

Inspection Test Plan

Project		Bedford Passage				Inspection Authorities			
Package		CFA Piling	Package No	P321		Keltbray			
Contractor		Keltbray				Principal Contractor (PC)		Morgan Sindall	
Work Package		Piling				Client (C)		Morgan Sindall	
Location		Secant wall				Architect/Engineer (A/E)		AECOM	
Revision Details						Others (e.g. Fire Officer)			
Rev	Amendment	Originator	Date	Approved By	Date	Inspection Codes			
00	Initial Issue	H White	28/06/21	MC	02/07	H	Hold Point	N	Notification Point
						N	First time only	A	Approval Required
						I	Information Only	R	Random Inspection
						R1	Daily Inspections	R10	10% Inspections
						R20	20% Inspections	T	Test Report, Certificate
						Document Code			
						Principal Contractor (PC)		Project Record to be held by PC	
						Keltbray (KLT)		Record to be held by Keltbray	
						Remarks		Keltbray to indicate if documents to be submitted to PC or Client at end of contract	

Package Number							Inspection & Test Plan Number							
Item	Operation /Activity (On & Off Site)	Contract Spec. & Clauses	Inspection Method	By Whom	Freq	Acceptance Criteria	Verifying		Inspection					Remarks
							Description	Held By	Keltbray	PC	C	A/E	Others	
1	Subcontractor approval	N/A	Check approved subcontractors and suppliers list	Project Manager	Prior to commencement	On list	Check approved subcontractors and suppliers list	Keltbray	H	A				N/A
2	Approval of materials	BS4449 & BS5328	Check approved subcontractors and suppliers list	Project Manager	Prior to commencement	On list	Contract Specification	Keltbray	H	A				CARES/QSR MC
3	Approval of testing laboratory	ICE B19.8.4 BS EN 12390	Check approved subcontractors and suppliers list	Project Manager	Prior to commencement	On list	Contract Specification	Keltbray	H	A				UKAS accredited Laboratory
4	Check for services & utilities	N/A	Check drawings and scan	Principal Contractor	All locations	Live services & utilities located	N/A	PC	H	A				PC to issue Permit to Dig & Permit to Pile
5	Working Platform	ICE A3.1.4, B1.6.2	Check platform has been constructed according to	Principal Contractor	All platforms	Firm and level	Installation Method Statement	PC	H	A				PC to issue the WPC

			structure specific method statements & relevant plant											
6	Setting out	Drawings Project Spec.	Surveyor check	Surveyor	Every position	Plan Position, Wall piles piles +/- 25mm	N/A	Keltbray	R1	R				Position record on pile record sheet
7	Method Statement	KP-P321-MS-003	Client review	Project Manager	Before works start	Review		Keltbray	H	A				Approval from PC must be obtained
8	Design Approval	Pile schedule	Client and Engineer review	Project Manager	Before works start	Review	Latest Pile Schedule	Keltbray	H	A				Issue of FC drawing and status A on 4P for schedules
9	Positioning rig	ICE B1.8.1, B1.8.2	Check verticality and position of rig mast	Rig Banksman	Each pile	Verticality 1:200 Position secant wall piles +/- 25mm	KP_COMP_PRO_031	Keltbray	I	R				Forcible corrections to overcome errors in position or alignment shall not be made.
10	Sequence of work	ICE A3.2.4, B1.13.3, B1.13.3, B3.5.1	Ensure no boring near a recently cast pile	Supervisor	Each structure / part of structure	No damage to adjacent piles	N/A	Keltbray	I	R				If nonconforming re-programme
11	Concrete Mix Design Approval		Engineer Review	Project Manager	Before works start and if	Engineer approval	Review of Mix Design Certificates	Keltbray	H	A				Cert from supplier

						mix is changed								
Reinforcement														
12	Acceptance of pile reinforcement cages	As per Construction Schedule	Visual Inspection Main bar sizes & Nr's, spacings, cage length, lifting points and general condition	Contracts Engineer	Each delivery	Cages as per Bearing and Secant Wall Schedules and match delivery note	Refer to cage drawings and pile schedule.	Keltbray	I	R				Completed cage check sheet ref KP-HSQE-FRT-022 rev01
Concrete														
13	Concrete delivery	ICE B3.5.2.1, B3.5.2.3 B19.4.5, BS 8500-2	Check delivery ticket	Concrete Technician	Each delivery	As per mix design	Details on ticket correct (mix and site address)	Keltbray	I	R				Concrete delivery ticket
14	Age of concrete	BS.EN.8500	Check delivery ticket	Pump man	Each delivery	Time period between placing successive batches <2hrs, if older than 2 hours re-slump, check temp and take cubes if concrete is used	Check Ticket		I	R				Pumpman log

15	Consistency	ICE B3.5.2.2, B19.8.2 BS EN206-1:2013	Slump test	Concrete Technician	Each delivery	Slump range = 140 - 230mm spot	Slump Test		I	R				KP-HSQE-FRT-056 - Slump Testing Sheet-Site Sampling Form
16	Strength	ICE B15.4, B19.2.1, B19.8.3, B19.8.4 See Table B19.3, BS 8500, BS EN12350-1	Compressive Strength Test.	Contracts Engineer	Set of 4 every 40m3 of mix used or once a day as minimum	37N/mm2 at 28 days no strength requirement for female pile mix. Testing will be 1no at 7 days, 2 at 28 days and 1no spare cube	BS1851 pt105		T	R				Issue of cube results summary.
Construction														
17	Pile position	ICE SPERW B1.8.1	As built Survey	Setting out Engineer	Each pile position	Secant wall Piles within 25mm of design position at Ground Level.	Survey		I	R				Record on Pile log KP-HSQE-FRT-020
18	Pile verticality	ICE SPERW Table 1.4	As built record	Rig Driver	Each pile position	Verticality to be within 1:75 below COL	Rig instrumentat ion		I	R				Rig Computer print out

														(Jean Lutz or DMS system)
19	Pile Drilling	ICE SPERW B4.4.1, B4.4.9.3	As Per record	Contracts Engineer	Every Pile	Target 12 to 20 rev per meter drilled, max 25 per meter drilled	Review of records		I	R				Record on Pile log KP-HSQE-FRT-020
20	Depth at toe	Project specification / pile schedule ICE SPERW B4.4.4	Pile depth to be checked at completion of piling	Rig Banksman / Operator	Each pile	Toe level to be no higher than design toe level	Rig instrumentation KP-COMP-PRO-031		I	R				Record on Pile log KP-HSQE-FRT-020
21	Cage type	ICE B19.9.2, Pile schedule / drawings	Dimensional check, visual examination	Supervisor / Engineer	Each pile	Compliance with drawings & schedule	Pile Schedule		I					Record on Pile log KP-HSQE-FRT-020
22	Cage installation	ICE B4.4.7	Check cage has been installed at the correct level and centralised.	Supervisor	Each pile	Vertical level +150/-50mm	Contract Spec.		I					Record on Pile log KP-HSQE-FRT-020
Completion														
23	Completed pile record	ICE SPERW B4.4.9.1, B4.4.9.2, B4.5.1	Construction Record	Project Manager and Contracts Engineer	Daily	To be agreed with client.	N/A		A					Record on Pile log KP-HSQE-FRT-020, 021 & 022
24	Ensure NCRs raised and closed	KP_COMP_PRO_039	Audit	Quality Engineer	All piles	Part C or KB NCR form received or	Keltbray		R					

						equivalent form the client								
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INSPECTION & TEST PLAN (Guide to information required in each column)

Operation /Activity	Principal activities to be carried out e.g. Compliance with Clients legislation /Spec's/Plans normal sequence of works incl. benchmark samples, etc
Contract Specification & Clause No	Principal activities to be carried out e.g. Compliance with Clients legislation /Spec's/Plans normal sequence of works incl. benchmark samples, etc
Inspection Method	e.g. visual, dimensional check, specified test, sample etc.
By Whom	Person who is qualified to, and carries out the inspection e.g. Keltbray Foremen, Engineer
Frequency	Frequency of inspection activity - e.g. each column, 10 % , daily etc.
Acceptance Criteria	Reference to acceptance level e.g. BS 5135, specification clause number etc., also note if this needs to be by Independent Body. (e.g. +/- 3mm over 3m straight edge or +/- 10 microns on paint thickness)
Verifying Spec / Documents	Keltbrays procedure/method statement used to control the inspection/test and the records produced to demonstrate compliance. (N.B. Copies of their blank example record sheets to be attached)
Inspection Authority & Codes	Insert a code from those listed on Sheet 1 in the appropriate column for the Inspection Authority. Keltbray only fills in his inspection in the Keltbray column. PC / Client / Architect / Engineer fill in remainder
Remarks	Use as required (i.e. Note of Benchmark to be signed off by PC