

Kiwa CMT Testing

Client:
AECOM
Royal Court
Basil Close
Chesterfield
S41 7SL



Report Number 74386/57776

Site: Sutton on Sea

Date: 22nd June 2018



**Trust
Quality
Progress**



Client:

AECOM
Royal Court
Basil Close
Chesterfield
S41 7SL

Date: 22.06.2018**Originator:** Mark Evans**Order Ref:** 60578623.1.2**Our Ref:** 57776/CH**Site:** Sutton on Sea**Document Control**

Document Prepared By: Brandon Fairweather Chemistry Administrator		
Document Authorised By: <i>PP</i> Mike Barham Departmental Manager		
Issue Number and Date	Issue 1	22/06/2018

1. Samples

1.1. The samples were delivered by the client to Kiwa CMT Testing on 13/06/2018

Sample References	Sample Description
K2 Gridline 2	Concrete core sample (see attached core logs)
DD1-2	Concrete core sample (see attached core logs)
KW2 Gridline2	Concrete core sample (see attached core logs)
Column Gridline 1	Concrete core sample (see attached core logs)
DD-EE2 Grid 2	Concrete core sample (see attached core logs)
Grid 2 22-3	Concrete core sample (see attached core logs)
Gridline P2	Concrete core sample (see attached core logs)
R1-2	Concrete core sample (see attached core logs)
X1-2	Concrete core sample (see attached core logs)
D3	Concrete core sample (see attached core logs)

2. Analysis:

2.1. The sample(s) were submitted for the following analysis

Sample References	Testing Requirements
All samples	1) Compressive strength 2) Close up photographs of crushed cores failure mode, including split faces before crushing 3) Cement content

2.2. The below are the testing methods use in the analysis

Testing	Testing Method	UKAS
Compressive strength	BSEN12504-1:2009	Yes
Cement content	BS 1881 : Part 124 : 2015	Yes

2.3.

Comments:
The test method used for the lime (CaO) determinations deviates from BS 1881 : Part 124 : 2015 only in terms of the indicator used.
Core DD1-2 could not be tested for compressive strength as this core consisted of three layers 35mm, 20mm and 65mm thick. None of these layers are large enough to be tested.

Kiwa CMT Testing



3. Results:

3.1. Detailed chemical results for the analysis can be found in Appendix 1, of this report

Appendix 1:
Certificates of Chemical Analysis

DETAILED ANALYTICAL RESULTS - CONCRETE

Cement Content in accordance with BS 1881 : Part 124 : 2015

Client	AECOM	Job No.	57776
Contact	Mark Evans	Site	Sutton on Sea
Order Ref	60578623.1.2	Date Received	13/06/2018
Sample Description	Concrete Cores	Date Analysed	19 - 20/06/2018
Test Methods	BS 1881 : Part 124 : 2015	Date Reported	22/06/2018

Analyte:	Units:	K2 Gridline 2	DD1-2	KW2 Gridline 2	Column M Gridline 1	Gridline DD- EE2
Lime CaO	%	12.78	13.46	12.95	13.39	12.66
Silica SiO ₂	%	5.07	4.54	4.76	4.80	4.70
Insoluble Residue	%	70.37	66.47	67.99	69.93	66.19
Loss on Ignition	%	7.61	11.36	10.11	7.38	8.60
Cement Content (Based on)	%	19.80	20.90	20.1	20.8	19.6
		Lime	Lime	Lime	Lime	Lime
	Kg/m ³ (+/- 25 Kg/m ³)	451	477	458	474	447

Assumptions made in calculating the above figures:

- 1) The cement is a basic Portland containing 64.5% CaO and 20.2% soluble silica.
- 2) There was no significant contribution to the lime or silica from the aggregate.
- 3) The oven dry density of the concrete is 2280 Kg/m³.

DETAILED ANALYTICAL RESULTS - CONCRETE**Cement Content in accordance with BS 1881 : Part 124 : 2015**

Client	AECOM	Job No.	57776
Contact	Mark Evans	Site	Sutton on Sea
Order Ref	60578623.1.2	Date Received	13/06/2018
Sample Description	Concrete Cores	Date Analysed	19 - 20/06/2018
Test Methods	BS 1881 : Part 124 : 2015	Date Reported	22/06/2018

Analyte:	Units:	Gridline P2 Gridline 2	Gridline 2 GL Z 2-3	Gridline R 1-2	Gridline X 1-2	Gridline D3
Lime CaO	%	13.66	16.34	15.94	13.42	10.76
Silica SiO ₂	%	5.65	5.50	5.60	4.58	4.96
Insoluble Residue	%	62.08	57.69	63.42	68.98	74.49
Loss on Ignition	%	11.55	12.35	9.43	8.98	5.63
Cement Content (Based on)	%	21.2 Lime	25.3 Lime	24.7 Lime	20.8 Lime	16.7 Lime
	Kg/m ³ (+/- 25 Kg/m ³)	483	577	563	474	381

Assumptions made in calculating the above figures:

- 1) The cement is a basic Portland containing 64.5% CaO and 20.2% soluble silica.
- 2) There was no significant contribution to the lime or silica from the aggregate.
- 3) The oven dry density of the concrete is 2280 Kg/m³.

Signed :

B Fairweather
Environmental Technician

Approved :

pp M. Barham
Chief Chemist



0528

Appendix 2:
Certificates of Compressive Strength

CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.01	Max Length Received (mm)	160.0								
Client Reference	GL K2 Grid Line 2	Min Length Received (mm)	160.0								
Orientation	Horizontal	Diameter (mm)	98.0								
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2428								
Max. nom. size of agg.	14mm	Excess Voidage (%)	1.0								
Date Drilled	23.05.18	Length After Capping (mm)	96.0								
Visual inspection including abnormalities	2 pieces	Length Diameter Ratio	0.98								
Condition Of Storage	Water	Reinforcement									
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>		Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*										
0	0										
0	0										
0	0										
Date Tested	20.06.18	* Distance of bar axis from nearest end									
Moisture condition at test	SSD	Load At Failure (kN)	452.8								
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	60.0								

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Explosive
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



Gary Peach
Department Manager
Building Products



CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.03	Max Length Received (mm)	230.0							
Client Reference	KW2 Grid Line 2	Min Length Received (mm)	220.0							
Orientation	Horizontal	Diameter (mm)	98.0							
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2425							
Max. nom. size of agg.	14mm	Excess Voidage (%)	0.5							
Date Drilled	23.05.18	Length After Capping (mm)	102.0							
Visual inspection including abnormalities	Normal	Length Diameter Ratio	1.04							
Condition Of Storage	Water	Reinforcement								
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*									
0	0									
0	0									
0	0									
Date Tested	20.06.18	* Distance of bar axis from nearest end								
Moisture condition at test	SSD	Load At Failure (kN)	450.6							
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	59.7							

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



Gary Peach
Department Manager
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CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.04	Max Length Received (mm)	310.0							
Client Reference	Col M Grid Line 1	Min Length Received (mm)	305.0							
Orientation	Horizontal	Diameter (mm)	98.0							
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2388							
Max. nom. size of agg.	14mm	Excess Voidage (%)	1.0							
Date Drilled	23.05.18	Length After Capping (mm)	99.0							
Visual inspection including abnormalities	Normal	Length Diameter Ratio	1.01							
Condition Of Storage	Water	Reinforcement								
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*									
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0	0									
Date Tested	20.06.18	* Distance of bar axis from nearest end								
Moisture condition at test	SSD	Load At Failure (kN)	338.9							
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	44.9							

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



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CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.05	Max Length Received (mm)	225.0								
Client Reference	Grid Line DD-EE,2	Min Length Received (mm)	220.0								
Orientation	Horizontal	Diameter (mm)	99.0								
Site Curing Condition	Average	Saturated density by displacement (Kg/m3)	2362								
Max. nom. size of agg.	14mm	Excess Voidage (%)	0.5								
Date Drilled	23.05.18	Length After Capping (mm)	96.0								
Visual inspection including abnormalities	Normal	Length Diameter Ratio	0.97								
Condition Of Storage	Water	Reinforcement									
Date Cast	N/K	<table><tr><th>Diameter ϕ</th><th>d*</th></tr><tr><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td></tr></table>		Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*										
0	0										
0	0										
0	0										
Date Tested	20.06.18	* Distance of bar axis from nearest end									
Moisture condition at test	SSD	Load At Failure (kN)	373.2								
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	48.5								

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



Gary Peach
Department Manager
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CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.06	Max Length Received (mm)	220.0							
Client Reference	Grid Line P2 Grid Line 2	Min Length Received (mm)	220.0							
Orientation	Horizontal	Diameter (mm)	99.0							
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2377							
Max. nom. size of agg.	10mm	Excess Voidage (%)	1.0							
Date Drilled	23.05.18	Length After Capping (mm)	99.0							
Visual inspection including abnormalities	Normal	Length Diameter Ratio	1.00							
Condition Of Storage	Water	Reinforcement								
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*									
0	0									
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0	0									
Date Tested	20.06.18	* Distance of bar axis from nearest end								
Moisture condition at test	SSD	Load At Failure (kN)	483.7							
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	62.8							

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



Gary Peach
Department Manager
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CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.07	Max Length Received (mm)	185.0								
Client Reference	GL Z,2-3 Grid Line 2	Min Length Received (mm)	185.0								
Orientation	Horizontal	Diameter (mm)	99.0								
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2322								
Max. nom. size of agg.	10mm	Excess Voidage (%)	0.5								
Date Drilled	23.05.18	Length After Capping (mm)	103.0								
Visual inspection including abnormalities	2 pieces	Length Diameter Ratio	1.04								
Condition Of Storage	Water	Reinforcement									
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>		Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*										
0	0										
0	0										
0	0										
Date Tested	20.06.18	* Distance of bar axis from nearest end									
Moisture condition at test	SSD	Load At Failure (kN)	362.9								
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	47.1								

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



Gary Peach
Department Manager
Building Products



CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.08	Max Length Received (mm)	110.0							
Client Reference	Grid Line R,1-2	Min Length Received (mm)	90.0							
Orientation	Vertical	Diameter (mm)	93.5							
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2403							
Max. nom. size of agg.	14mm	Excess Voidage (%)	0.5							
Date Drilled	24.05.18	Length After Capping (mm)	73.0							
Visual inspection including abnormalities	2 pieces - short sample	Length Diameter Ratio	0.78							
Condition Of Storage	Water	Reinforcement								
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*									
0	0									
0	0									
0	0									
Date Tested	20.06.18	* Distance of bar axis from nearest end								
Moisture condition at test	SSD	Load At Failure (kN)	371.1							
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	54.0							

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	Short Core

Kiwa CMT Testing



Gary Peach
Department Manager
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CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.09	Max Length Received (mm)	105.0							
Client Reference	Grid Line X,1-2	Min Length Received (mm)	90.0							
Orientation	Vertical	Diameter (mm)	93.5							
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2357							
Max. nom. size of agg.	10mm	Excess Voidage (%)	0.5							
Date Drilled	24.05.18	Length After Capping (mm)	86.0							
Visual inspection including abnormalities	Normal	Length Diameter Ratio	0.92							
Condition Of Storage	Water	Reinforcement								
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*									
0	0									
0	0									
0	0									
Date Tested	20.06.18	* Distance of bar axis from nearest end								
Moisture condition at test	SSD	Load At Failure (kN)	225							
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	32.8							

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



Gary Peach
Department Manager
Building Products



CORE TEST REPORT

Client: AECOM
Royal Court
Basil Close
Chesterfield
Derbyshire
S41 7SL

Date: 20.06.18
Site: Sutton on Sea

Laboratory Ref. No.	57776.10	Max Length Received (mm)	235.0							
Client Reference	Grid Line D3	Min Length Received (mm)	230.0							
Orientation	Horizontal	Diameter (mm)	93.5							
Site Curing Condition	Average	Saturated density by displacement (Kg/m³)	2356							
Max. nom. size of agg.	14mm	Excess Voidage (%)	1.5							
Date Drilled	24.05.18	Length After Capping (mm)	100.0							
Visual inspection including abnormalities	Normal	Length Diameter Ratio	1.07							
Condition Of Storage	Water	Reinforcement								
Date Cast	N/K	<table border="1"> <thead> <tr> <th>Diameter ϕ</th> <th>d*</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	Diameter ϕ	d*	0	0	0	0	0	0
Diameter ϕ	d*									
0	0									
0	0									
0	0									
Date Tested	20.06.18	* Distance of bar axis from nearest end								
Moisture condition at test	SSD	Load At Failure (kN)	178.5							
Lab. Water Curing (Days)	6	Core Strength (N/mm²)	26.0							

Tested in accordance with BSEN 12504-1:2009

Method of preparation	Sulphur Capping
Condition on receipt	OK
Failure type and observations	Normal
Mix details	Not Known
Deviation from standard	None

Kiwa CMT Testing



Gary Peach
Department Manager
Building Products



Appendix 3:
AECOM Core Logs

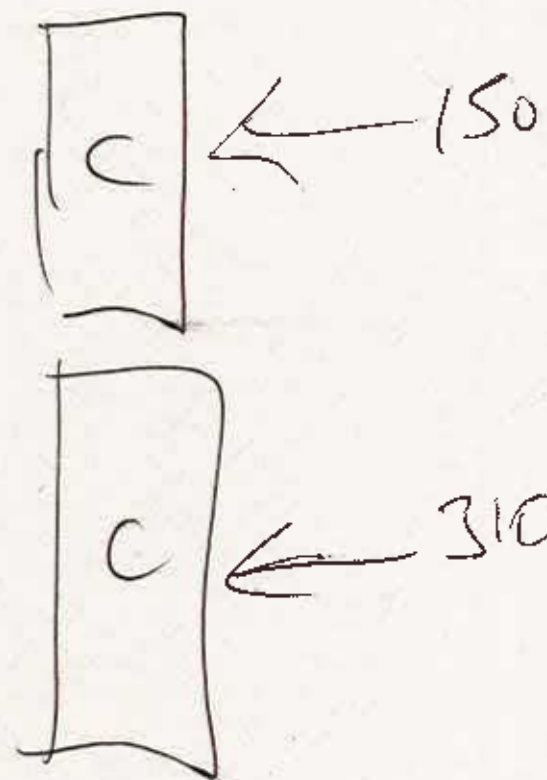
SITE CORE LOG FORM

AECOM

Project:	Sutton on Sea		Job No.	08251017
Site:	1		Date:	24/05/18
Coring Operator:	DP/CC		Time:	
Weather conditions: DRY				
Core No./Ref:	K2 GRO CINE 1			
Ch/MP/ELR Ref:				
Direction:		Lane:	X Pos: (ns/os etc)	
Offset from the: = m				
GPS Coordinates:				
Core Diameter:	100 mm	Coring type:	<input checked="" type="radio"/> WET <input type="radio"/> DRY	
Foundation Condition Cracked / Rutted / Settlement / Surface Det'r / OK				
Is the core taken through the crack:				
If so Crack type: <input checked="" type="radio"/> Transverse <input type="radio"/> Longitudinal <input type="radio"/> Cracking				
Did the core barrel lock/jam whilst cutting: YES <input checked="" type="radio"/> NO				
If Yes, at what depth: mm				
Condition of core: <input checked="" type="radio"/> Good <input type="radio"/> De-bonded <input type="radio"/> Shattered <input type="radio"/> Partial Recovery				
Depth cored to:	460 mm	Core length	460 mm	
Nature of material at bottom of core hole:				
Have photos been taken? (general core location before, core on extraction and down core hole) <input checked="" type="radio"/> YES <input type="radio"/> NO				
Has sample of sub-base been taken and bagged: <input checked="" type="radio"/> YES <input type="radio"/> NO				

Core Sketch:

(Detail sketch with measurements of extracted sample)



(Please detail/comment on any findings during coring)

Q159
Jul-09

SITE CORE LOG FORM

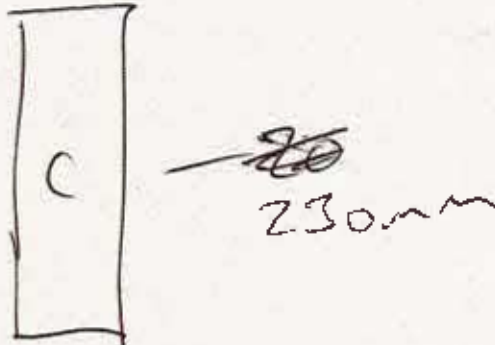
AECOM

Project: <u>Sutton on Sea</u>		Job No. <u>08251017</u>	Core Sketch: (Detail sketch with measurements of extracted sample)
Site:		Date: <u>24/05/18</u>	
Coring Operator: <u>BP/CL</u>		Time:	
Weather conditions: <u>DRY</u>			
Core No./Ref: <u>DD1-2</u>	Ch/MP/ELR Ref: <u>✓</u>		
Direction: <u>✓</u>	Lane: <u>✓</u>	X Pos: (ns/os etc) <u>✓</u>	
Offset from the: <u>✓</u> = <u> </u> m			
GPS Coordinates: <u>✓</u>			
Core Diameter: <u>100</u> mm	Coring type: <u>WET</u> DRY		
Foundation Condition: <u>Cracked / Rutted / Settlement / Surface Det'r / OK</u>			
Is the core taken through the crack:			
If so Crack type: <u>Transverse</u> Longitudinal Cracking			
Did the core barrel lock/jam whilst cutting: YES <u>NO</u>			
If Yes, at what depth: <u> </u> mm			
Condition of core: <u>Good</u> De-bonded Shattered Partial Recovery			
Depth cored to: <u>120</u> mm	Core length <u>110</u> mm		
Nature of material at bottom of core hole: <u>✓</u>			
Have photos been taken? (general core location before, core on extraction and down core hole) <u>YES</u> NO			
Has sample of sub-base been taken and bagged: YES <u>NO</u>			
(Please detail/comment on any findings during coring)			

Q159
Jul-09

SITE CORE LOG FORM

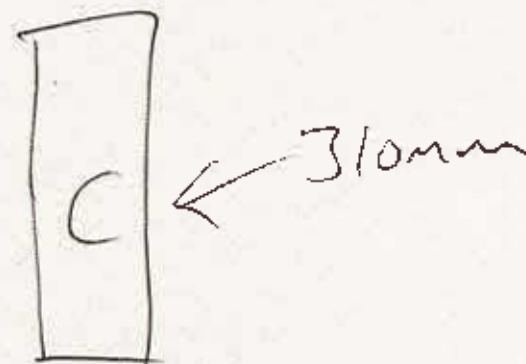
AECOM

Project: <u>Sutton on Sea</u>		Job No. <u>08251017</u>	Core Sketch: (Detail sketch with measurements of extracted sample)
Site:		Date: <u>23/05/18</u>	
Coring Operator: <u>BE/cc</u>		Time:	
Weather conditions: <u>DRY</u>			
Core No./Ref: <u>GRID LINE 2 KW2</u>	Ch/MP/ELR Ref:		
Direction:	Lane:	X Pos: (ns/os etc)	
Offset from the: = m			
GPS Coordinates:			
Core Diameter: <u>100</u> mm	Coring type: <u>WET</u> DRY		
Foundation Condition <u>Cracked</u> / Rutted / Settlement / Surface Det'r / OK			
Is the core taken through the crack:			
If so Crack type: <u>Transverse</u> Longitudinal Cracking			
Did the core barrel lock/jam whilst cutting: YES <u>NO</u>			
If Yes, at what depth: mm			
Condition of core: <u>Good</u> De-bonded Shattered Partial Recovery			
Depth cored to: mm	Core length mm		
Nature of material at bottom of core hole:			
Have photos been taken? (general core location before, core on extraction and down core hole) <u>YES</u> NO			
Has sample of sub-base been taken and bagged: YES <u>NO</u>			
(Please detail/comment on any findings during coring)			

SITE CORE LOG FORM

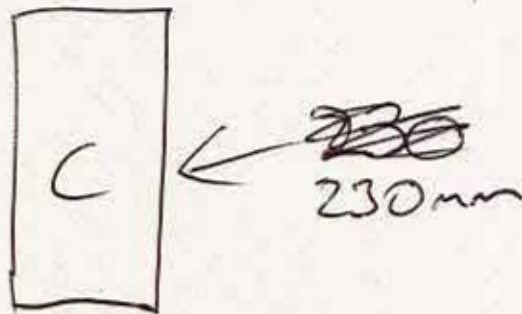
AECOM

Project:	Sutton on Sea		Job No.	08251017	Core Sketch: (Detail sketch with measurements of extracted sample)
Site:			Date:	23/05/18	
Coring Operator:	BP-CC		Time:		
Weather conditions: DRY					
Core No./Ref:	Ch/MP/ELR Ref:				
COLUMN M GRID LINE 1					
Direction:	Lane:	X Pos: (ns/os etc)			
Offset from the: = m					
GPS Coordinates:					
Core Diameter:	100 mm	Coring type:	WET DRY		
Foundation Condition Cracked / Rutted / Settlement / Surface Det'r / OK					
Is the core taken through the crack:					
If so Crack type: Transverse Longitudinal Cracking					
Did the core barrel lock/jam whilst cutting: YES NO					
If Yes, at what depth: mm					
Condition of core: Good De-bonded Shattered Partial Recovery					
Depth cored to:	310 mm	Core length:	310 mm		
Nature of material at bottom of core hole:					
Have photos been taken? (general core location before, core on extraction and down core hole)					
YES NO					
Has sample of sub-base been taken and bagged: YES NO					
(Please detail/comment on any findings during coring)					



SITE CORE LOG FORM

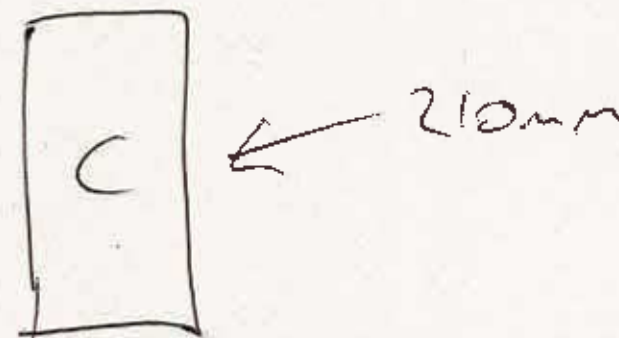
AECOM

Project: <u>Sutton on Sea</u>		Job No. <u>08251017</u>		Core Sketch: (Detail sketch with measurements of extracted sample)
Site:		Date: <u>24/05/18</u>		
Coring Operator: <u>BP/CC</u>		Time:		
Weather conditions: <u>DRY</u>				
Core No./Ref: <u>GRO2 DD-EEZ</u>		Ch/MP/ELR Ref:		
Direction: <u>—</u>	Lane: <u>—</u>	X Pos: (ns/os etc) <u>—</u>		
Offset from the: = m				
GPS Coordinates:				
Core Diameter: <u>100</u> mm	Coring type: <u>WET</u> <u>DRY</u>			
Foundation Condition: <u>Cracked / Rutted / Settlement / Surface Det'r / OK</u>				
Is the core taken through the crack:				
If so Crack type: <u>Transverse</u> <u>Longitudinal</u> <u>Crazing</u>				
Did the core barrel lock/jam whilst cutting: YES <u>NO</u>				
If Yes, at what depth: mm				
Condition of core: <u>Good</u> <u>De-bonded</u> <u>Shattered</u> <u>Partial Recovery</u>				
Depth cored to: <u>230</u> mm	Core length <u>230</u> mm			
Nature of material at bottom of core hole:				
Have photos been taken? (general core location before, core on extraction and down core hole) <u>YES</u> <u>NO</u>				
Has sample of sub-base been taken and bagged: YES <u>NO</u>				
(Please detail/comment on any findings during coring)				

SITE CORE LOG FORM

AECOM

Project:	Sutton on Sea		Job No.	08251017	Core Sketch: (Detail sketch with measurements of extracted sample)
Site:			Date:	24/05/18	
Coring Operator:	BP/CC		Time:		
Weather conditions: DRY					
Core No./Ref:	G102 22-3		Ch/MP/ELR Ref:		
Direction:	Lane:	X Pos: (ns/os etc)			
Offset from the: = m					
GPS Coordinates:					
Core Diameter:	100 mm	Coring type:	WET DRY		
Foundation Condition Cracked / Rutted / Settlement / Surface Det'r / OK					
Is the core taken through the crack:					
If so Crack type: Transverse Longitudinal Crazing					
Did the core barrel lock/jam whilst cutting: YES NO					
If Yes, at what depth: mm					
Condition of core: Good De-bonded Shattered Partial Recovery					
Depth cored to: 210 mm		Core length 210 mm			
Nature of material at bottom of core hole:					
Have photos been taken? (general core location before, core on extraction and down core hole) YES NO					
Has sample of sub-base been taken and bagged: YES NO					
(Please detail/comment on any findings during coring)					



Q159

Jul-09

SITE CORE LOG FORM

AECOM

Project:		Job No.	08251017	Core Sketch: (Detail sketch with measurements of extracted sample)
Site:	Sutton on Sea	Date:	24/05/18	
Coring Operator:	BP/CC	Time:		
Weather conditions:			DRY	
Core No./Ref:	Ch/MP/ELR Ref:			
Grid Line 2 PL				
Direction:	Lane:	X Pos: (ns/os etc)		
Offset from the:			= m	
GPS Coordinates:				
Core Diameter:	100 mm	Coring type:	WET DRY	
Foundation Condition: Cracked / Rutted / Settlement / Surface Det'r / OK				
Is the core taken through the crack:				
If so Crack type: Transverse Longitudinal Crazing				
Did the core barrel lock/jam whilst cutting:			YES NO	
If Yes, at what depth:			mm	
Condition of core: Good De-bonded Shattered Partial Recovery				
Depth cored to:	220 mm	Core length	220 mm	
Nature of material at bottom of core hole:				
Have photos been taken? (general core location before, core on extraction and down core hole)			YES NO	
Has sample of sub-base been taken and bagged:			YES NO	
(Please detail/comment on any findings during coring)				



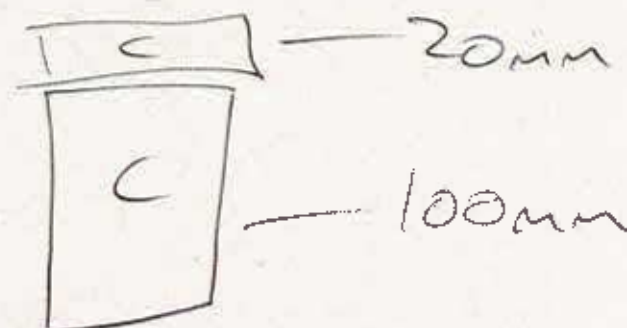
SITE CORE LOG FORM

AECOM

Project:	Sutton on Sea		Job No.	08251017
Site:			Date:	24/05/18
Coring Operator:	Bp/cc		Time:	
Weather conditions: DRY				
Core No./Ref:	Ch/MP/ELR Ref:			
R1-2				
Direction:	Lane:	X Pos: (ns/os etc)		
Offset from the: = m				
GPS Coordinates:				
Core Diameter:	100 mm	Coring type:	WET DRY	
Foundation Condition Cracked / Ruffed / Settlement / Surface Det'r / OK				
Is the core taken through the crack:				
If so Crack type: Transverse Longitudinal Cracking				
Did the core barrel lock/jam whilst cutting: YES NO				
If Yes, at what depth: mm				
Condition of core: Good De-bonded Shattered Partial Recovery				
Depth cored to: mm		Core length mm		
Nature of material at bottom of core hole:				
Have photos been taken? (general core location before, core on extraction and down core hole) YES NO				
Has sample of sub-base been taken and bagged: YES NO				

Core Sketch:

(Detail sketch with measurements of extracted sample)

Q159
Jul-09

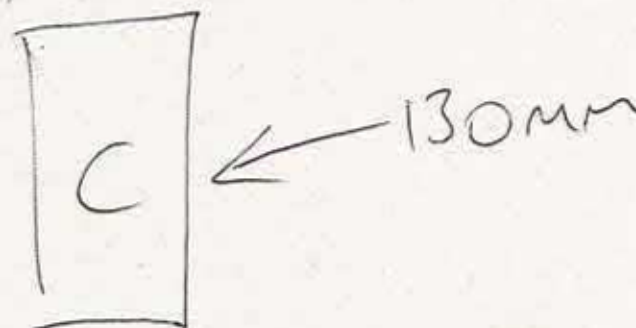
SITE CORE LOG FORM

AECOM

Project:	Sutton on Sea		Job No:	082510/7
Site:		Date:	24/05/18	
Coring Operator:	BP/CL		Time:	
Weather conditions: DRY				
Core No./Ref:	Ch/MP/ELR Ref:			
X1-2				
Direction:	Lane:	X Pos: (ps/os etc)		
Offset from the: _____ m				
GPS Coordinates: _____				
Core Diameter:	100 mm	Coring type:	WET DRY	
Foundation Condition Cracked / Ruffed / Settlement / Surface Det'r / OK				
Is the core taken through the crack:				
If so Crack type: Transverse Longitudinal Crazing				
Did the core barrel lock/jam whilst cutting: YES NO				
If Yes, at what depth: _____ mm				
Condition of core: Good De-bonded Shattered Partial Recovery				
Depth cored to:	130 mm	Core length	130 mm	
Nature of material at bottom of core hole: _____				
Have photos been taken? (general core location before, core on extraction and down core hole) YES NO				
Has sample of sub-base been taken and bagged: YES NO				

Core Sketch:

(Detail sketch with measurements of extracted sample)

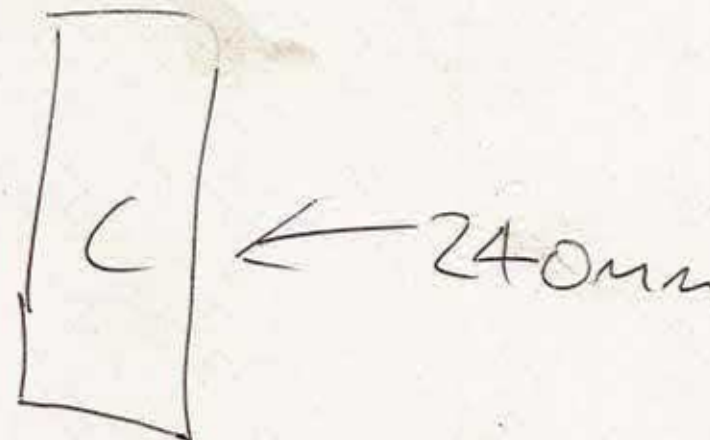


(Please detail/comment on any findings during coring)

SITE CORE LOG FORM

AECOM

Project: <u>Sutton on Sea</u>		Job No. <u>08251017</u>		Core Sketch: (Detail sketch with measurements of extracted sample)
Site:		Date: <u>24/05/18</u>		
Coring Operator: <u>BP/cc</u>		Time:		
Weather conditions: <u>DRY</u>				
Core No./Ref: <u>D3</u>		Ch/MP/ELR Ref:		
Direction:		Lane:		
		X Pos: (ns/os etc)		
Offset from the: = m				
GPS Coordinates:				
Core Diameter: <u>100</u> mm		Coring type: <input checked="" type="radio"/> WET <input type="radio"/> DRY		
Foundation Condition <u>Cracked / Rutted / Settlement / Surface Det'r / OK</u>				
Is the core taken through the crack:				
If so Crack type: <input checked="" type="radio"/> Transverse <input type="radio"/> Longitudinal <input type="radio"/> Craziing				
Did the core barrel lock/jam whilst cutting: YES <input type="radio"/> NO <input checked="" type="radio"/>				
If Yes, at what depth: mm				
Condition of core: <input checked="" type="radio"/> Good <input type="radio"/> De-bonded <input type="radio"/> Shattered <input type="radio"/> Partial Recovery				
Depth cored to: mm		Core length mm		
Nature of material at bottom of core hole:				
Have photos been taken? (general core location before, core on extraction and down core hole) <input checked="" type="radio"/> YES <input type="radio"/> NO				
Has sample of sub-base been taken and bagged: YES <input type="radio"/> NO <input checked="" type="radio"/>				
(Please detail/comment on any findings during coring)				



Appendix 4:
AECOM Core Photographs

Kiwa CMT Testing



Figure 1 K2 Gridline 1



Figure 2: DD1-2

Kiwa CMT Testing



Figure 3: KW2 Gridline 2



Figure 4: Column Gridline 1

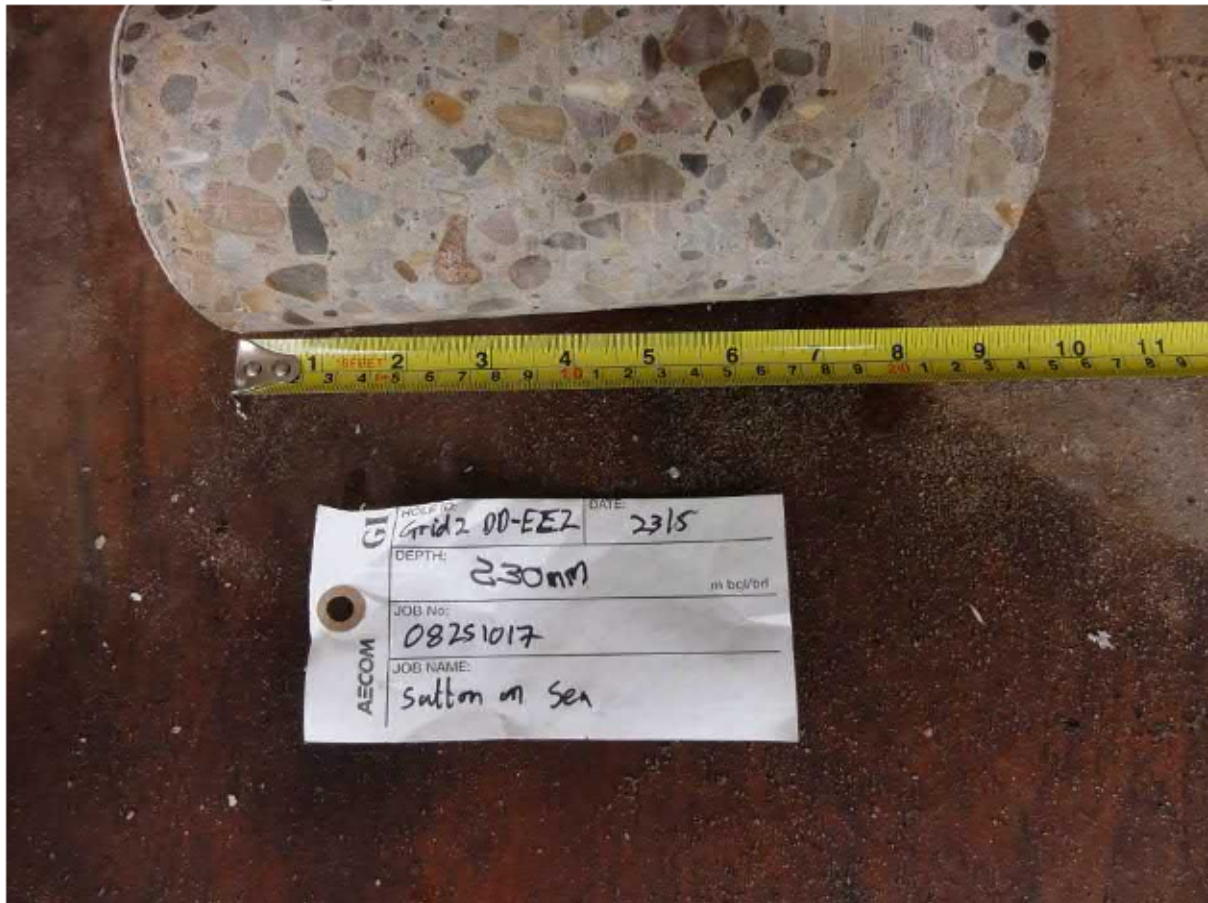


Figure 5: Grid 2 DD-EE2



Figure 6: Grid 2 22-3



Figure 7: Gridline 2 P2



Figure 8: R1-2

Kiwa CMT Testing

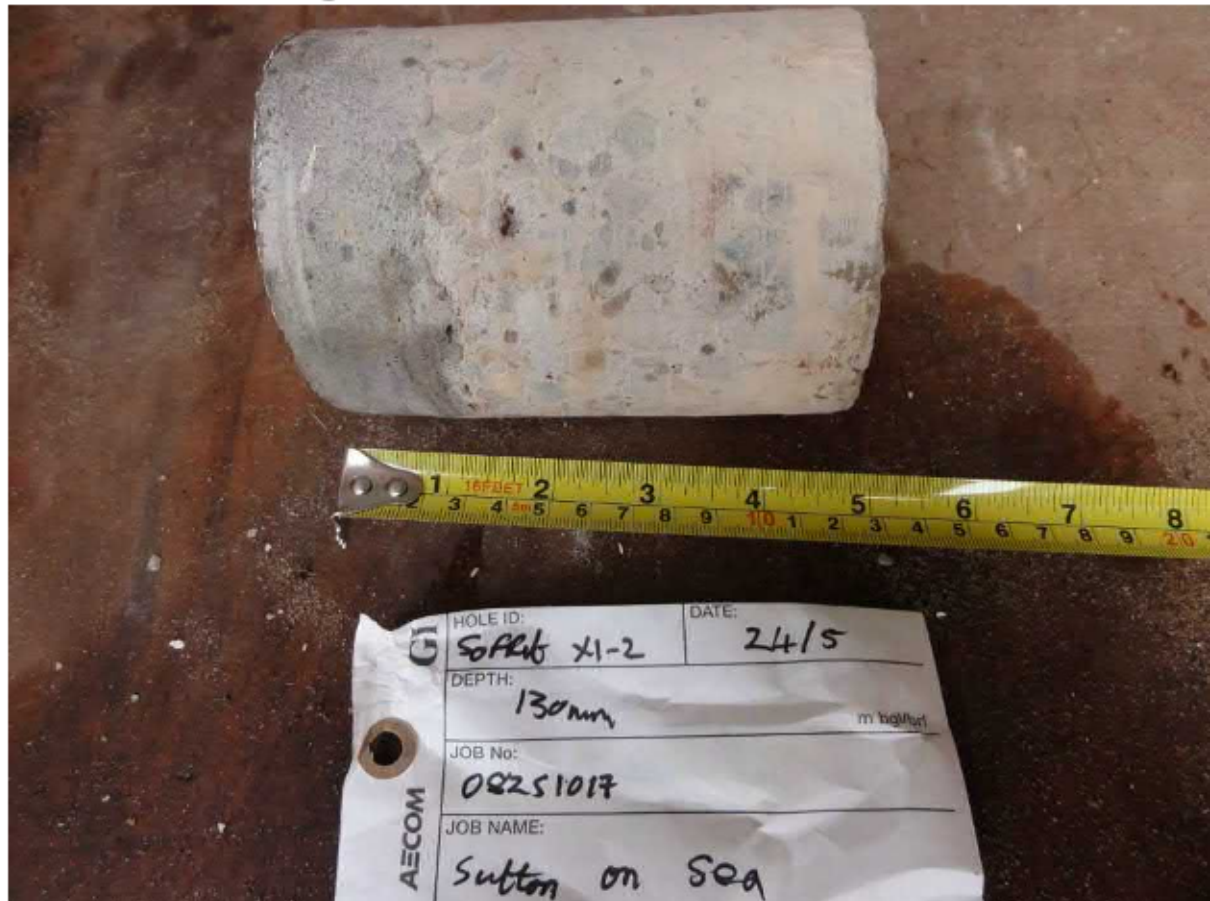


Figure 9: X1-2

Appendix 5:
KCMT Core Photographs

Kiwa CMT Testing



Kiwa CMT Testing



Kiwa CMT Testing



Kiwa CMT Testing



Kiwa CMT Testing



Kiwa CMT Testing



Kiwa CMT Testing



Kiwa CMT Testing

