Core Photographs
BH02



Core Photographs
BH02



Core Photographs
BH02



Core Photographs
BH02



Core Photographs
BH02



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Plant used: Commachio 205	Project: RFQ - 132KV Kronospan		Location ID: **BH03**
Dates: 25/07/2025	Client: Kronospan Limited		Sheet 1 of 2
Dynamic Sampling and Rotary Boring Log	Location: 330175.09E 338203.97N	Ground level: 99.13mOD / Logged by: AC / Vertical scale: 1:50	Project ID: 2231512

Depth	Sample ID	Test Result	Level (mOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
0.00 - 0.60	B1							
0.00 - 0.60	D2			(0.60)	MADE GROUND: Grass over, brown, slightly gravelly, clayey, fine to coarse SAND with frequent rootlets. Gravel is subangular to subrounded, fine to coarse including mudstone. (IMPORTED TOPSOIL)			
0.25	ES3							
0.50	ES4		98.53	0.60				
0.60 - 1.20	B5				Firm to stiff, orangish brown, slightly gravelly, sandy CLAY. Gravel is subrounded to rounded, fine and medium including siltstone.			
0.60 - 1.20	D6							
1.00	ES7							
1.20		SPT(S) N=15 (4,3/4,3,4,4)		(1.10)				
1.20 - 1.65	D8							
1.20 - 1.70	B9							
1.70 - 2.00	D10		97.43	1.70	Very dense, brown and grey, fine to coarse SAND and GRAVEL. Gravel is subangular to rounded, fine to coarse including mudstone, siltstone and sandstone. *Between 2.00m and 3.00m: open-hole drilling, no recovery. Samples below 2.00m taken from drilling chippings.*			
2.00		SPT(S) 50 (25 for 105mm/50 for 50mm)						
2.00 - 2.45	D11			(1.30)				
2.00 - 3.00	B12							
3.00		SPT(S) N=21 (4,6/6,5,4,6)	96.13	3.00	Medium dense, grey and reddish brown, very sandy, slightly clayey, silty, subangular to rounded, fine to coarse GRAVEL including mudstone and sandstone.			
3.00 - 3.45	D13							
3.00 - 3.70	B14			(0.70)				
3.70 - 3.90	D15		95.43	3.70 (0.30)	Brown, very gravelly, slightly clayey, fine to coarse SAND. Gravel is subangular to subrounded, fine to coarse including mudstone, siltstone and sandstone.			
4.00		SPT(S) 50 (25 for 30mm/50 for 180mm)	95.13	4.00	Very dense, brown, very sandy, slightly clayey, GRAVEL. Gravel is subangular to subrounded, fine to coarse including mudstone, siltstone and sandstone. *Between 4.00m and 6.00m: open-hole drilling, no recovery. Description and samples taken from drilling chippings.*			
4.00 - 5.00	B16							
4.00 - 5.00	D17							
5.00		SPT(S) 50 (20,5/50 for 240mm)		(2.00)				
5.00 - 6.00	B18							
5.00 - 6.00	D19							
		NA	93.13	6.00 (0.30)	Very dense, brown, clayey subrounded COBBLES including siltstone and sandstone.			
		6.00m - SPT(S) 50 (11,14/50 for 240mm)	92.83	6.30	Assumed zone of core loss - driller notes clayey COBBLES. *Between 6.30m and 9.75m: open-hole drilling, no recovery. Description and samples taken from drilling chippings.*			
6.00 - 7.50	20 0 0	6.00m - B20						
		7.00m - SPT(S) 50 (25 for 10mm/50 for 10mm)						
		AZCL		(3.45)				
7.50 - 9.00	0 0 0							
		9.00m - SPT(S) 50 (3,6/50 for 170mm)						
9.00 - 10.00	25 0 0	9.00m - D21						
		9.75m - B22	89.38	9.75				
		NA	89.28	9.85	Very dense, black, grey and brown, subangular to rounded, fine to			
	TCR/SCR/RQD	FI	Samples & Tests		Continued next sheet			

Dynamic Sample Recovery

Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks
1.20	2.00	101	100	
2.00	3.00	101	0	
3.00	4.00	101	90	
4.00	5.00	101	0	
5.00	6.00	101	0	

Remarks:
Service inspection pit hand excavated from GL to 1.20m.
Between 6.00m and 10.40m change to rotary coring due to cobbles.

SPT Hammer: RM01 Energy Ratio: 64%

Water Strikes

Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
4.00	3.00	4.00	20	3.80	Slow

Monitoring Installations

Top (m)	Base (m)	Pipe Type	Dia (mm)
0.00	3.00	Plain	50
3.00	7.50	Slotted	50

Checked by:	KH	IFA DS v01.01
Log status:	FINAL	

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Plant used: Commachio 205	Project: RFQ - 132KV Kronospan		Location ID: **BH03**
Dates: 25/07/2025	Client: Kronospan Limited		Sheet 2 of 2
Rotary Boring Log	Location: 330175.09E 338203.97N	Ground level: 99.13mOD / Logged by: AC / Vertical scale: 1:50	Project ID: 2231512

Coring, Samples & In Situ Testing				Strata Details					Groundwater	
Depth	TCR/SCR/ RQD	FI	Samples & Test Result	Level (mOD)	Depth (m) (Thickness)	Strata Description	Legend		Water Strike	Backfill/ Installation
			10.00m - SPT(S) 50 (6,7/50 for 230mm)		(0.55)	Very dense, black, grey and brown, subangular to rounded, fine to coarse GRAVEL including siltstone and mudstone.				
			10.00m - D23	88.73	10.40	Possible weathered MUDSTONE recovered as grey, sandy, clayey, angular to subrounded, fine to coarse gravel.				
						End of Borehole at 10.40m				
								11		
								12		
								13		
								14		
								15		
								16		
								17		
								18		
								19		
								20		

Flush Details

Top (m)	Base (m)	Flush Type	Flush Return %

Borehole Diameter

Depth (m)	Dia (mm)
6.00	139
10.00	121

Boring Progress

Date	Time	Depth (m)	Cased (m)	Water (m)
25/07	16:30	10.40	10.00	9.40

Remarks:

SPT Hammer: RM01 Energy Ratio: 64%

Casing Diameter

Depth (m)	Dia (mm)
6.00	139
10.00	121

Water Strikes

Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

Monitoring Installations

Top (m)	Base (m)	Pipe Type	Dia (mm)

Checked by:	KH	IFA RC v01.01
Log status:	FINAL	

IAN FARMER ASSOCIATES

Plant used:	Project:	Location ID:
Commachio 205	RFQ - 132KV Kronospan	**BH04**
Dates:	**Client:**	Sheet 1 of 2
24/07/2025	Kronospan Limited	

Dynamic Sample Borehole Log	Location:	Ground level:	Logged by:	Vertical scale:	Project ID:
	331290.70E 338966.62N	51.79mOD	AC	1:50	2231512

Depth	Sample ID	Test Result	Level (mOD)	Depth (m) (Thickness)	Strata Description	Legend		Groundwater: Water Strike	Groundwater: Backfill/ Installation
0.00 - 0.20	B1				MADE GROUND: Grass over, brown, gravelly, slightly clayey, fine to coarse SAND with low cobble content. Gravel is angular to subrounded, fine to coarse including brick, sandstone and mudstone. Cobbles are subrounded to rounded including sandstone and siltstone. (IMPORTED TOPSOIL)				
0.00 - 0.20	D2		51.59	0.20					
0.15	ES3								
0.20 - 1.20	B4								
0.20 - 1.20	D5								
0.50	ES6								
1.00	ES7				Very stiff, yellowish brown mottled grey, slightly gravelly, sandy CLAY. Gravel is subangular to subrounded, fine to coarse including sandstone and mudstone.		1		
1.20		SPT(S) 50 (6,4/50 for 170mm)		(1.80)					
1.20 - 1.50	D8								
1.20 - 1.90	B9								
1.90 - 2.00	D10								
2.00		SPT(S) 50 (25 for 125mm/50 for 95mm)	49.79	2.00	Very dense becoming medium dense, dark brown mottled grey and yellowish brown, sandy, clayey, silty, angular to subrounded, fine to coarse GRAVEL including mudstone.		2		
2.00 - 2.20	D11								
2.00 - 2.50	B12								
2.80	D13			(1.50)					
3.00		SPT(S) N=25 (6,9/12,3,4,6)					3		
3.00 - 3.45	D14								
3.00 - 3.50	B15								
3.50 - 3.90	B16		48.29	3.50	Stiff becoming very stiff, reddish brown mottled light yellowish brown, slightly sandy, slightly gravelly CLAY. Gravel is subangular to subrounded, fine and medium including mudstone.				
3.90 - 4.00	D17								
4.00		SPT(S) N=21 (6,5/5,6,5,5)					4		
4.00 - 4.45	D18								
4.10 - 4.60	B19			(1.90)					
4.80	D20								
5.00		SPT(S) N=46 (7,5/10,12,12,12)					5		
5.00 - 5.45	D21								
5.50 - 5.70	D22		46.39	5.40 (0.30)	Brown, slightly gravelly, slightly clayey, fine to coarse SAND. Gravel is subangular to rounded, fine and medium including mudstone.				
			46.09	5.70	Firm to stiff, reddish brown mottled yellowish brown, sandy CLAY.				
6.00		SPT(S) N=15 (4,3/4,4,4,3)					6		
6.00 - 6.45	D23			(0.80)					
6.20 - 6.50	B24								
			45.29	6.50	Assumed zone of core loss - driller notes possible mudstone COBBLES.				
				(1.00)			7		
7.50 - 7.70	D25		44.29	7.50	Reddish brown mottled yellowish brown, subrounded to rounded mudstone COBBLES with little, slightly sandy clay.				
7.70 - 8.00	D26		44.09	7.70	Soft, reddish brown, sandy CLAY.				
8.00		SPT(S) N=8 (2,1/2,2,1,3)		(0.60)			8		
8.00 - 8.45	D27								
8.30 - 8.40	D28		43.49	8.30	Stiff becoming very stiff, reddish brown mottled grey and yellowish brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded, fine and medium including mudstone and siltstone.				
8.50 - 9.00	B29								
9.00		SPT(S) N=29 (4,6/5,7,9,8)					9		
9.00 - 9.45	D30			(2.15)					
9.50 - 9.90	B31								
9.90 - 10.00	D32								
10.00		SPT(S) N=33 (6,9/9,8,7,9)			Continued next sheet		10		

Dynamic Sample Recovery

Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks
1.20	2.00	101	100	
2.00	3.00	101	100	
3.00	4.00	101	95	
4.00	5.00	101	90	
5.00	6.00	101	50	
6.00	6.50	101	100	
6.50	8.00	101	33	

Checked by:	KH	IFA DS v01.01
Log status:	FINAL	

Remarks:
Service inspection pit hand excavated from GL to 1.20m.
Between 6.50m and 8.00m: change to rotary coring due to cobbles.

SPT Hammer: RM01 Energy Ratio: 64%

Water Strikes

Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
3.00	3.00	3.00	20	2.90	

Monitoring Installations

Top (m)	Base (m)	Pipe Type	Dia (mm)
0.00	3.00	Plain	50
3.00	6.50	Slotted	50

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Plant used: Commachio 205	Project: RFQ - 132KV Kronospan		Location ID: **BH04**
Dates: 24/07/2025	Client: Kronospan Limited		Sheet 2 of 2
Dynamic Sample Borehole Log	Location: 331290.70E 338966.62N	Ground level: 51.79mOD / Logged by: AC / Vertical scale: 1:50	Project ID: 2231512

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mOD)	Depth (m) (Thickness)	Strata Description	Legend	Water Strike	Backfill/ Installation
10.00 - 10.45	D33		41.34	10.45	Stiff becoming very stiff, reddish brown mottled grey and yellowish brown, slightly sandy, slightly gravelly CLAY. Gravel is subrounded to rounded, fine and medium including mudstone and siltstone.			
					End of Borehole at 10.45m			

11 12 13 14 15 16 17 18 19 20

Dynamic Sample Recovery

Top (m)	Base (m)	Dia (mm)	Recovery %	Remarks
8.00	9.00	101	90	
9.00	10.00	101	60	

Remarks:

SPT Hammer: RM01 Energy Ratio: 64%

Water Strikes

Strike (m)	Cased (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

Monitoring Installations

Top (m)	Base (m)	Pipe Type	Dia (mm)

Checked by:	KH	IFA DS v01.01
Log status:	FINAL	

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Gas and Groundwater Monitoring Results

Contract Number:	*2231512*	**Gas Monitor:**	*GM25*
Contract Name:	*RFQ - 132KV Kronospan*	**Readings Taken By:**	*DS*
Date:	*18/08/2025*	**Checked By:**	*KH*
Borehole No:	*BH01*		

Background Readings:	Weather Conditions:	*Overcast*	
	Ground Conditions (dry / wet etc):	*Dry*	
	Atmospheric Pressure:	*1005 mb*	

O_2% v/v	CO_2% v/v		CH_4% v/v		CO ppm		H_2S ppm	
20.8	*0.0*		*0.0*		*0*		*0*	

Time secs	Flow Rate l/hr	O_2% v/v	CO_2% v/v	CH_4% v/v	H_2S ppm	CO ppm
0	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
15	*0.0*	*20.6*	*0.0*	*0.0*	*0.0*	*0*
30	*0.0*	*20.6*	*0.0*	*0.0*	*0.0*	*0*
45	*0.0*	*20.6*	*0.0*	*0.0*	*0.0*	*0*
60	*0.0*	*20.4*	*0.2*	*0.0*	*0.0*	*0*
90	*0.0*	*20.3*	*0.1*	*0.0*	*0.0*	*0*
120	*0.0*	*20.3*	*0.1*	*0.0*	*0.0*	*0*
150	*0.0*	*20.0*	*0.1*	*0.0*	*0.0*	*0*
180	*0.0*	*20.0*	*0.1*	*0.0*	*0.0*	*0*
210	*0.0*	*20.0*	*0.1*	*0.0*	*0.0*	*0*
240	*0.0*	*20.0*	*0.1*	*0.0*	*0.0*	*0*
270	*0.0*	*20.0*	*0.1*	*0.0*	*0.0*	*0*
300	*0.0*	*20.0*	*0.1*	*0.0*	*0.0*	*0*
Min	*0.0*	*20.0*	*0.0*	*0.0*	*0*	*0*
Max	*0.0*	*20.8*	*0.2*	*0.0*	*0*	*0*
Steady	*0.0*	*20.0*	*0.1*	*0.0*	*0*	*0*

VOC ppm	*0.0*	Depth to base of well	*24.00*	SWL	*Dry*	LNAPL or DNAPL	*ND*	Start time:	*09:15*
	Steady		mBGL		mBGL		mBGL	Finish Time:	*09:20*

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded. ND = Not Detected.

Remarks:

VOC - No Peak

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Gas and Groundwater Monitoring Results

Contract Number:	*2231512*	**Gas Monitor:**	*GM25*
Contract Name:	*RFQ - 132KV Kronospan*	**Readings Taken By:**	*DS*
Date:	*18/08/2025*	**Checked By:**	*KH*
Borehole No:	*BH02*		

Background Readings:			
Weather Conditions:	*Overcast*		
Ground Conditions (dry / wet etc):	*Dry*		
Atmospheric Pressure:	*1003 mb*		

O_2% v/v	*20.8*	CO_2% v/v	*0.0*	CH_4% v/v	*0.0*	CO ppm	*0*	H_2S ppm	*0*

Time secs	Flow Rate l/hr	O_2% v/v	CO_2% v/v	CH_4% v/v	H_2S ppm	CO ppm
0	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
15	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
30	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
45	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
60	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
90	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
120	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
150	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
180	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
210	*0.0*	*20.7*	*0.0*	*0.0*	*0.0*	*0*
240	*0.0*	*20.7*	*0.0*	*0.0*	*0.0*	*0*
270	*0.0*	*20.7*	*0.0*	*0.0*	*0.0*	*0*
300	*0.0*	*20.7*	*0.0*	*0.0*	*0.0*	*0*
Min	*0.0*	*20.7*	*0.0*	*0.0*	*0*	*0*
Max	*0.0*	*20.8*	*0.0*	*0.0*	*0*	*0*
Steady	*0.0*	*20.7*	*0.0*	*0.0*	*0*	*0*

VOC ppm	*0.0* Steady	Depth to base of well	*17.25* mBGL	SWL	*14.86* mBGL	LNAPL or DNAPL	*ND* mBGL	Start time:	*12:30*
								Finish Time:	*12:35*

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded. ND = Not Detected.

Remarks:

VOC - No Peak

Monitoring techncian observed the seal around bung not intact. Bung and tap fitted securely and left for 30 minutes before carrying out gas monitoring.

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Gas and Groundwater Monitoring Results

Contract Number:	*2231512*	**Gas Monitor:**	*GM25*
Contract Name:	*RFQ - 132KV Kronospan*	**Readings Taken By:**	*MJ*
Date:	*28/08/2025*	**Checked By:**	*KH*
Borehole No:	*BH03*		

Background Readings:	Weather Conditions:	*Cloudy with occasional rain*	
	Ground Conditions (dry / wet etc):	*Damp*	
	Atmospheric Pressure:	*982 mb*	

O_2% v/v	CO_2% v/v	CH_4% v/v	CO ppm	H_2S ppm
20.9	*0.0*	*0.0*	*0*	*0*

Time secs	Flow Rate l/hr	O_2% v/v	CO_2% v/v	CH_4% v/v	H_2S ppm	CO ppm
0	*0.2*	*20.3*	*0.8*	*0.0*	*0.0*	*0*
15	*0.2*	*20.4*	*0.8*	*0.0*	*0.0*	*0*
30	*0.2*	*20.4*	*0.8*	*0.0*	*0.0*	*0*
45	*0.2*	*20.4*	*0.8*	*0.0*	*0.0*	*0*
60	*0.2*	*20.4*	*0.8*	*0.0*	*0.0*	*0*
90	*0.2*	*20.4*	*0.8*	*0.0*	*0.0*	*0*
120	*0.2*	*20.8*	*1.1*	*0.0*	*0.0*	*0*
150	*0.2*	*20.8*	*1.1*	*0.0*	*0.0*	*0*
180	*0.2*	*20.0*	*1.1*	*0.0*	*0.0*	*0*
210	*0.2*	*20.0*	*1.1*	*0.0*	*0.0*	*0*
240	*0.2*	*20.0*	*1.1*	*0.0*	*0.0*	*0*
270	*0.2*	*20.0*	*1.1*	*0.0*	*0.0*	*0*
300	*0.2*	*20.0*	*1.1*	*0.0*	*0.0*	*0*
Min	*0.2*	*20.0*	*0.8*	*0.0*	*0*	*0*
Max	*0.2*	*20.8*	*1.1*	*0.0*	*0*	*0*
Steady	*0.2*	*20.0*	*1.1*	*0.0*	*0*	*0*

VOC ppm	*2.2* Steady	Depth to base of well	*7.50* mBGL	SWL	*3.50* mBGL	LNAPL or DNAPL	*NR* mBGL	Start time:	*14:00*
								Finish Time:	*14:05*

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded. ND = Not Detected.

Remarks:

VOC Peak = 2.2ppm

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Gas and Groundwater Monitoring Results

Contract Number:	*2231512*	**Gas Monitor:**	*GM25*
Contract Name:	*RFQ - 132KV Kronospan*	**Readings Taken By:**	*MJ*
Date:	*28/08/2025*	**Checked By:**	*KH*
Borehole No:	*BH04*		

Background Readings:	Weather Conditions:	*Cloudy with occasional rain*	
	Ground Conditions (dry / wet etc):	*Damp*	
	Atmospheric Pressure:	*982 mb*	

O_2% v/v	*20.8*	CO_2% v/v	*0.0*	CH_4% v/v	*0.0*	CO ppm	*0*	H_2S ppm	*0*

Time secs	Flow Rate l/hr	O_2% v/v	CO_2% v/v	CH_4% v/v	H_2S ppm	CO ppm
0	*0.1*	*20.5*	*0.1*	*0.0*	*0.0*	*0*
15	*0.0*	*20.8*	*0.0*	*0.0*	*0.0*	*0*
30	*0.0*	*20.7*	*0.0*	*0.0*	*0.0*	*0*
45	*0.0*	*20.7*	*0.1*	*0.0*	*0.0*	*0*
60	*0.0*	*20.7*	*0.1*	*0.0*	*0.0*	*0*
90	*0.0*	*20.7*	*0.1*	*0.0*	*0.0*	*0*
120	*0.0*	*20.7*	*0.1*	*0.0*	*0.0*	*0*
150	*0.0*	*20.4*	*0.2*	*0.0*	*0.0*	*0*
180	*0.0*	*20.4*	*0.3*	*0.0*	*0.0*	*0*
210	*0.0*	*20.4*	*0.3*	*0.0*	*0.0*	*0*
240	*0.0*	*20.4*	*0.4*	*0.0*	*0.0*	*0*
270	*0.0*	*20.5*	*0.6*	*0.0*	*0.0*	*0*
300	*0.0*	*20.2*	*0.9*	*0.0*	*0.0*	*0*
330	*0.0*	*20.1*	*1.0*	*0.0*	*0.0*	*0*
360	*0.0*	*20.1*	*1.0*	*0.0*	*0.0*	*0*
390	*0.0*	*20.1*	*1.0*	*0.0*	*0.0*	*0*
420	*0.0*	*20.3*	*0.9*	*0.0*	*0.0*	*0*
450	*0.0*	*20.2*	*0.9*	*0.0*	*0.0*	*0*
480	*0.0*	*20.2*	*0.9*	*0.0*	*0.0*	*0*
Min	*0.0*	*20.1*	*0.0*	*0.0*	*0*	*0*
Max	*0.1*	*20.8*	*1.0*	*0.0*	*0*	*0*
Steady	*0.0*	*20.2*	*0.9*	*0.0*	*0*	*0*

VOC ppm	*3.4*	Depth to base of well	*7.00*	SWL	*3.03*	LNAPL or DNAPL	*NR*	Start time:	*15:45*
	Steady		mBGL		mBGL		mBGL	Finish Time:	*15:53*

>>>> = Flow above detection limit of 30 l/hr, <<< = Negative flow greater than -10 l/hr. >Max = In excess of lower explosive limit. NR = Not Recorded. ND = Not Detected.

Remarks:

VOC Peak = 3.5ppm

IAN FARMER ASSOCIATES

Water Level Summary

Contract Number: 2231512	Contract Name: RFQ-132KV Kronospan

Readings Taken By: DS

Location	Date	Base of well	SWL
		mBGL	mBGL
BH01	*18/08/2025*	*24.00*	*Dry*
BH01	*19/08/2025*	*23.98*	*Dry*

Remarks:

Checked by: KH

Readings Taken By: DS

Location	Date	Base of well	SWL
		mBGL	mBGL
BH02	*18/08/2025*	*17.25*	*14.86*
BH02	*19/08/2025*	*17.82*	*16.27*

Remarks:

18/08/25 - silty base observed.

19/08/25 - water level still not returned to initial level following rising head test.

Checked by: KH

Readings Taken By: MJ

Location	Date	Base of well	SWL
		mBGL	mBGL
BH03	*28/08/2025*	*7.50*	*3.50*

Remarks:

Checked by: KH

Readings Taken By: MJ

Location	Date	Base of well	SWL
		mBGL	mBGL
BH04	*28/08/2025*	*7.00*	*3.03*

Remarks:

Checked by: KH

IAN FARMER ASSOCIATES

Variable Head Permeability Test in Open System
(according to BS EN ISO 22282-2:2012)

Project Name:	FRQ - 132KV Kronospan	**Project Number:**	2231512
Client:	Kronospan Limited	**Borehole Number:**	BH02

Test Method	Rising Head	Operator	DS	Test Number	1
Drilling method	CP and RC	Date	18/08/2025	Sheet	1 of 2

Base of installation pipe (mBGL)	17.25	Length of test section L (m)	17.25
		Mid-point of test section (mBGL)	8.63
Diameter of borehole D (mm)	121.00	L/D Ratio	142.6
Diameter of standpipe (mm)	50.00	Cross sectional area of standpipe S (m^2)	0.001963
Casing stickup (mAGL)	0.66	Other test notes or observations:	
Elevation of borehole (mAOD)	113.07	None.	
Groundwater depth (mBGL)	14.86		

Informative

Intake Factor, F

F= 19.17

Borehole Case 5

Case 4 - 1.2 < L/D < 10
Case 5 - L/D = or > 10

Permeability, k

$$k = \frac{S}{F.(t2 - t1)} .Ln(H1/H2) \quad (i)$$

$$k = \frac{S}{F . T} \quad (ii)$$

T is Basic Time Lag Factor where H_t/H_0 = 0.37

Selected values

t1=	NA	s
t2=	NA	s
H1=	NA	m
H2=	NA	m
T=	NA	s

Calculation output

k =	NA	m/s	from (i)
k =	NA	m/s	from (ii)

Test Results

Elapsed (minutes)	Total seconds	Water Depth (m)	Head (metres)	H/Ho
0.0	0	17.910	-3.71	1.000
0.5	30	16.930	-2.73	0.736
1.0	60	16.930	-2.73	0.736
2.0	120	16.930	-2.73	0.736
3.0	180	16.930	-2.73	0.736
4.0	240	16.910	-2.71	0.730
5.0	300	16.880	-2.68	0.722
6.0	360	16.880	-2.68	0.722
7.0	420	16.880	-2.68	0.722
8.0	480	16.880	-2.68	0.722
9.0	540	16.880	-2.68	0.722
10.0	600	16.880	-2.68	0.722
15.0	900	16.870	-2.67	0.720
20.0	1200	16.870	-2.67	0.720
25.0	1500	16.870	-2.67	0.720
30.0	1800	16.870	-2.67	0.720
35.0	2100	16.870	-2.67	0.720
40.0	2400	16.870	-2.67	0.720
45.0	2700	16.870	-2.67	0.720
50.0	3000	16.870	-2.67	0.720
55.0	3300	16.870	-2.67	0.720
60.0	3600	16.870	-2.67	0.720

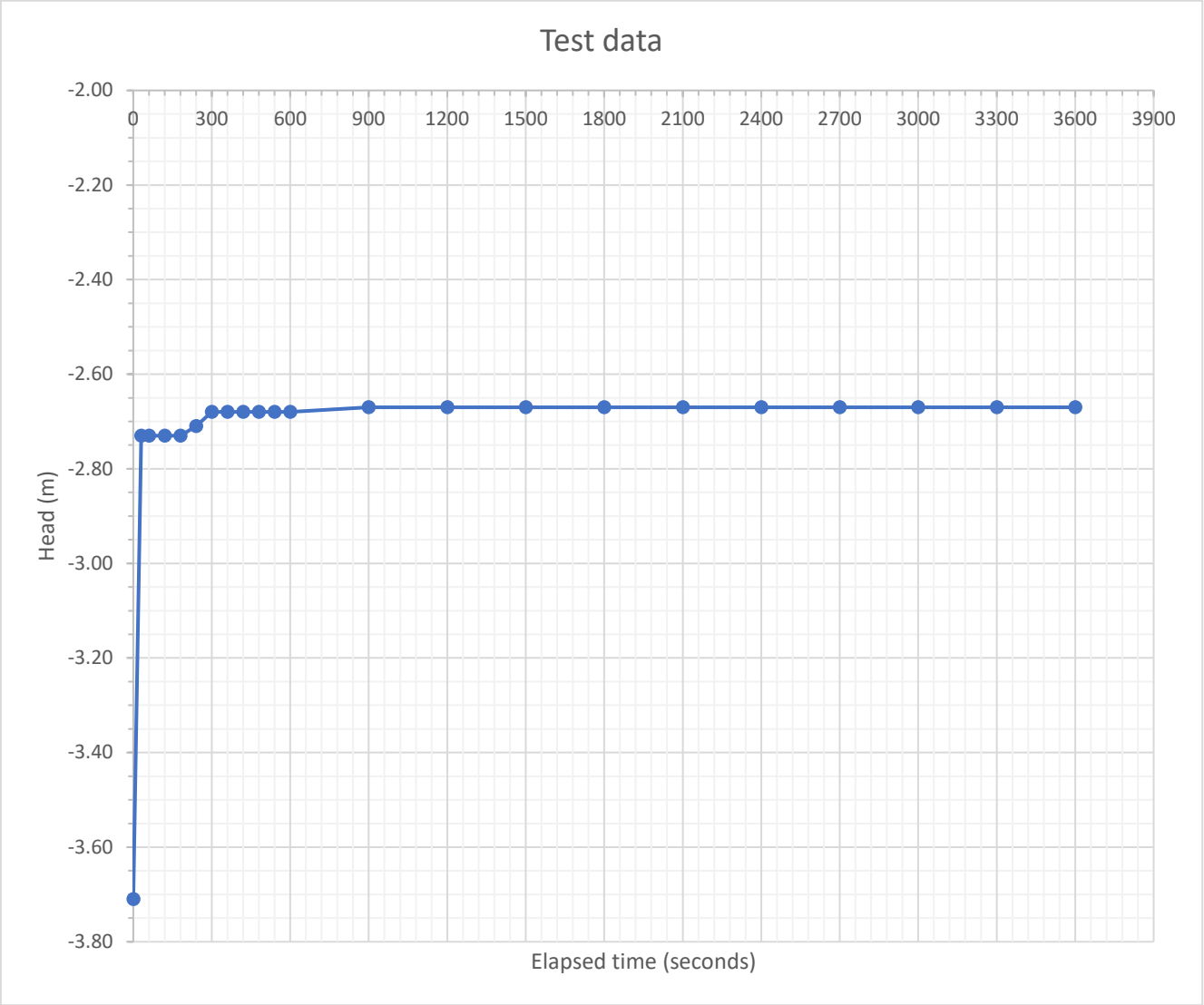
General remarks and additional information:
Large volume of silt at the bottom of installation pipe.
All water readings during test measured from top of casing.
Unable to calculate K value (permeability coefficient) due to insufficient recharge of water during test period - water level did not return to 25% original level.

IAN FARMER ASSOCIATES

Variable Head Permeability Test in Open System (according to BS EN ISO 22282-2:2012)

Project Name:	FRQ - 132KV Kronospan	**Project Number:**	2231512
Client:	Kronospan Limited	**Borehole Number:**	BH02

Test Method	Rising Head	Operator	DS	Test Number	1
Drilling method	CP and RC	Date	18/08/2025	Sheet	2 of 2



General remarks

IAN FARMER ASSOCIATES

Variable Head Permeability Test in Open System
(according to BS EN ISO 22282-2:2012)

Project Name:	FRQ - 132KV Kronospan	**Project Number:**	2231512
Client:	Kronospan Limited	**Borehole Number:**	BH03

Test Method	Rising Head	Operator	MJ	Test Number	1
Drilling method	DS and RC	Date	28/08/2025	Sheet	1 of 2

Base of installation pipe (mBGL)	7.50	Length of test section L (m)	7.50
		Mid-point of test section (mBGL)	3.75
Diameter of borehole D (mm)	139.00	L/D Ratio	54.0
Diameter of standpipe (mm)	50.00	Cross sectional area of standpipe S (m^2)	0.001963
Casing stickup (mAGL)	0.28	Other test notes or observations:	
Elevation of borehole (mAOD)	99.13	None.	
Groundwater depth (mBGL)	3.50		

Informative

Intake Factor, F

F= 10.07

Borehole Case 5

Case 4 - 1.2 < L/D < 10
Case 5 - L/D = or > 10

Permeability, k

$$k = \frac{S}{F.(t2 - t1)} .Ln(H1/H2) \quad (i)$$

$$k = \frac{S}{F . T} \quad (ii)$$

T is Basic Time Lag Factor where H_t/H_0 = 0.37

Selected values

t1=	60	s
t2=	540	s
H1=	-1.43	m
H2=	-0.61	m
T=	510	s

Calculation output

k =	3.46E-07	m/s	from (i)
k =	3.82E-07	m/s	from (ii)

Test Results

Elapsed (minutes)	Total seconds	Water Depth (m)	Head (metres)	H/Ho
0.0	0	5.500	-1.72	1.000
0.5	30	5.410	-1.63	0.948
1.0	60	5.210	-1.43	0.831
2.0	120	5.060	-1.28	0.744
3.0	180	4.960	-1.18	0.686
4.0	240	4.840	-1.06	0.616
5.0	300	4.760	-0.98	0.570
6.0	360	4.690	-0.91	0.529
7.0	420	4.590	-0.81	0.471
8.0	480	4.490	-0.71	0.413
9.0	540	4.390	-0.61	0.355
10.0	600	4.350	-0.57	0.331
15.0	900	4.220	-0.44	0.256
20.0	1200	4.120	-0.34	0.198
25.0	1500	4.110	-0.33	0.192
30.0	1800	4.100	-0.32	0.186
35.0	2100	4.100	-0.32	0.186
40.0	2400	4.090	-0.31	0.180
45.0	2700	4.090	-0.31	0.180
50.0	3000	4.080	-0.30	0.174
55.0	3300	4.080	-0.30	0.174
60.0	3600	4.070	-0.29	0.169

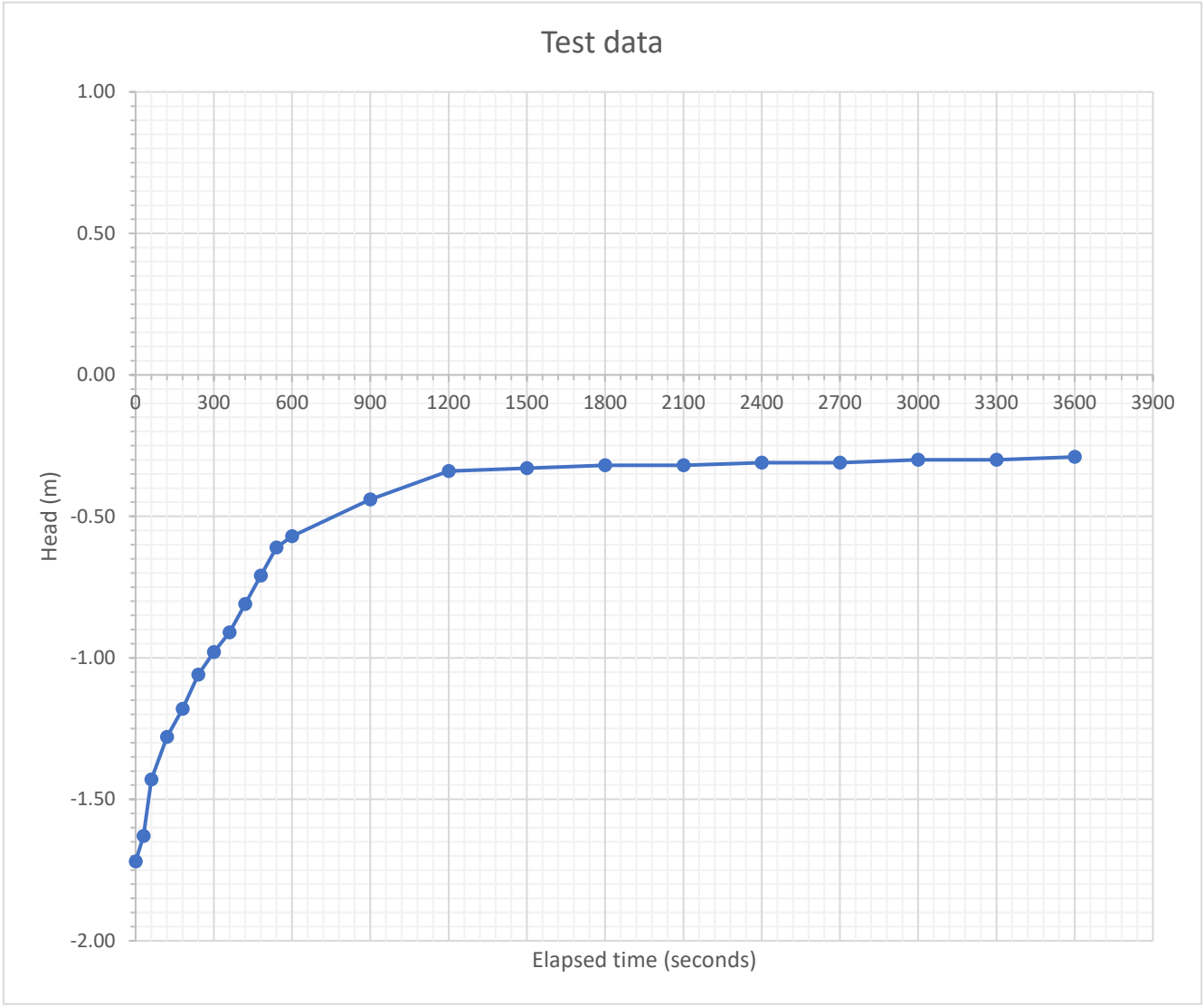
General remarks and additional information
All water readings during test measured from top of casing.

IAN FARMER ASSOCIATES

Variable Head Permeability Test in Open System (according to BS EN ISO 22282-2:2012)

Project Name:	FRQ - 132KV Kronospan	**Project Number:**	2231512
Client:	Kronospan Limited	**Borehole Number:**	BH03

Test Method	Rising Head	Operator	MJ	Test Number	1
Drilling method	DS and RC	Date	28/08/2025	Sheet	2 of 2



General remarks

IAN FARMER ASSOCIATES

Variable Head Permeability Test in Open System
(according to BS EN ISO 22282-2:2012)

Project Name:	FRQ - 132KV Kronospan	**Project Number:**	2231512
Client:	Kronospan Limited	**Borehole Number:**	BH04

Test Method	Rising Head	Operator	MJ	Test Number	1
Drilling method	DS	Date	28/08/2025	Sheet	1 of 2

Base of installation pipe (mBGL)	7.00	Length of test section L (m)	7.00
		Mid-point of test section (mBGL)	3.50
Diameter of borehole D (mm)	139.00	L/D Ratio	50.4
Diameter of standpipe (mm)	50.00	Cross sectional area of standpipe S (m^2)	0.001963
Casing stickup (mAGL)	0.00	Other test notes or observations:	
Elevation of borehole (mAOD)	51.79	None.	
Groundwater depth (mBGL)	3.03		

Informative

Intake Factor, F

F= 9.54

Borehole Case 5

Case 4 - 1.2 < L/D < 10
Case 5 - L/D = or > 10

Permeability, k

$$k = \frac{S}{F.(t2 - t1)} .Ln(H1/H2) \quad (i)$$

$$k = \frac{S}{F . T} \quad (ii)$$

T is Basic Time Lag Factor where H_t/H_0 = 0.37

Selected values

t1=	60	s
t2=	600	s
H1=	-0.04	m
H2=	-0.01	m
T=	45	s

Calculation output

k =	5.29E-07	m/s	from (i)
k =	4.58E-06	m/s	from (ii)

Test Results

Elapsed (minutes)	Total seconds	Water Depth (m)	Head (metres)	H/Ho
0.0	0	3.160	-0.13	1.000
0.5	30	3.090	-0.06	0.462
1.0	60	3.070	-0.04	0.308
2.0	120	3.060	-0.03	0.231
3.0	180	3.060	-0.03	0.231
4.0	240	3.050	-0.02	0.154
5.0	300	3.050	-0.02	0.154
6.0	360	3.050	-0.02	0.154
7.0	420	3.050	-0.02	0.154
8.0	480	3.040	-0.01	0.077
9.0	540	3.040	-0.01	0.077
10.0	600	3.040	-0.01	0.077
15.0	900	3.030	0.00	0.000
20.0	1200	3.030	0.00	0.000
25.0	1500	3.030	0.00	0.000
30.0	1800	3.030	0.00	0.000
35.0	2100	3.030	0.00	0.000

General remarks and additional information

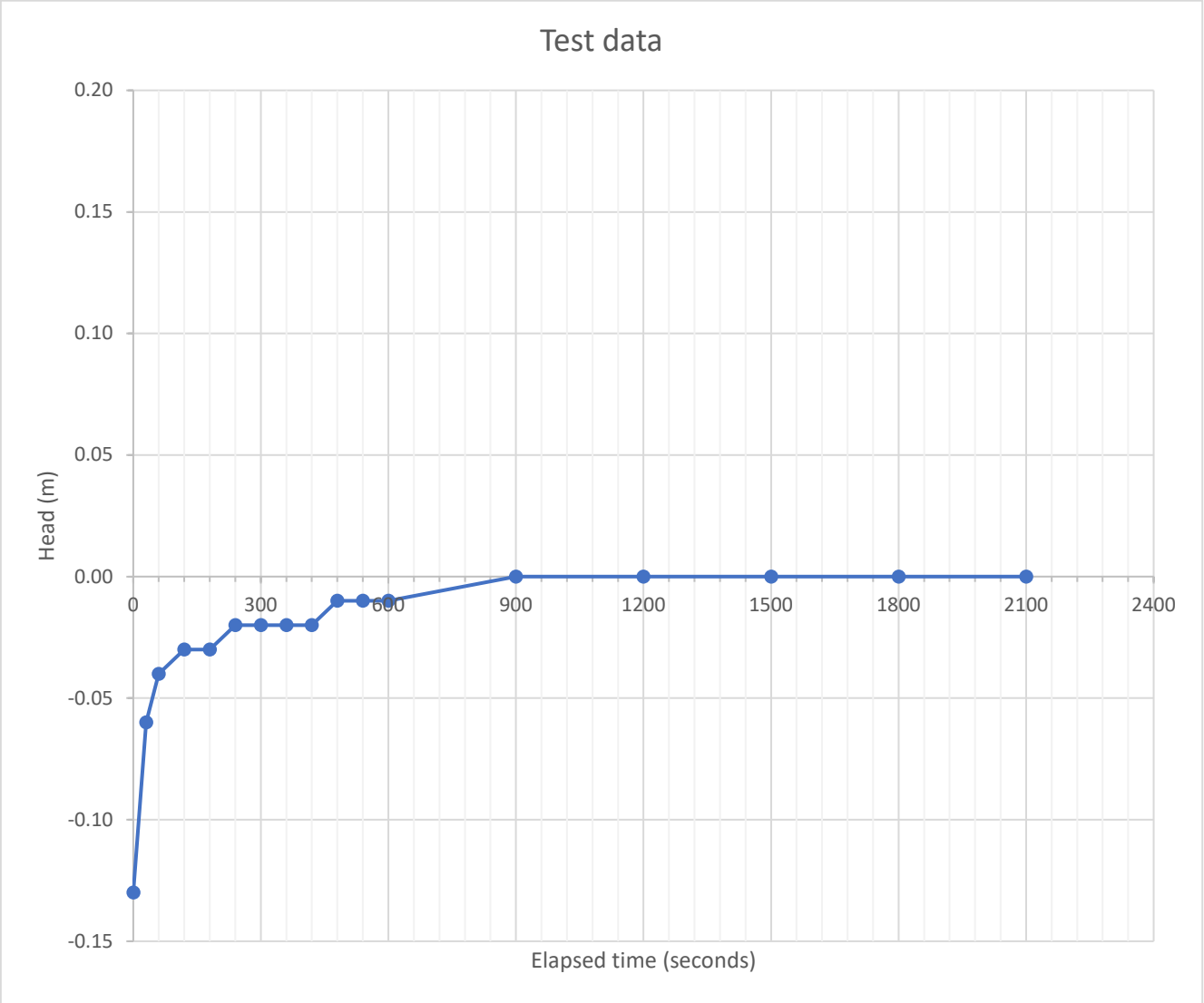
All water readings during test measured from top of casing.
Unable to remove water faster than recharge - only able to reduce water level to 3.16m bgl using pump.

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Variable Head Permeability Test in Open System (according to BS EN ISO 22282-2:2012)

Project Name:	FRQ - 132KV Kronospan	**Project Number:**	2231512
Client:	Kronospan Limited	**Borehole Number:**	BH04

Test Method	Rising Head	Operator	MJ	Test Number	1
Drilling method	DS	Date	28/08/2025	Sheet	2 of 2



General remarks

APPENDIX 3

GEOTECHNICAL TESTS

IAN FARMER ASSOCIATES

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Cheshire
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F.A.O.

Final Test Report - 2231512 / 2

Site:	RFQ - 132KV Kronospan
Job Number:	2231512
Originating Client:	Kronospan Limited
Originating Reference:	2231512
Date Sampled:	Not Given
Date Scheduled:	08/08/2025
Date Testing Started:	09/08/2025
Date Testing Finished:	12/09/2025

Previous Reports		Amendments	Date Issued
1	Interim		08/09/2025

Amendments: 1 x SED added

Authorised By:

Tim Robinson
Quality Supervisor

Report Issue Date: 12/09/2025

Constructionline Part of Capita plc

Ian Farmer Associates (1998) Limited. Registered in England and Wales, No. 3661447.
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Newcastle upon Tyne (0191) 482 8500. **Motherwell** (01698) 230231. **Warrington** (01925) 855440. **Washington** (0191) 482 8500.

AGS

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 2

Determination of Water Content, Liquid Limit and Plastic Limit and Derivation of Plasticity and Liquidity Index

Borehole / Trial Pit	Depth (m)	Sample	Natural Water Content %	Sample Preparation Natural = Hand picked Sieved = Washed on 425µm			Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	One-point PI Only		Description / Remarks
				Natural / Sieved	Passing %	Calc. WC %						Cone Penetration (mm)	Correction Factor	
BH01	2.00	B12	15	Sieved	39	38	27	15	12	1.94	CL	20.3 20.3	0.996	Brown sandy, silty, clayey GRAVEL
BH01	5.00	B22	14.1	Sieved	65	22	31	14	17	0.46	CL	20.2 20.1	0.998	Brown silty, gravelly, sandy CLAY
BH01	7.50	B29	11	Sieved	70	16	24	14	10	0.18	CL	20.4 20.5	0.993	Brown gravelly, sandy, silty CLAY
BH01	12.00	B40	10.6	Natural	34	32	23	12	11	1.78	CL	19.6 19.8	1.005	Brown gravelly, sandy, silty CLAY
BH01	15.00	B46	13.6	Sieved	74	18	27	13	14	0.39	CL	20.2 20.2	0.997	Brown gravelly, sandy CLAY/SILT
BH02	2.00	B14	14.7	Sieved	74	20	27	15	12	0.41	CL	19.8 19.6	1.005	Brown gravelly, sandy, silty CLAY
BH02	5.00	B24	12.4	Sieved	62	20	29	14	15	0.40	CL	20 20.2	0.999	Brown gravelly, sandy, silty CLAY
BH02	11.50	D39	18.3	Natural	89	21	30	15	15	0.37	CL	20 19.9	1.001	Brown gravelly, silty CLAY
BH02	15.60	B43	8.5	Natural	99	8.6	31	15	16	-0.40	CL	20.1 20.1	0.999	Grey SILT/CLAY

Method of Preparation: BS EN ISO 17892-1 : 2014 + A1 : 2022 : Clause 5.1 Water content test preparation
BS EN ISO 17892-12 : 2018 + A2 : 2022 : Clause 5.2 Specimen preparation for liquid and plastic limits

Method of Test: BS EN ISO 17892-1 : 2014 + A1 : 2022 : Clause 5.2 Water content test execution
BS EN ISO 17892-12 : 2018 + A2 : 2022 : Clause 5.3 Determination of liquid limit by the fall cone method. 80g / 30° Cone
BS EN ISO 17892-12 : 2018 + A2 : 2022 : Clause 5.5 Determination of plastic limit

UKAS TESTING 1464

General Remarks: All samples tested with increasing water content, unless otherwise stated.
All samples tested to four-point method, unless the extra 'One-point PI Only' data is reported.

Results reported relate only to the samples tested.

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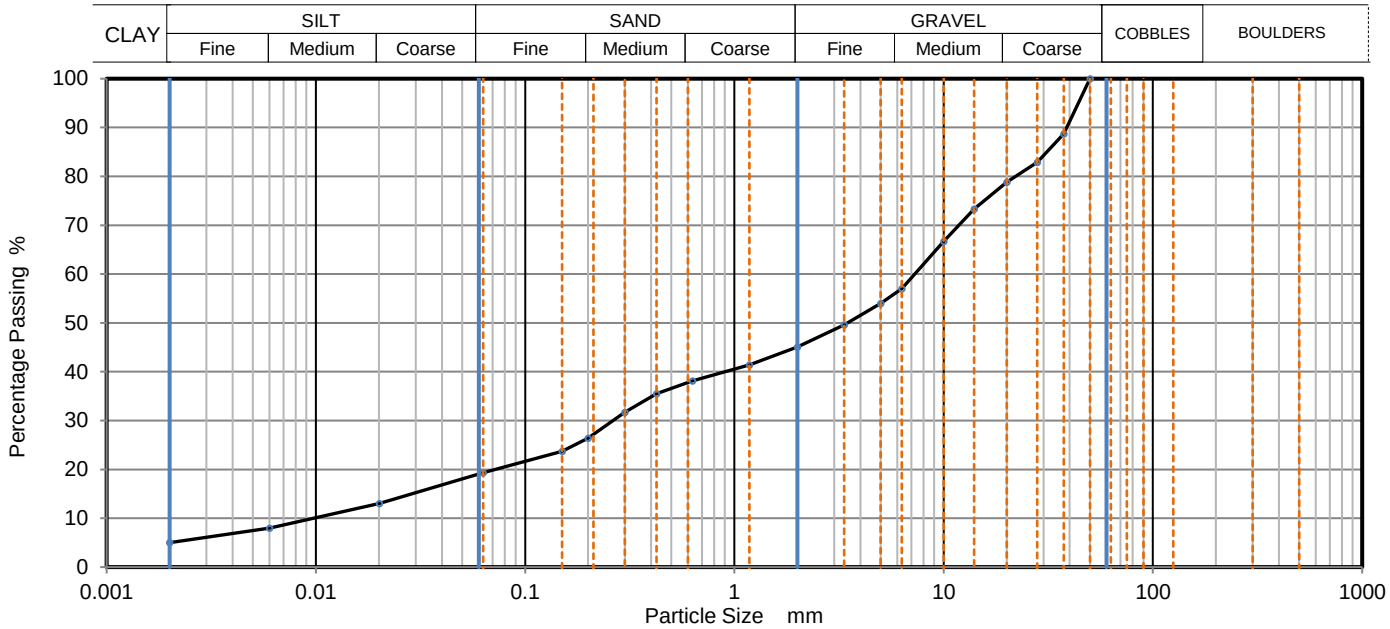
Laboratory Test Report 2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 3

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH01	2.00	B12	Wet Sieve + Pipette	Brown sandy, silty, clayey GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	13
		0.0060	8
		0.0020	5
50	100		
37.5	89		
28	83		
20	79		
14	73		
10	67		
6.3	57		
5	54		
3.35	50		
2	45	Particle density	(assumed)
1.18	41	2.65	Mg/m3
0.63	38		
0.425	36		
0.3	32		
0.2	26		
0.15	24		
0.063	19		

Dry Mass of sample, g 4615

Sample Proportions	% dry mass
Very coarse	0
Gravel	55
Sand	26
Silt	14
Clay	6

Grading Analysis		
D100	mm	50
D60	mm	7.26
D30	mm	0.263
D10	mm	0.00955
Uniformity Coefficient		760
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

IAN FARMER ASSOCIATES

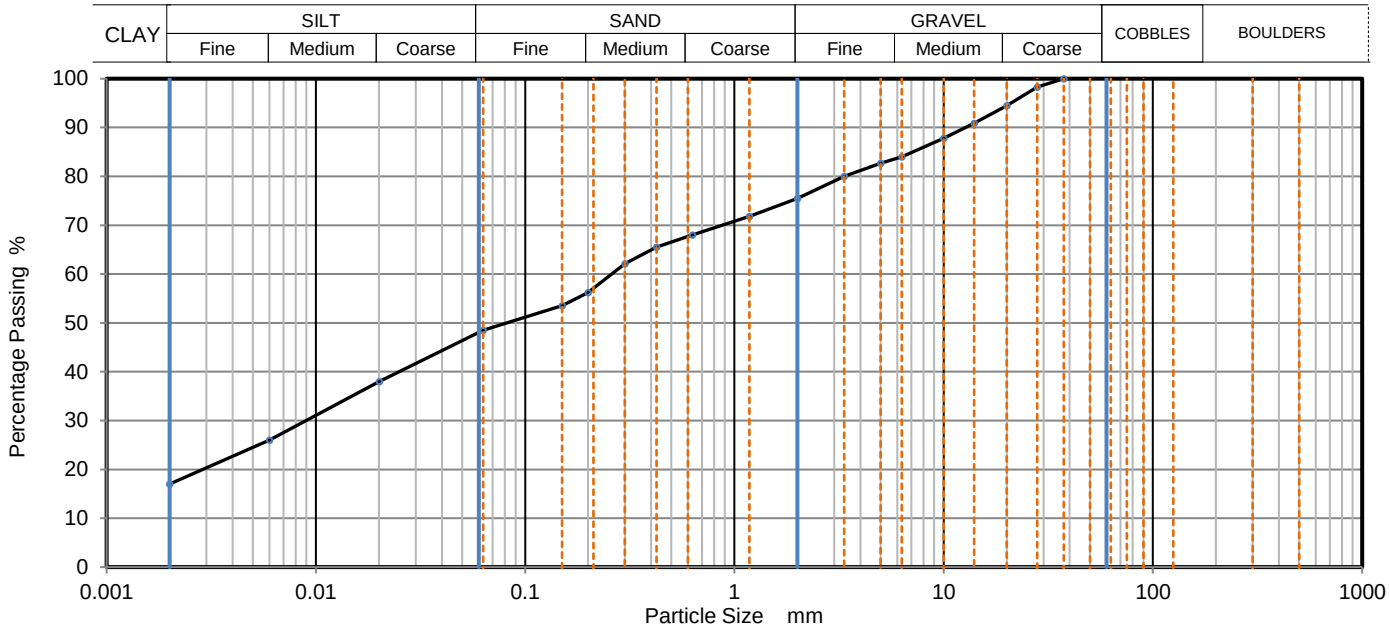
Laboratory Test Report	2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 4

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH01	5.00	B22	Wet Sieve + Pipette	Brown silty, gravelly, sandy CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	38
		0.0060	26
		0.0020	17
37.5	100		
28	98		
20	95		
14	91		
10	88		
6.3	84		
5	83		
3.35	80		
2	76	Particle density	(assumed)
1.18	72	2.65	Mg/m3
0.63	68		
0.425	66		
0.3	62		
0.2	56		
0.15	54		
0.063	49		

Dry Mass of sample, g: 3083

Sample Proportions	% dry mass
Very coarse	0
Gravel	25
Sand	27
Silt	31
Clay	17

Grading Analysis		
D100	mm	37.5
D60	mm	0.26
D30	mm	0.00879
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

IAN FARMER ASSOCIATES

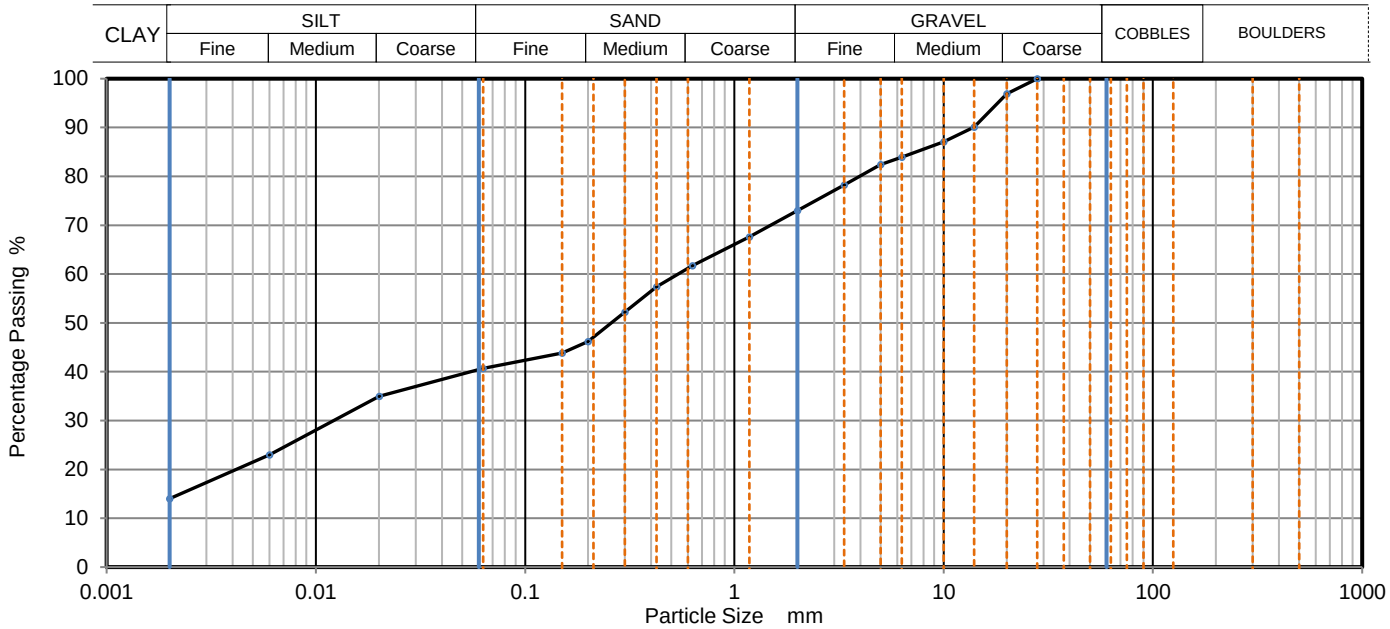
Laboratory Test Report	2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 5

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH01	7.50	B29	Wet Sieve + Pipette	Brown gravelly, sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	35
		0.0060	23
		0.0020	14
28	100		
20	97		
14	90		
10	87		
6.3	84		
5	82		
3.35	78		
2	73	Particle density	(assumed)
1.18	68	2.65	Mg/m3
0.63	62		
0.425	57		
0.3	52		
0.2	46		
0.15	44		
0.063	41		

Dry Mass of sample, g	2304

Sample Proportions	% dry mass
Very coarse	0
Gravel	27
Sand	32
Silt	26
Clay	14

Grading Analysis		
D100	mm	28
D60	mm	0.54
D30	mm	0.0121
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

IAN FARMER ASSOCIATES

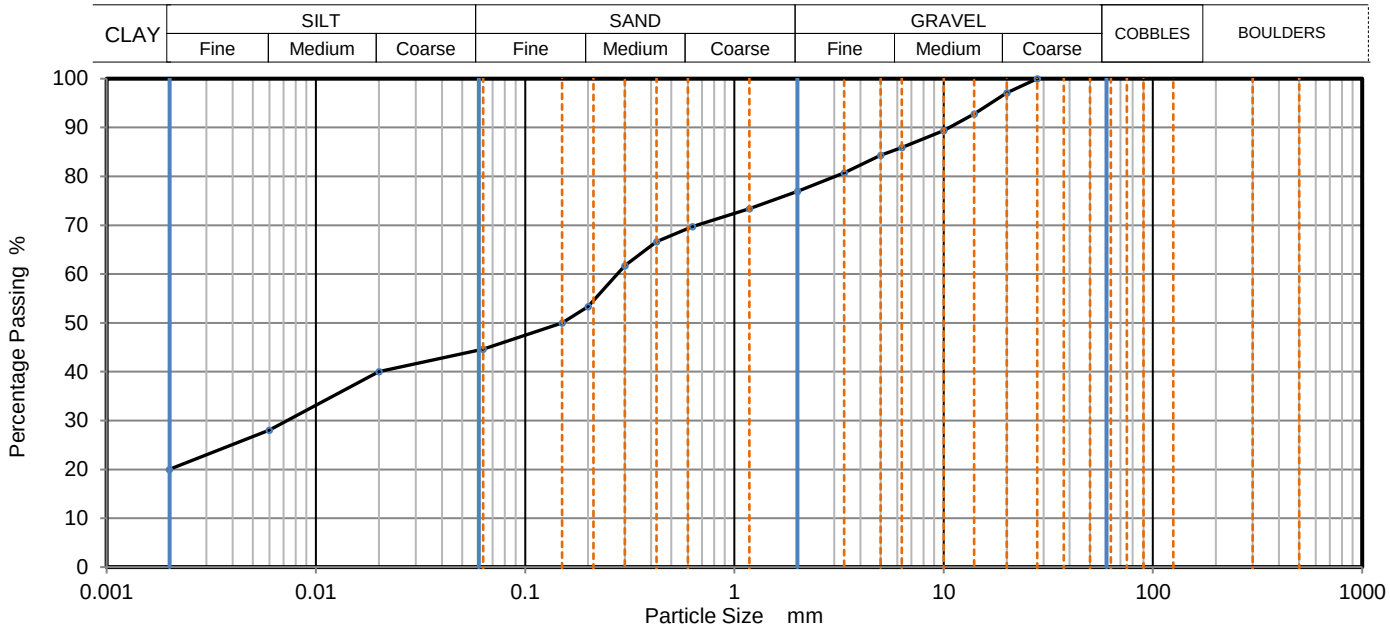
Laboratory Test Report	2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 6

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH01	12.00	B40	Wet Sieve + Pipette	Brown gravelly, sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	40
		0.0060	28
		0.0020	20
28	100		
20	97		
14	93		
10	89		
6.3	86		
5	84		
3.35	81		
2	77	Particle density	(assumed)
1.18	73	2.65	Mg/m3
0.63	70		
0.425	67		
0.3	62		
0.2	53		
0.15	50		
0.063	45		

Dry Mass of sample, g	2018

Sample Proportions	% dry mass
Very coarse	0
Gravel	23
Sand	32
Silt	24
Clay	20

Grading Analysis		
D100	mm	28
D60	mm	0.276
D30	mm	0.007
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

IAN FARMER ASSOCIATES

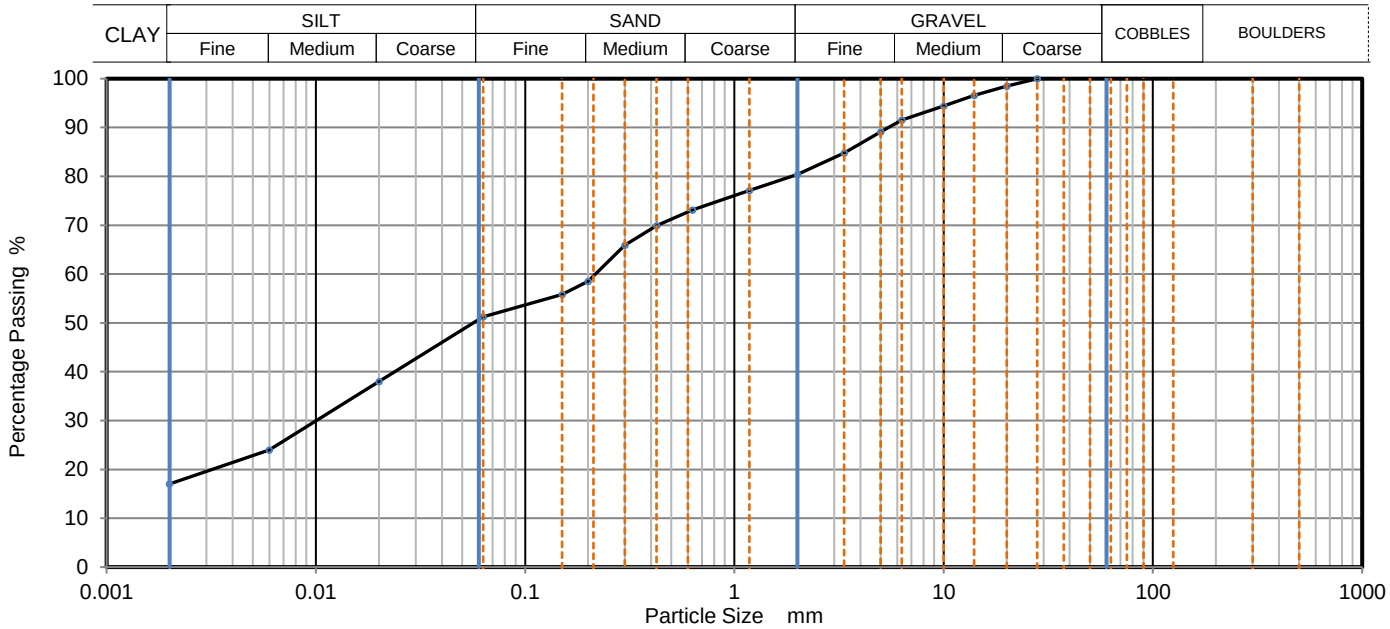
Laboratory Test Report	2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 7

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH01	15.00	B46	Wet Sieve + Pipette	Brown gravelly, sandy CLAY/SILT



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	38
		0.0060	24
		0.0020	17
28	100		
20	99		
14	97		
10	94		
6.3	92		
5	89		
3.35	85		
2	80	Particle density	(assumed)
1.18	77	2.65	Mg/m3
0.63	73		
0.425	70		
0.3	66		
0.2	59		
0.15	56		
0.063	51		

Dry Mass of sample, g	1345

Sample Proportions	% dry mass
Very coarse	0
Gravel	20
Sand	29
Silt	35
Clay	17

Grading Analysis		
D100	mm	28
D60	mm	0.217
D30	mm	0.0102
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

IAN FARMER ASSOCIATES

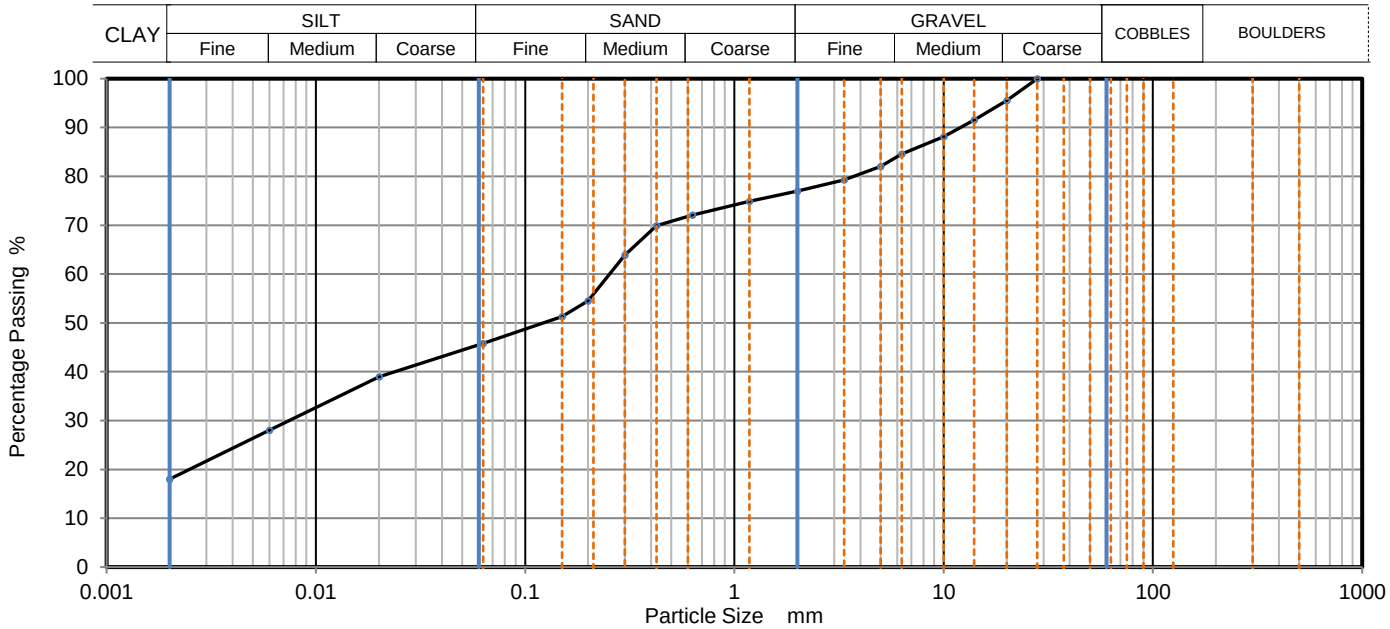
Laboratory Test Report	2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 8

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH02	2.00	B14	Wet Sieve + Pipette	Brown gravelly, sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	39
		0.0060	28
		0.0020	18
28	100		
20	96		
14	92		
10	88		
6.3	85		
5	82		
3.35	79		
2	77	Particle density	(assumed)
1.18	75	2.65	Mg/m3
0.63	72		
0.425	70		
0.3	64		
0.2	55		
0.15	51		
0.063	46		

Dry Mass of sample, g	1610

Sample Proportions	% dry mass
Very coarse	0
Gravel	23
Sand	31
Silt	28
Clay	18

Grading Analysis		
D100	mm	28
D60	mm	0.254
D30	mm	0.0074
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

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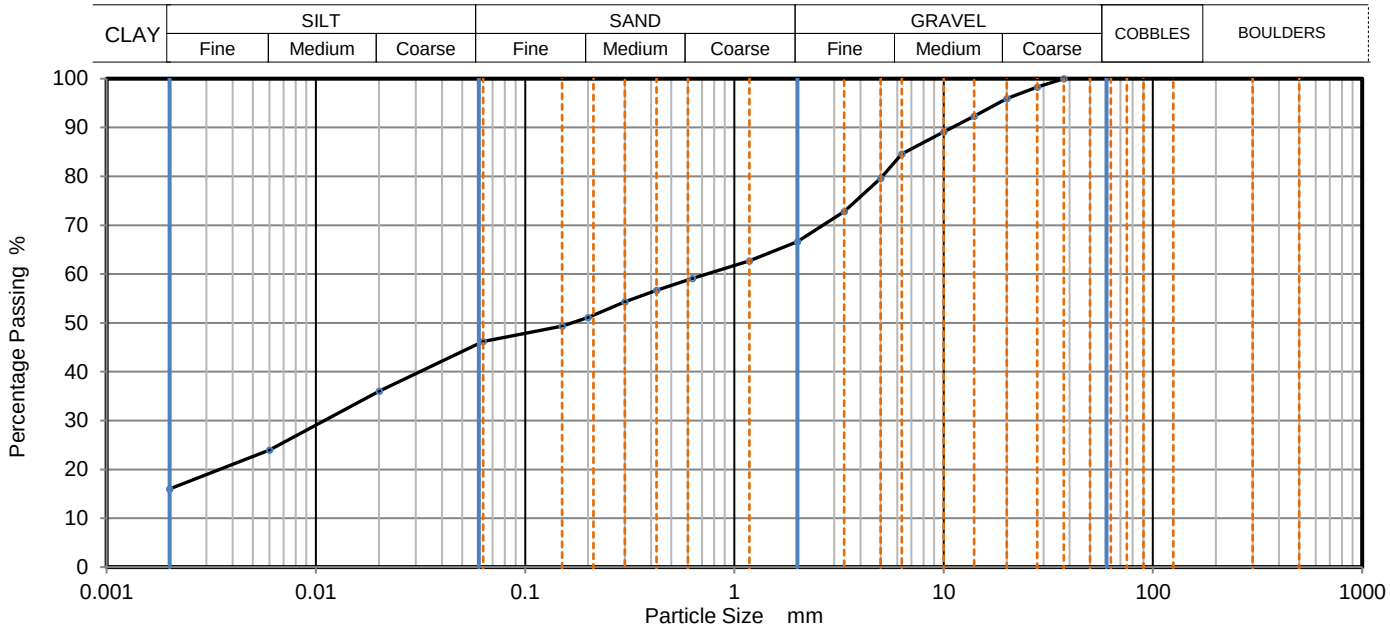
Laboratory Test Report	2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 9

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH02	5.00	B24	Wet Sieve + Pipette	Brown gravelly, sandy, silty CLAY



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	36
		0.0060	24
		0.0020	16
37.5	100		
28	98		
20	96		
14	92		
10	89		
6.3	85		
5	80		
3.35	73		
2	67	Particle density	(assumed)
1.18	63	2.65	Mg/m3
0.63	59		
0.425	57		
0.3	54		
0.2	51		
0.15	49		
0.063	46		

Dry Mass of sample, g	2172

Sample Proportions	% dry mass
Very coarse	0
Gravel	33
Sand	20
Silt	31
Clay	16

Grading Analysis		
D100	mm	37.5
D60	mm	0.74
D30	mm	0.0111
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

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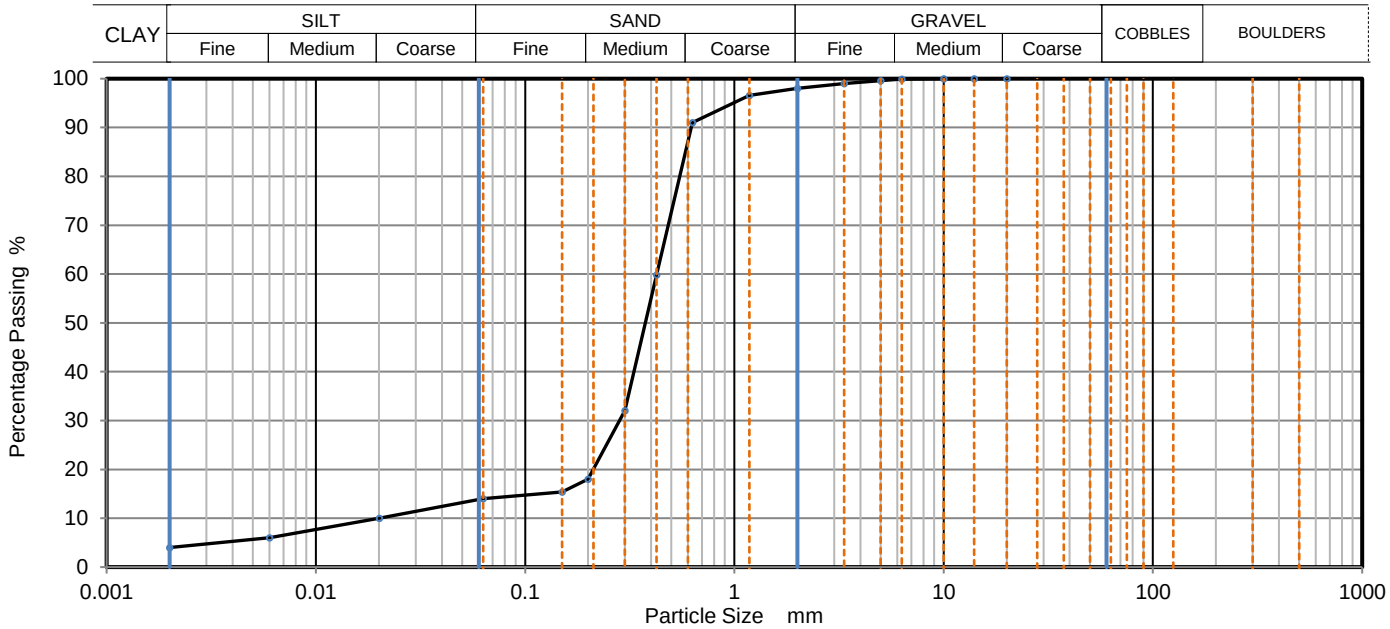
Laboratory Test Report	2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

Client: Kronospan Limited **Page:** 10

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH02	7.50	B31	Wet Sieve + Pipette	Brown slightly gravelly, silty SAND



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	10
		0.0060	6
		0.0020	4
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	98	Particle density	(assumed)
1.18	97	2.65	Mg/m3
0.63	91		
0.425	60		
0.3	32		
0.2	18		
0.15	15		
0.063	14		

Dry Mass of sample, g: 632

Sample Proportions	% dry mass
Very coarse	0
Gravel	2
Sand	84
Silt	10
Clay	4

Grading Analysis		
D100	mm	10
D60	mm	0.426
D30	mm	0.283
D10	mm	0.0196
Uniformity Coefficient		22
Curvature Coefficient		9.6

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

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Laboratory Test Report 2231512 / 2

Site: RFQ - 132KV Kronospan **Job Number:** 2231512

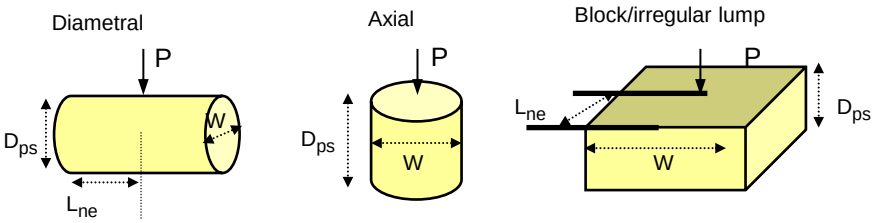
Client: Kronospan Limited **Page:** 11

Point Load Strength Index Tests
Summary of Results

Borehole No.	Depth m	Sample	Rock Type and Test condition	Test Type see ISRM: Type (D, A, I, B)	Test Type see ISRM: Direction (PL, PD or U)	Failure Valid (Y/N)	Dimensions: Lne mm	Dimensions: W mm	Dimensions: Dps mm	Dimensions: Dps' mm	Force P kN	Equivalent diameter, De mm	Point Load Strength Index: Is . MPa	Point Load Strength Index: Is (50) MPa	Remarks (including water content if measured)
BH02	19.37 - 19.43	C46	Grey MUD/SILTSTONE As received	I	U	YES	44.0	85.71 70.51	70.2	65.2	0.1	83.6	0.01	0.01	
BH02	19.37 - 19.43	C46	Grey MUD/SILTSTONE As received	I	U	YES	23.9	52.49 48.65	38.5	25.5	0.3	49.8	0.11	0.11	

Test Type
D - Diametral, A - Axial, I - Irregular Lump, B - Block
Direction
PL - Parallel to planes of weakness
PD - Perpendicular to planes of weakness
U - Unknown or random
Dimensions
Dps - Distance between platens (platen separation)
Dps' - at failure (see ISRM note 6)
Lne - Length from platens to nearest free end
W - Width of shortest dimension perpendicular to load, P
Size factor, F = (De/50)0.45 for all tests.

Detailed legend for test and dimensions, based on ISRM



Method of Preparation: ISRM 2007 Suggested method for point load strength index (pages 125 - 132)

Method of Test: ISRM 2007 Suggested method for point load strength index (pages 125 - 132)

Results reported relate only to the samples tested.

Final Test Report - 2231512 / 2

Site:	RFQ - 132KV Kronospan
Job Number:	2231512
Originating Client:	Kronospan Limited

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Samples will be retained for 28 days from date of issue of the final test report before being disposed of, unless we receive written instruction to the contrary.

Report End

Report Issue Date: 12/09/2025

IAN FARMER ASSOCIATES

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F.A.O.

Final Test Report - 2231512A / 1

Site:	RFQ - 132KV Kronospan
Job Number:	2231512A
Originating Client:	Kronospan Limited
Originating Reference:	2231512
Date Sampled:	Not Given
Date Scheduled:	08/08/2025
Date Testing Started:	12/08/2025
Date Testing Finished:	29/08/2025

Previous Reports		Amendments	Date Issued

Amendments:

Authorised By:

Tim Robinson
Quality Supervisor

Report Issue Date: 01/09/2025

Constructionline Part of Capita plc

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AGS

Site: RFQ - 132KV Kronospan **Job Number:** 2231512A

Client: Kronospan Limited **Page:** 2

Determination of Water Content, Liquid Limit and Plastic Limit and Derivation of Plasticity and Liquidity Index

Borehole / Trial Pit	Depth (m)	Sample	Natural Water Content %	Sample Preparation Natural = Hand picked Sieved = Washed on 425µm			Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	One-point PI Only		Description / Remarks
				Natural / Sieved	Passing %	Calc. WC %						Cone Penetration (mm)	Correction Factor	
BH04	1.20	B9	10.9	Sieved	36	30	39	19	20	0.57	CI	20.4 20.2	0.996	Brown gravelly CLAY/SILT
BH04	3.90	D17	12.3	Natural	100	12	36	19	17	-0.39	CI	19.6 19.6	1.009	Brown silty CLAY
BH04	7.70	D26	25	Natural	97	26	41	19	22	0.31	CI	19.9 19.9	1.002	Brown slightly gravelly, silty CLAY
BH04	9.90	D32	15.4	Natural	100	15	42	22	20	-0.33	CI	20.3 20.3	0.996	Brown slightly gravelly, silty CLAY

Method of Preparation: BS EN ISO 17892-1 : 2014 + A1 : 2022 : Clause 5.1 Water content test preparation
BS EN ISO 17892-12 : 2018 + A2 : 2022 : Clause 5.2 Specimen preparation for liquid and plastic limits

Method of Test: BS EN ISO 17892-1 : 2014 + A1 : 2022 : Clause 5.2 Water content test execution
BS EN ISO 17892-12 : 2018 + A2 : 2022 : Clause 5.3 Determination of liquid limit by the fall cone method. 80g / 30° Cone
BS EN ISO 17892-12 : 2018 + A2 : 2022 : Clause 5.5 Determination of plastic limit

UKAS TESTING 1464

General Remarks: All samples tested with increasing water content, unless otherwise stated.
All samples tested to four-point method, unless the extra 'One-point PI Only' data is reported.

Results reported relate only to the samples tested.

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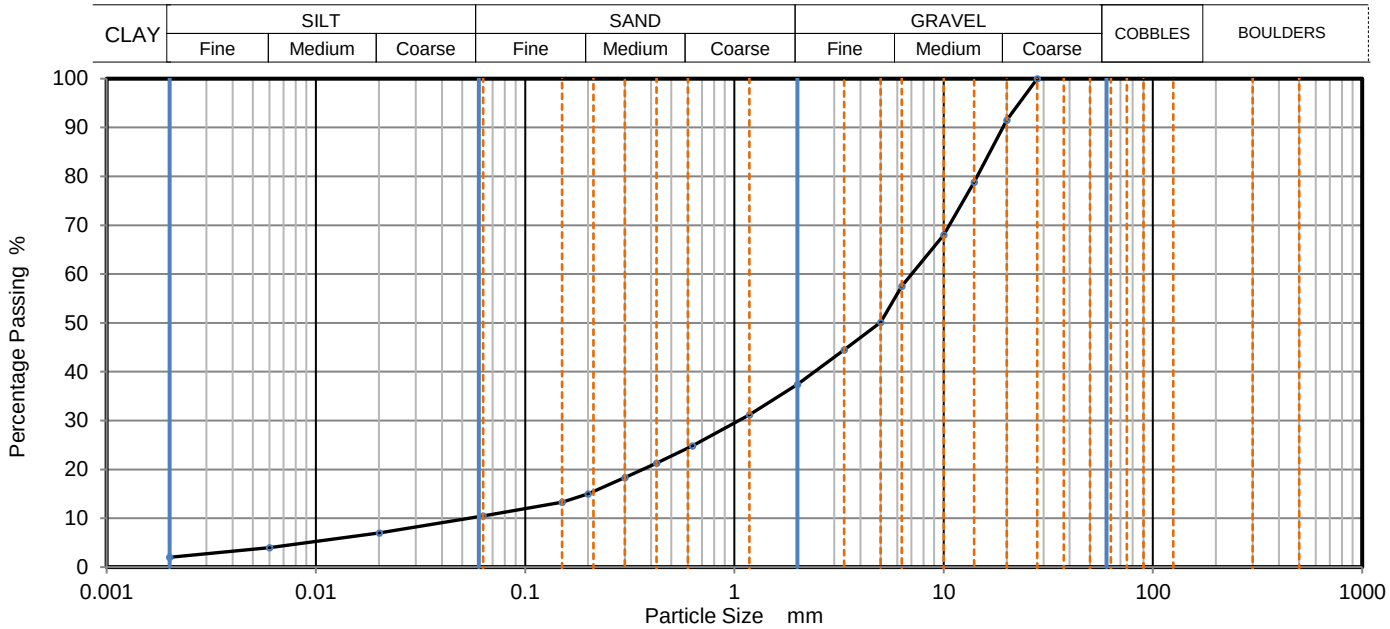
Laboratory Test Report	2231512A / 1

Site: RFQ - 132KV Kronospan **Job Number:** 2231512A

Client: Kronospan Limited **Page:** 3

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH03	3.00	D13	Wet Sieve + Pipette	Brown slightly silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	7
		0.0060	4
		0.0020	2
28	100		
20	92		
14	79		
10	68		
6.3	58		
5	50		
3.35	45		
2	37	Particle density	(assumed)
1.18	31	2.65	Mg/m3
0.63	25		
0.425	21		
0.3	18		
0.2	15		
0.15	13		
0.063	11		

Dry Mass of sample, g	430

Sample Proportions	% dry mass
Very coarse	0
Gravel	63
Sand	27
Silt	8
Clay	2

Grading Analysis		
D100	mm	28
D60	mm	7.04
D30	mm	1.05
D10	mm	0.0543
Uniformity Coefficient		130
Curvature Coefficient		2.9

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Mass of sample available was less than that recommended in the British Standard for a representative specimen.

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

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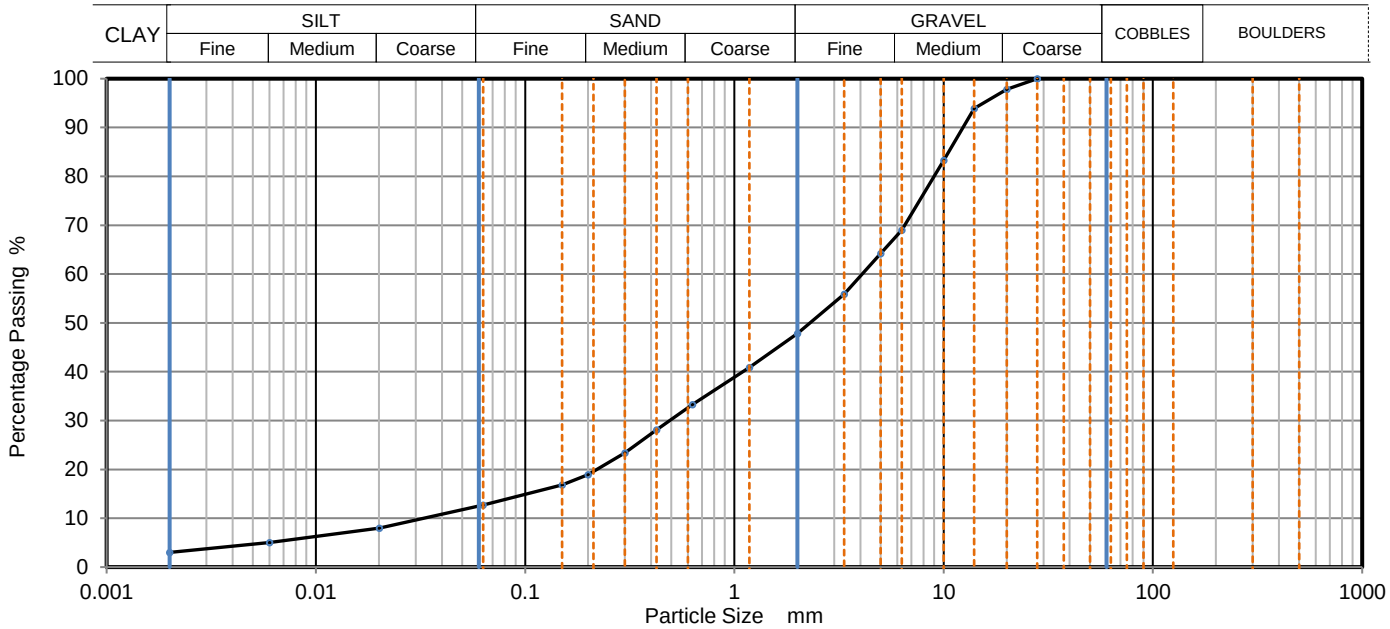
Laboratory Test Report	2231512A / 1

Site: RFQ - 132KV Kronospan **Job Number:** 2231512A

Client: Kronospan Limited **Page:** 4

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH03	4.00	B16	Wet Sieve + Pipette	Brown slightly silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	8
		0.0060	5
		0.0020	3
28	100		
20	98		
14	94		
10	83		
6.3	69		
5	64		
3.35	56		
2	48	Particle density	(assumed)
1.18	41	2.65	Mg/m3
0.63	33		
0.425	28		
0.3	23		
0.2	19		
0.15	17		
0.063	13		

Dry Mass of sample, g	2533

Sample Proportions	% dry mass
Very coarse	0
Gravel	52
Sand	35
Silt	10
Clay	3

Grading Analysis		
D100	mm	28
D60	mm	4.08
D30	mm	0.489
D10	mm	0.0317
Uniformity Coefficient		130
Curvature Coefficient		1.9

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

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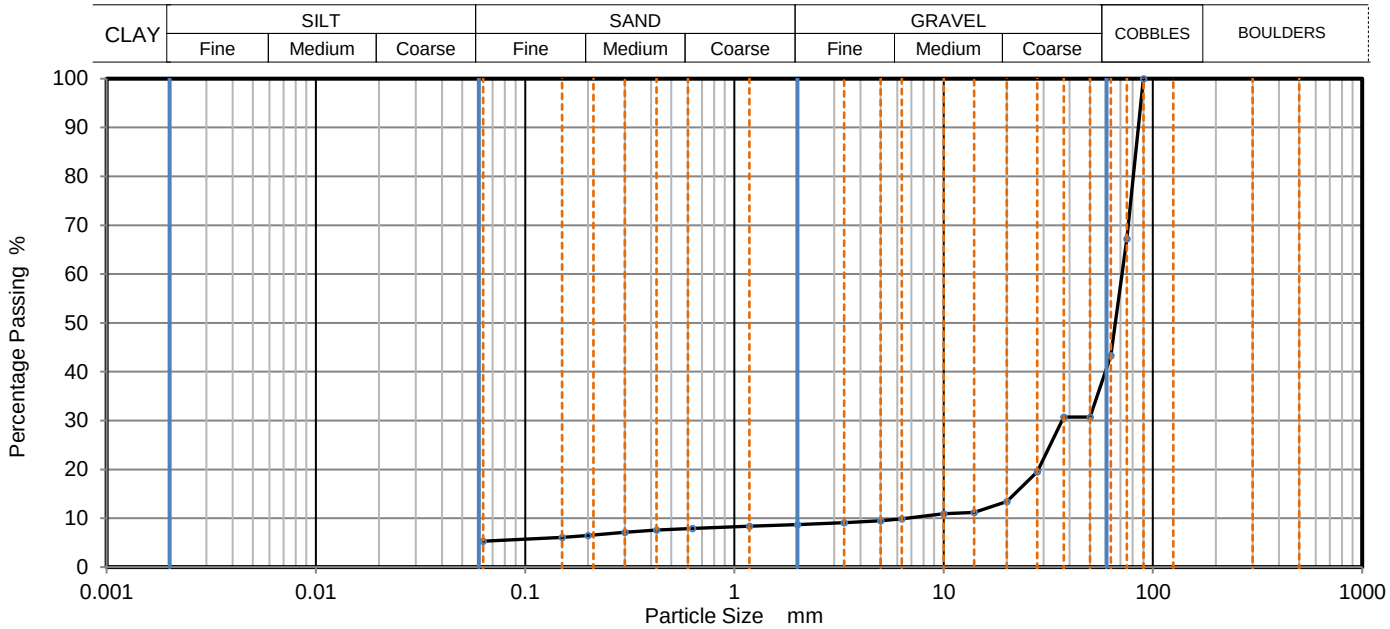
Laboratory Test Report 2231512A / 1

Site: RFQ - 132KV Kronospan **Job Number:** 2231512A

Client: Kronospan Limited **Page:** 5

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH03	6.00	B20	Wet Sieve	Brown silty, clayey GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
90	100		
75	67		
63	43		
50	31		
37.5	31		
28	20		
20	13		
14	11		
10	11		
6.3	10		
5	10		
3.35	9		
2	9		
1.18	8		
0.63	8		
0.425	8		
0.3	7		
0.2	7		
0.15	6		
0.063	5		

Dry Mass of sample, g 2586

Sample Proportions	% dry mass
Very coarse	57
Gravel	35
Sand	3
Fines <0.063mm	5

Grading Analysis		
D100	mm	90
D60	mm	71.2
D30	mm	36.9
D10	mm	6.72
Uniformity Coefficient		11
Curvature Coefficient		2.8

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Mass of sample available was less than that recommended in the British Standard for a representative specimen.

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method

UKAS TESTING 1464

Result reported relates only to the sample tested.

IAN FARMER ASSOCIATES

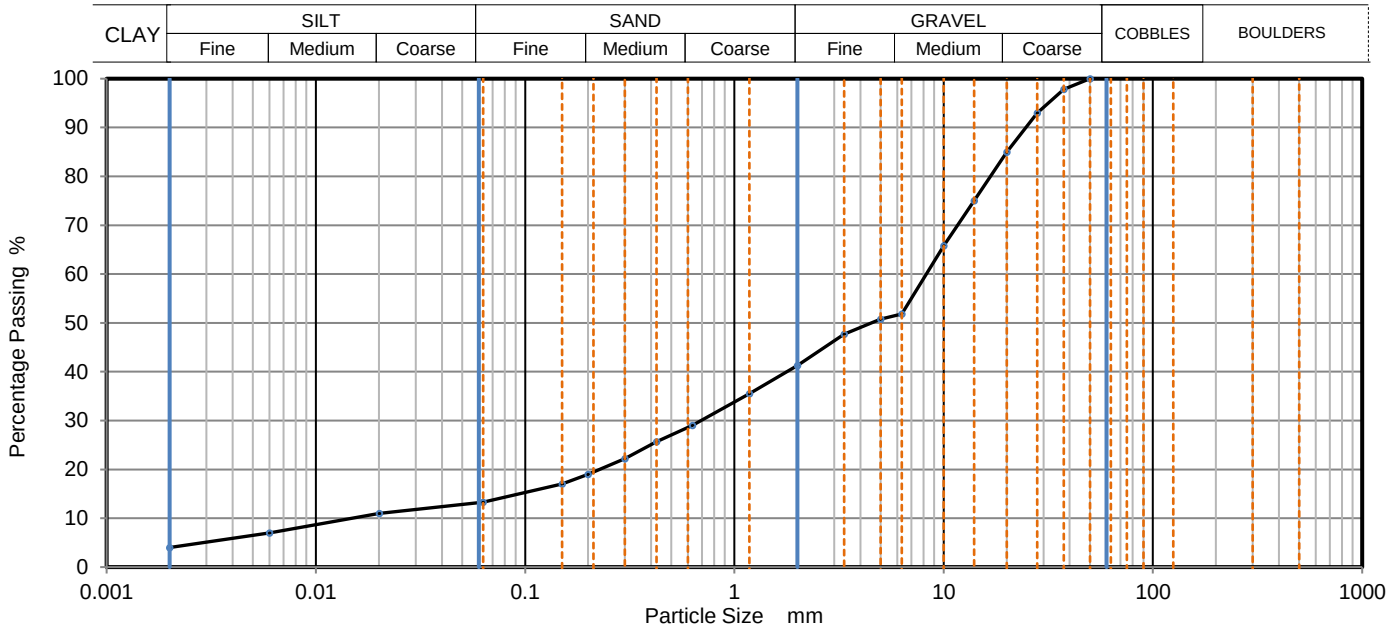
Laboratory Test Report	2231512A / 1

Site: RFQ - 132KV Kronospan **Job Number:** 2231512A

Client: Kronospan Limited **Page:** 6

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Borehole / Trial Pit	Depth (m)	Sample	Testing Type	Description
BH04	3.00	B15	Wet Sieve + Pipette	Brown slightly clayey, silty, sandy GRAVEL



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
		0.0201	11
		0.0060	7
		0.0020	4
50	100		
37.5	98		
28	93		
20	85		
14	75		
10	66		
6.3	52		
5	51		
3.35	48		
2	41	Particle density	(assumed)
1.18	36	2.65	Mg/m3
0.63	29		
0.425	26		
0.3	22		
0.2	19		
0.15	17		
0.063	13		

Dry Mass of sample, g	3837

Sample Proportions	% dry mass
Very coarse	0
Gravel	59
Sand	28
Silt	9
Clay	5

Grading Analysis		
D100	mm	50
D60	mm	8.26
D30	mm	0.691
D10	mm	0.0167
Uniformity Coefficient		490
Curvature Coefficient		3.5

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Method of Preparation: BS EN 17892:Part4:2016, clause 5.2.2 Preparation of samples for wet sieving test
BS EN 17892:Part4:2016, clause 5.4.2 Preparation of samples for pipette test

Method of Test: BS EN 17892:Part4:2016, clause 5.2.3 Determination of particle size distribution by wet sieving method
BS EN 17892:Part4:2016, clause 5.4.3 Determination of sedimentation by pipette method

UKAS TESTING 1464

Result reported relates only to the sample tested.

Final Test Report - 2231512A / 1

Site:	RFQ - 132KV Kronospan
Job Number:	2231512A
Originating Client:	Kronospan Limited

All opinions and interpretations contained within this report are outside of our Scope of Accreditation.

This test report shall not be reproduced, except in full and only with the written permission of Ian Farmer Associates Ltd.

Samples will be retained for 28 days from date of issue of the final test report before being disposed of, unless we receive written instruction to the contrary.

Report End

Report Issue Date: 01/09/2025

APPENDIX 4

THERMAL RESITIVTY TESTS

Soil Environment Services Ltd

Soil Survey 25 years
Thermal Testing 15 years

LABORATORY TEST CERTIFICATE

Client:	Ian Farmer Associates Unit 14-15 Ruford Court Warrington WA1 4RF
Contact:	Katie Hirst
Client Job Ref.:	Job ref: 2231512 RFQ-132KV Kronospan BH01
Sampling Date:	15/07/2025
Samples Received:	17/07/2025
Analysis Completed:	22/07/2025
Certificate Issued:	23/07/2025
Material:	Natural soils
Tests:	Thermal Resistivity, Dry Density

Notes:

1. Samples disposed of 7 days from date of Certificate issue unless otherwise instructed.
2. Unless otherwise stated, Soil Environment Services Ltd was not responsible for sampling.
3. This report shall not be reproduced, except in full, without written approval of Soil Environment Services Ltd.
4. Results reported relate only to the samples supplied.

Tested on behalf of *Soil Environment Services* by:

Louise Tavasso BSc M I SoilSci
Environmental Consultant

Checked by:

Dr Robin S Davies BSc PhD (Soil Physics) F.I.SoilSci
Managing Director

Quality and Standards

This testing has been undertaken by Soil Environment Services who have 15 years' experience in testing the thermal properties of soils, rocks and aggregates and over 30 years' experience in testing the physical and mechanical properties of these materials. All work is therefore based on a full theoretical understanding of the processes involved with attention to detail at the research scientist *level. We have pioneered new and novel techniques with statistically valid in-house research to deliver test values of the highest standard to meet the requirements of the following specifications.*

ENA TS 97-1, Issue 2 2016
ASTM D5334 - 14
IEEE Std 442 – 2017
National Grid TS 3.05.07
BS 1377

All test equipment is calibrated to manufacturer's requirements.

Soil Environment Services Ltd
Unit 8, Stocksfield Hall, Stocksfield,
Northumberland, NE43 7TN

Tel: 01661 844827 Email: rd@soilenvironmentservices.co.uk

www.soilenvironmentservices.co.uk

Company Registration Number 4538894 England and Wales
Directors: Dr R S Davies BSc PhD MISoilSci. Dr M T Davies BSc PhD

Thermal Properties - Test Data					
Laboratory sample ref:	**Sample Moisture Status**	**Average Resistivity** (Km/W)	**Test Moisture** (% w/w)	**Dry Bulk Density** (Mg/m^3)	**Strata Description**
Sample ID 10 - Depth 2.0-2.3 m (BH01)	As received Zero m.c.	**0.494** **3.525**	14.74 0.00	1.837	Wet sandy very gravelly CLAY
Sample ID 17 - Depth 4.0-4.3 m (BH01)	As received Zero m.c.	**0.583** **1.385**	17.38 0.00	1.773	Soft sandy gravelly CLAY
Sample ID 24 - Depth 6.0-6.3 m (BH01)	As received Zero m.c.	**0.491** **1.111**	11.79 0.00	1.792	Soft sandy gravelly CLAY
Sample ID 30 - Depth 8.0-8.3 m (BH01)	As received Zero m.c.	**0.411** **1.035**	9.63 0.00	2.001	Stiff sandy very gravelly CLAY
Sample ID 34 - Depth 10.0-10.3 m (BH01)	As received Zero m.c.	**0.500** **1.070**	11.77 0.00	1.841	Soft sandy gravelly CLAY

Notes:

1. Samples re-compacted at as received moisture using BS1377 2.5 kg hammer @ 9 impacts per layer for 3 layers or equivalent.
2. Average of three readings in the test sample if possible.

A Test specifications

1. Thermal test method: *Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure. ASTM Designation D5334-14, 2015.*

B Test equipment

1. TEMPOS, KD2 or similar Thermal analyser.
2. ELE Proctor ~1 litre mould with an ELE 42.5 kg hammer. Or ~80 mm dia aluminium cores.
3. Impact Test Equipment soil drying oven set at 105°C.

Soil Environment Services Ltd

Soil Survey 25 years
Thermal Testing 15 years

LABORATORY TEST CERTIFICATE

Client:	Ian Farmer Associates Unit 14-15 Ruford Court Warrington WA1 4RF
Contact:	Katie Hirst
Client Job Ref.:	Job ref: 2231512 RFQ-132KV Kronospan BH01
Sampling Date:	16/07/2025
Samples Received:	21/07/2025
Analysis Completed:	23/07/2025
Certificate Issued:	24/07/2025
Material:	Natural soils
Tests:	Thermal Resistivity, Dry Density

Notes:

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Thermal Properties - Test Data					
Laboratory sample ref:	**Sample Moisture Status**	**Average Resistivity** (Km/W)	**Test Moisture** (% w/w)	**Dry Bulk Density** (Mg/m^3)	**Strata Description**
Sample ID 38 Depth 12.0-12.3 m (BH01)	As received Zero m.c.	**0.486** **1.038**	10.15 0.00	1.860	Stiff sandy gravelly CLAY
Sample ID 44 Depth 14.0-14.3 m (BH01)	As received Zero m.c.	**0.471** **1.024**	14.60 0.00	1.927	Wet sandy slightly gravelly CLAY
Sample ID 47 Depth 16.0-16.3 m (BH01)	As received Zero m.c.	**0.540** **1.237**	15.27 0.00	1.948	Wet sandy slightly gravelly CLAY
Sample ID 52 Depth 18.0-18.3 m (BH01)	As received Zero m.c.	**0.508** **1.091**	14.32 0.00	1.911	Wet sandy slightly gravelly CLAY
Sample ID 57 Depth 20.0-20.3 m (BH01)	As received Zero m.c.	**0.492** **1.316**	11.74 0.00	2.015	Sandy slightly gravelly CLAY
Sample ID 61 Depth 22.0-22.3 m (BH01)	As received Zero m.c.	**0.554** **1.292**	12.59 0.00	1.964	Slightly wet sandy slightly gravelly CLAY
Sample ID 67 Depth 24.0-24.3 m (BH01)	As received Zero m.c.	**0.504** **1.501**	13.36 0.00	1.996	Wet sandy slightly gravelly CLAY

Notes:

1. Samples re-compacted at as received moisture using BS1377 2.5 kg hammer @ 9 impacts per layer for 3 layers or equivalent.
2. Average of three readings in the test sample if possible.

A Test specifications

1. Thermal test method: *Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure. ASTM Designation D5334-14, 2015.*

B Test equipment

1. TEMPOS, KD2 or similar Thermal analyser.
2. ELE Proctor ~1 litre mould with an ELE 42.5 kg hammer. Or ~80 mm dia aluminium cores.
3. Impact Test Equipment soil drying oven set at 105°C.

Soil Environment Services Ltd

Soil Survey 25 years
Thermal Testing 15 years

LABORATORY TEST CERTIFICATE

Client:	Ian Farmer Associates Unit 14-15 Ruford Court Warrington WA1 4RF
Contact:	Katie Hirst
Client Job Ref.:	Job ref: 2231512 RFQ-132KV Kronospan BH02
Sampling Date:	17/07/2025 and 18/07/2025
Samples Received:	23/07/2025
Analysis Completed:	25/07/2025
Certificate Issued:	25/07/2025
Material:	Natural soils
Tests:	Thermal Resistivity, Dry Density

Notes:

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Thermal Properties - Test Data					
Laboratory sample ref:	**Sample Moisture Status**	**Average Resistivity** (Km/W)	**Test Moisture** (% w/w)	**Dry Bulk Density** (Mg/m^3)	**Strata Description**
Sample ID 12 Depth 2.0-2.3 m (BH02)	As received Zero m.c.	**0.508** **0.982**	14.91 0.00	1.814	Orange/brown gravelly soft CLAY
Sample ID 19 Depth 4.0-4.3 m (BH02)	As received Zero m.c.	**0.439** **1.015**	13.78 0.00	1.974	Gravelly soft CLAY
Sample ID 26 Depth 6.0-6.3 m (BH02)	As received Zero m.c.	**0.525** **1.112**	12.04 0.00	1.843	Orange/brown sandy gravelly CLAY
Sample ID 32 Depth 8.0-8.3 m (BH02)	As received Zero m.c.	**0.486** **1.286**	12.11 0.00	1.882	Red/brown slighly gravelly slighlt clayey SAND
Sample ID 38 Depth 10.5-11.0 m (BH02)	As received Zero m.c.	**0.652** **1.485**	15.34 0.00	1.843	Grey weak MUDSTONE

Notes:

1. Samples re-compacted at as received moisture using BS1377 2.5 kg hammer @ 9 impacts per layer for 3 layers or equivalent.
2. Average of three readings in the test sample if possible.

A Test specifications

1. Thermal test method: *Standard Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure. ASTM Designation D5334-14, 2015.*

B Test equipment

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Soil Environment Services Ltd

Soil Survey 25 years
Thermal Testing 15 years

LABORATORY TEST CERTIFICATE

Client:	Ian Farmer Associates Unit 14-15 Ruford Court Warrington WA1 4RF
Contact:	Katie Hirst
Client Job Ref.:	Job ref: 2231512 RFQ-132KV Kronospan BHs 02, 03, 04
Sampling Date:	14/07/2025 to 29/07/2025
Samples Received:	27/07/2025 and 30/07/2025
Analysis Completed:	21/08/2025
Certificate Issued:	04/08/2025
Material:	Natural soils
Tests:	Thermal Resistivity, Dry Density

Notes:

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Thermal Properties - Test Data					
Laboratory sample ref:	**Sample Moisture Status**	**Average* Resistivity** (Km/W)	**Test Moisture** (% w/w)	**Dry Bulk Density** ($Mg/m^{3)}$	**Strata Description**
BH02 Sample 41 Depth 12.5-12.86 m	As received Zero m.c.	**0.526** **1.060**	6.67 0.00	2.069	Grey soft silty CLAY with gravel
BH02 Sample 42 Depth 15.2-15.5 m	As received Zero m.c.	**0.546** **1.199**	10.75 0.00	1.936	Grey/brown firm silty CLAY with gravel
BH02 Sample 44 Depth 17.2-17.5 m	As received Zero m.c.	**0.644** **1.447**	11.02 0.00	1.867	Grey/brown firm silty CLAY with gravel
BH02 Sample 45 Depth 18.85-19.15 m	As received Zero m.c.	**0.821** **2.010**	12.42 0.00	1.775	Dark grey very stiff CLAY with SHALE
BH03 Sample 9 Depth 1.2-1.7 m	As received Zero m.c.	**0.770** **2.323**	10.56 0.00	1.639	Brown dry silty slightly gravelly CLAY
BH03 Sample 14 Depth 3.0-3.7 m	As received Zero m.c.	**0.777** **2.312**	7.71 0.00	1.683	Very sady slightly clayey GRAVEL
BH03 Sample 18 Depth 5.0-6.0 m	As received Zero m.c.	**0.312** **1.551**	14.07 0.00	2.004	Very wet sandy fine to coarse GRAVEL
BH03 Sample 22 Depth 9.75-10.0 m	As received Zero m.c.	**0.840** **3.973**	8.19 0.00	1.699	Coarse clayey GRAVEL

Thermal Properties - Test Data					
Laboratory sample ref:	**Sample Moisture Status**	**Average* Resistivity** (Km/W)	**Test Moisture** (% w/w)	**Dry Bulk Density** ($Mg/m^{3)}$	**Strata Description**
BH04 Sample 12 Depth 2.0-2.5 m	As received	**1.087**	12.07		Sandy clayey GRAVEL
	Zero m.c.	**2.639**	0.00	1.686	
BH04 Sample 19 Depth 4.1-4.6 m	As received	**0.769**	16.87		Slighty sandy. Slightly clayey GRAVEL
	Zero m.c.	**1.734**	0.00	1.632	
BH04 Sample 24 Depth 6.2-6.5 m	As received	**0.718**	13.58		Pale brown sandy CLAY and very stiff greem sandy CLAY
	Zero m.c.	**1.902**	0.00	1.797	
BH04 Sample 29 Depth 8.5-9.0 m	As received	**0.663**	9.86		Gravelly CLAY with gravally material in SPT void
	Zero m.c.	**1.536**	0.00	1.876	

Notes:

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