

PHOTOGRAPHIC LOG

Site Location: Land at West End Nursery, Angmering

Photo No.
5

Date:
28/05/2019

Photo showing fencing along the eastern boundary of Plots 281 – 301. Photo looking west.



Photo No.
6

Date:
28/05/2019

Photo showing fencing along the eastern boundary of Plots 281 – 301. Photo looking north east.



PHOTOGRAPHIC LOG

Site Location: Land at West End Nursery, Angmering

Photo No.
7

Date:
28/05/2019

Photo showing fencing along the north eastern boundary of Plots 281 – 301. Photo looking north east.



PHOTOGRAPHIC LOG

Site Location: Land at West End Nursery, Angmering

Photo No.
1

Date:
14/05/2019

View to the east, showing fencing along the northern boundary of the central POS.



Photo No.
2

Date:
14/05/2019

View to the west, showing fencing along the northern boundary of the central POS.



PHOTOGRAPHIC LOG

Site Location: Land at West End Nursery, Angmering

Photo No.
3

Date:
14/05/2019

View to the south, showing fencing along the western boundary of the central POS.

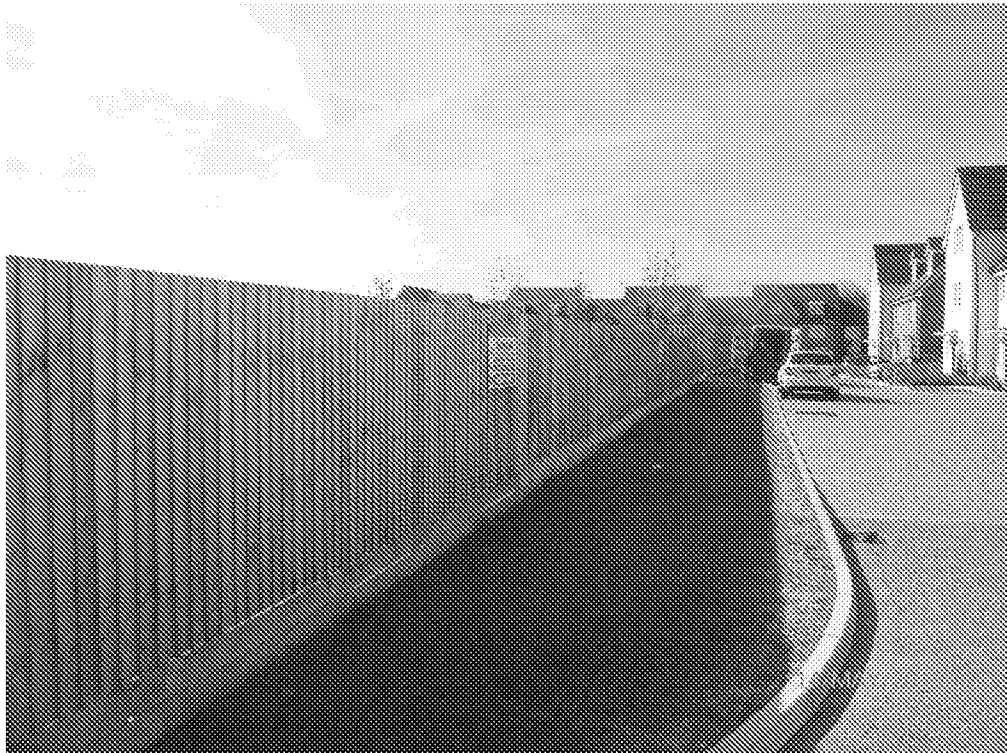


Photo No.
4

Date:
14/05/2019

View to the south, showing fencing along the western boundary of the central POS.



PHOTOGRAPHIC LOG

Site Location: Land at West End Nursery, Angmering

Photo No.
5

Date:
14/05/2019

View to the north east, showing fencing along the southern boundary of the central POS.



Photo No.
6

Date:
14/05/2019

View to the north, showing fencing surrounding the Site Compound.



PHOTOGRAPHIC LOG

Site Location: Land at West End Nursery, Angmering

Photo No.
7

Date:
14/05/2019

View to the south west, showing fencing surrounding the Site Compound.





TRIAL PIT LOG

Contract: Land at West End Nursery, Angmering		Client: CALA Homes (South Home Counties) Ltd		Trial Pit: VSS1	
Contract Ref: 27621	Start: 06.11.18 End: 06.11.18	Ground Level: ---	Co-ordinates: ---	Sheet: 1 of 1	

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.10	1	ES	Tub+Jar+Vial			MADE GROUND: Mid brown slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is fine to very coarse flint, concrete, brick and chalk. Concrete cobble noted at 0.40m bgl. Plastic pipe noted at 0.85m bgl. Light brown slightly sandy CLAY. Sand is fine grained. Trial pit terminated at 1.00m bgl.		
0.10		PID	0.5ppm					
0.20	2	ES	Tub+Jar+Vial				(0.90)	
0.20		PID	0.1ppm				0.90	
							1.00	

General Remarks				
1. Trial pit remained dry and stable during excavation. 2. No groundwater encountered. 3. On completion, Trial Pit backfilled with arisings.				
All dimensions in metres			Scale:	1:25
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: JLaite	Checked By:	



TRIAL PIT LOG

Contract: Land at West End Nursery, Angmering		Client: CALA Homes (South Home Counties) Ltd		Trial Pit: VSS1	
Contract Ref: 27621	Start: 06.11.18 End: 06.11.18	Ground Level: ---	Co-ordinates: ---	Sheet: 1 of 1	

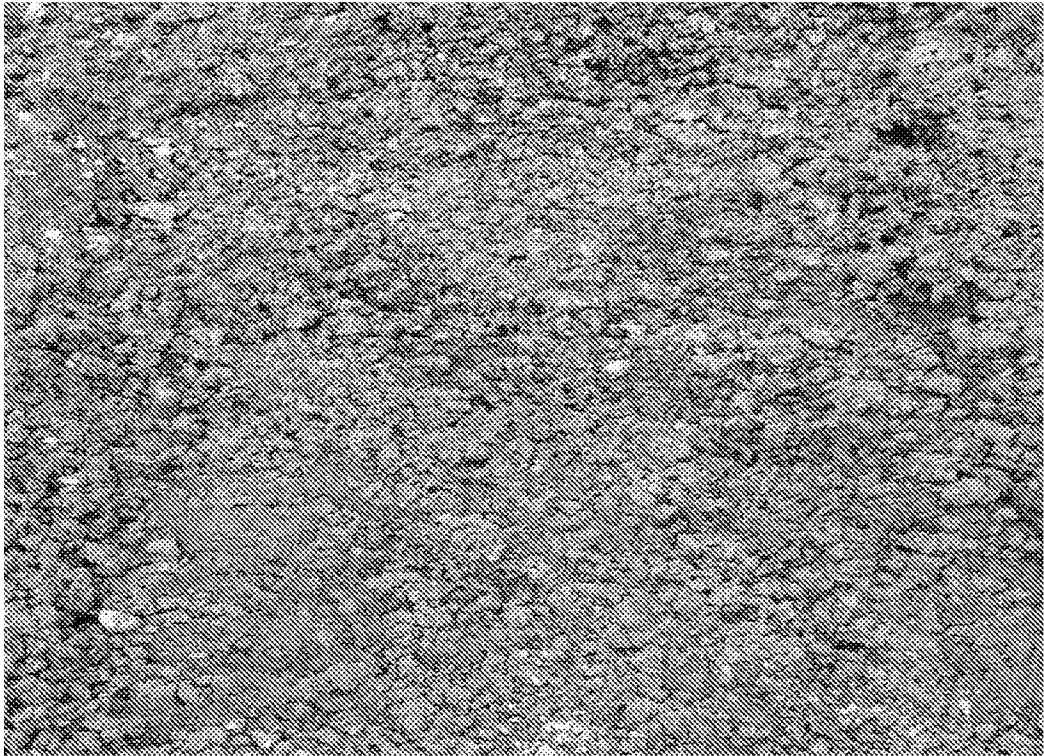
Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.10	1	ES	Tub+Jar+Vial			MADE GROUND: Mid brown slightly sandy gravelly CLAY. Sand is fine to medium. Gravel is fine to very coarse flint, concrete, brick and chalk. Concrete cobble noted at 0.40m bgl. Light brown slightly sandy CLAY. Sand is fine grained. Plastic pipe noted at 0.90m bgl. Trial pit terminated at 1.00m bgl.		
0.10		PID	0.5ppm					
0.20	2	ES	Tub+Jar+Vial				(0.90)	
0.20		PID	0.1ppm				0.90	
							1.00	

General Remarks				
1. Trial pit remained dry and stable during excavation. 2. No groundwater encountered. 3. On completion, Trial Pit backfilled with arisings.				
All dimensions in metres			Scale: 1:25	
Method Used: Machine dug	Plant Used: JCB-3CX	Logged By: JLaite	Checked By:	

APPENDIX G

PHOTOGRAPHIC LOG

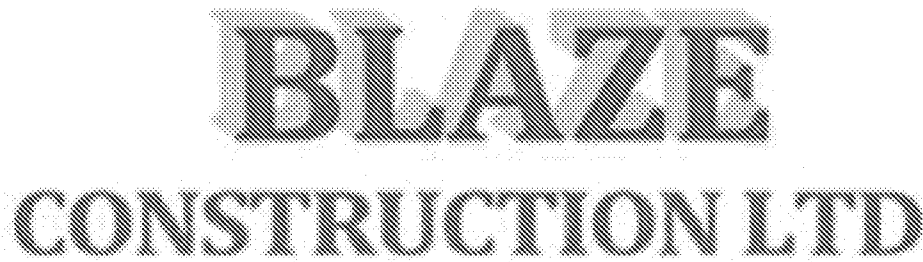
PHOTOGRAPHIC LOG	
Site Location: Land at West End Nursery, Angmering	
Photo No. 1	
Date: May/2016	
Photo showing substation located within the south eastern portion of the site in use during a walkover conducted in May 2016 as part of RSK report 27621 R01 (02).	
Photo No. 2	
Date: 06/11/2018	
Material excavated during the removal of the former sub station slab.	

PHOTOGRAPHIC LOG	
Site Location: Land at West End Nursery, Angmering	
Photo No. 1	
Date: 06/11/2018	
Visually clean material from 0.90 m bgl associated with the former sub station.	



APPENDIX H

BLAZE AND ECONOMIC INSULATION HEALTH AND SAFETY DOCUMENTATION



Angmering

Addendum to Risk Assessment & Method Statement

Works to Borrow Pit in South East Corner

Prepared By	Paul Broderick
Revision	2
Date	27/03/2018

Revision	Date	Comments
0	22/12/2017	Initial Issue
1	15/02/2018	Revised following internal review
2	27/03/2018	Revised to include named contractors for testing & supervision. Testing frequencies stated.

Site Address	Cala Homes development Roundstone Lane Angmering BN16 4AX
Client & Principal Contractor	Cala Homes (South Home Counties) Ltd Tilford House, Farnham Business Park Weydon Lane Farnham Surrey GU9 8QT
Watching Brief / Asbestos Consultant	Economic Insulations (Portsmouth) Limited 8 Whittle Avenue Segensworth West Fareham Hampshire PO15 5SH
Asbestos in Air testing	Envirochem Analytical Laboratories Ltd 12-14 The Gardens Broadcut Fareham Hampshire PO16 8SS
Scope of Works	This document covers the excavation of a borrow pit in the south west corner of the site, spreading of clean material across Phase 2 to raise levels and filling of borrow pit with contaminated materials from bunds, Phase 3 (original site offices & car park area) & site stockpiles, and installation of geomarker membrane & clean cover. This does not cover works to any licensable materials (which, if required, are to be carried out by a licensed contractor) or the removal of any materials from site (which will be at the sole discretion of the client). This document has been prepared with reference to setting out, levels, details, volumes, remediation strategies & testing results, etc provided by Cala (and prepared by their consultant engineers, etc) and all work is to be completed in accordance with drawings, details and instructions issued by Cala Homes.
Current Status and Remedial Requirements Summary	Geo-environmental investigations carried out by RSK identified hydrocarbon, metal and asbestos (sporadic cement bonded asbestos containing materials (ACM) and low level concentrations of asbestos fibres) in made ground across Phase 1B. Where this was removed for foundations/roads and installation of clean cover system it was stockpiled on site pending a decision as to final location. Any ACM encountered was handpicked during excavation by RSK advisors, with remaining soils (containing fibre content as detailed in report 27621 L08) deemed suitable for re-use at depth – results from air sampling carried out prior to works were not above the detection limit of 0.01 fibres/ml. Areas of hydrocarbon contamination were stockpiled separately for later removal from site. In accordance with the remedial strategy for the site (RSK reports 27621 R08 & 27621 R03) the primary measures to mitigate potential risks to personnel from these materials during the construction process are good personal hygiene practices and dust mitigation measures. Any additional mitigation measures proposed within this RAMS have been included as precautionary

	measures, to protect personnel in the event that higher risk contaminants are unexpectedly identified during the works, and may be relaxed dependent on . A watching brief by all personnel conducting any excavation works at the site should be maintained at all times for unexpected contamination (staining, odours, suspected ACM). In the event that any unexpected contamination is identified, works are to immediately cease <u>(with exception of dust mitigation which must be maintained)</u> and advice sought from environmental consultant who shall supervise the works. Implementation of mitigation measures relating to future residents (garden and soft landscaping 3 layers) and the environment (i.e. materials management and measures to prevent cross contamination to 'clean' areas of the site) are also referred to in this document.
Supervision	Consultant from Economic Insulations (Portsmouth) Limited to supervise all works, carrying out a watching brief for licensable asbestos, advise on control measures required, and whether changes are required to the scheme of work. Economic Insulations (Portsmouth) Limited to carry out cleaning of plant & decontamination unit. Cala's consultants (RSK) to advise on carry out testing if required and advise on other contaminants (eg hydrocarbons). All operatives will have received asbestos awareness training, and have been advised to stop works to seek advice of consultant(s) upon discovery of suspected Asbestos or other contaminants (eg visual or olfactory evidence of hydrocarbons).

Preparatory Works

1. Ensure all stockpiles fenced off with herras panels (double clipped), location recorded and stockpile references assigned. (already carried out)
2. Clearance of vegetation from proposed borrow pit area. (already carried out)
3. Carry out air monitoring to establish baseline levels of asbestos. (already carried out)
4. Consultant to walk the proposed storage area and transport route to visually check for any contaminants prior to movement of materials starting.
5. Erect fencing to areas of contaminated material (South East Corner, Bund Cut-Through to A280).
 - Cala Homes to erect fencing along proposed route from Phase 3 to Borrow Pit, following route Road 7, Road 7a, temporary link road, Road 8A, Road 8.
6. Place operative decontamination unit & sign in hut on Road 8 (ie by Plot 100) – or other location as agreed with Cala Homes.
7. Set up vehicle exit & washdown area at Road 8, by decontamination unit
 - Trailer mounted water bowser with pressure washer to be available
 - CALA Homes to provide water supply to this area.
8. Ensure plant is marked “clean” or “dirty” and ensure “dirty” plant only on contaminated works.
 - Gateman to issue construction plant with dirty stickers if moved into contaminated work area.
 - Gateman to ensure plant has been decontaminated and dirty stickers removed if to be removed from work area. Plant decontamination form to be completed upon removal of construction plant from work area (see Appendix 4).
9. Place Dustlayer mobile dust suppression units to agreed locations prior to disturbing ground.

Phase 3 Works

1. Once Cala Homes have vacated offices, demolish existing welfare facilities.
 - Hardcore to be crushed for re-use on site.
2. Break out existing concrete hardstanding and crush for re-use.
3. Damp down soils using Dustlayer mobile dust suppression unit.
4. Reduce dig across entire area (Plots 197-214) to level of underside of cover system.
5. Dig & pour foundations.
6. Strip off & re-contour bund to front of site, including replace cover geo-marker membrane.
7. Transport arisings to borrow pit area using dumptrucks once borrow pit dug
 - To prevent loss of material, dumptrucks not to be filled above the rim.
8. Lay Fastrack 609 Geomarker to plots.
 - Great care is to be taken in laying Geomarker to prevent contamination.
 - i. Geomarker to be rolled out with ‘clean’ inside facing up, 300mm laps to be used.
 - Once Geomarker is laid the foreman will record details, take photos, and ask the consultant to confirm geomarker laid correctly & ready for clean fill.
9. Use roadbrush to clear haul road of any arisings.
10. Carry out reassurance monitoring prior to resuming activity in the area.
 - Operatives should clean (eg boots, respirator) or dispose of potentially contaminated PPE (eg gloves, filters, overalls, etc) if continuing to work in Phase 3 area.
11. Remove Heras panels surrounding Phase 3, and haul road to borrow pit.

- Adjust heras around borrow pit area to extend around corner of Road 8, to allow access from borrow pit to decontamination unit and washdown area.
12. Using “clean” dumpers or dump truck, move clean natural subsoil from stockpile to borrow pit area laying 450mm over Geomarker as cover system and spread/grade using excavator. Leave ready for landscaping by others.
- Topsoil (if required) to be imported Woodhorn topsoil.

Main Works

1. Set out.
2. Damp down soils using Dustlayer mobile dust suppression unit, if required.
3. Reduce dig to strip off topsoil & made ground from base & batters of existing pond area
 - RSK report 27621 R08 Figure 4 states that there is asbestos contamination to this area. Advisor to confirm when clean natural soils reached.
 - If necessary remove part of made ground stockpile where over borrow pit location.
 - Soils to be stored in location to be agreed on site (far south east corner proposed, ie location of future attenuation tank – may be inadequate and require use of Phase 2 area, in which case terram should be laid under temporary storage stockpile.)
4. Form access ramp in vicinity of plot 224 to enable access to excavation.
5. Excavate out to depths & dimensions all as approved plans, maintaining sides of excavation at gradient no steeper than 1 in 4.
 - As work proceeds excavate sides of borrow pit to alter bank gradients to 1 in 2 if required.
 - Deeper area near existing made ground stockpile to be excavated first, to enable filling at lower level whilst excavation continues at higher level nearer to initial access ramp.
 - Level survey to be carried out when base of borrow pit reached (prior to filling each section) to quantify volumes excavated / deposited.
6. Move clean material by site dumper, or dumptruck, to clean stockpile in Phase 2.
 - Samples to be taken for moisture testing every 500m³ (minimum) and results forwarded to Cala / RSK to inform compaction regime (to be confirmed by Cala Homes).
 - May spread and level directly to level of underside of cover system.
7. Install stop block at end of Road 8 to allow tipping direct into borrow pit, or form ramp if space allows.
8. Transport material from Phase 3 works to borrow pit.
9. Move & Level tipped material using 360 excavator (marked ‘dirty’) and compact in layers in accordance with approved compaction regime.
 - Samples to be taken for moisture testing every 500m³ (minimum) and results forwarded to Cala / RSK.
10. Once all clean material is moved, alter route fencing and carry out excavation through bund adjacent to A280.
 - Tip at depth via access ramp into borrow pit.
 - Supply & lay Fastrack 609 Geomarker to exposed surfaces.
 - Sacrificial 150mm to be removed from haul route and transported to borrow pit
11. Move & Level tipped material using 360 excavator (marked ‘dirty’) and compact in layers in accordance with approved compaction regime using 13T sheepfoot Roller.

- Samples to be taken for moisture testing every 500m³ (minimum) and results forwarded to Cala / RSK.
12. Move material from existing made ground stockpile & material previously stripped from borrow pit area into borrow pit, continuing to compact and take samples for moisture testing.
 - This is likely to be via 'haymaking' using excavator, or dumptrucks using ramped access.
 13. Once overlying material removed, and as work proceeds, excavate for attenuation tank & connection to site storm water system.
 - Details to be provided – it is anticipated that pipes will run above the geomarker membrane, in which case connection will follow item 17.
 - It is believed that heavy duty crates are to be used.
 14. Continue moving material to achieve underside of geomarker membrane.
 15. Once entire stockpile removed, including 150mm sacrificial scrape from area underneath (or to level of underside of cover system, whichever is lower), borrow pit area to be profiled to correct levels.
 16. Clean plant at designated wash point and remove to 'clean' area.
 17. Lay Fastrack 609 Geomarker.
 - Great care is to be taken in laying Geomarker to prevent contamination.
 - i. Geomarker to be rolled out with 'clean' inside facing up, 300mm laps to be used.
 - Once Geomarker is laid the foreman will sign the handover form, take photos, and ask the consultant to confirm geomarker laid & ready for clean fill. Operatives should clean (eg boots, respirator) or dispose of potentially contaminated PPE (eg gloves, filters, etc) if continuing to work in area.
 18. Carry out reassurance monitoring prior to resuming activity in the area.
 - Operatives should clean (eg boots, respirator) or dispose of potentially contaminated PPE (eg gloves, filters, overalls, etc) if continuing to work in this area.
 - Possibility of carrying out reassurance testing to bunds/haul road along A280 at earlier stage, in which case heras panels should be adjusted to suit revised remediation area prior to continuing work in the area adjacent to A280.
 19. Remove Herras Panels
 - Once this work is complete decontamination unit may be off-hired and removed from site.
 20. Using "clean" dumpers or dump truck, move clean natural subsoil from stockpile to borrow pit area laying 450mm over Geomarker as cover system and spread/grade using excavator. Also move clean soils as cover to bunds alongside A280. Leave ready for landscaping by others.
 - Topsoil (if required) to be imported Woodhorn topsoil.
 21. RSK to carry out verification testing.
 22. Spread and compact clean soil to Phase 2 & central POS area in accordance with approved compaction regime, continuing to take samples for moisture testing.

Control Measures Required (when working in 'dirty' area)

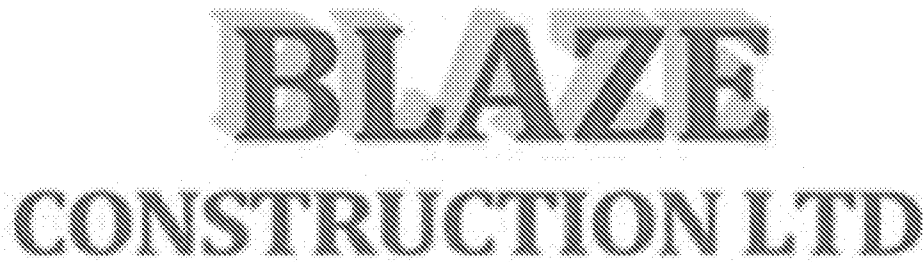
1. All operatives to be inducted in these RAMS & sign briefing record.
2. All operatives to have received asbestos awareness training, and be aware that they should stop works and contact consultant if concerned about potential contaminants.
3. All visitors to receive induction relevant to their work.
4. Operatives to wear P3 filtering face pieces. *
5. Operatives to have oversuits for working in the area. Boots to be of wellington style (ie no laces or stitching), and meet EN 20345 requirements for midsole and toe protection. *
6. Stockpiles & any exposed soils to be dampened down as required to prevent fibres becoming airborne.
7. Plant not to be removed from designated dirty areas unless decontaminated.
8. All operatives to clean boots and remove potentially contaminated PPE when leaving the work area.

* Dependent on results of (representative) personal air monitoring carried out by Envirochem, and advice received from Economic Insulations, RPE/PPE requirements may be adjusted. It is envisaged that where a relaxation is proposed follow up testing will be carried out to ensure conditions remain safe, and where a change occurs (eg location, material, etc) standard procedures will be in place until further testing indicates that it may be safe to relax requirements.

Risk Matrix

Hazard	Person(s) at risk	Worst Case	Initial Risk	Control Measures to be put in place	Residual Risk
Inhalation of asbestos fibres	Operatives	Asbestosis	High	All operatives to have received asbestos awareness training	Medium
				Consultant to be on site to identify asbestos as necessary. (Only sporadic non-licensable ACM materials to be considered suitable for re-use at depth. If any licensable or large quantities of non-licensable ACM are observed, works are to cease in this area, and the area made safe i.e. dampened down, covered/boarded and fenced off, and advice sought from licensed asbestos contractor)	
				All operatives to be face-fit tested for P3 filtering facepiece or provided with powered respirator. Masks <u>must</u> be worn whilst breaking / disturbing potentially impacted ground. Personal monitoring may be used to allow removal of masks where results below 0.01 fibres/ml.	
	Persons outside the work area (due to wind dispersal)		Medium	Soils to be wetted down to prevent fibres becoming airborne	Low
	Persons outside the work area (due to contact)		High	Area to be herrassed off and signed to prevent unauthorised access	Low
				Workers to carry out personal decontamination	

	dispersal)			procedure when leaving 'dirty' area	
				Plant to be decontaminated before leaving 'dirty' area	
Ingestion of Metals / Oil Substances	Operatives	Ingestion of Metals / Oil Substances	High	Operatives to wear gloves.	Low
				No Smoking / Drinking / Eating in work area – welfare facilities in clean area.	
				Workers to carry out personal decontamination procedure when leaving 'dirty' area	
	Future users of land		Medium	Cover system consisting of geo-marker membrane and 450mm clean site won subsoil & 150mm clean imported topsoil to be laid to private gardens prevent absorption by future growing of foodstuffs.	Low
Contamination of clean soils	Client	Increased cost for disposal of contaminated soils / importation of additional clean soils	Medium	Plant to be clearly labelled 'clean' or 'dirty'	Low
				Separate routes to be established for clean & dirty plant	
				'Dirty' dumpers / dumptrucks not to be filled above the rim	



Angmering

Addendum to Risk Assessment & Method Statement

**Works to Borrow Pit in South East Corner &
associated areas (Phase 1C/3 & Existing Bunds)**

Prepared By	Paul Broderick
Revision	3
Date	19/06/2018

Revision	Date	Comments
0	22/12/2017	Initial Issue
1	15/02/2018	Revised following internal review
2	27/03/2018	Revised to include named contractors for testing & supervision. Testing frequencies stated.
3	19/06/2018	Revised to remove requirement for air testing and supervision, except

		in 'high risk' areas (existing bunds) due to good air testing results / advice from Economic Insulations.
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Site Address	Cala Homes development Roundstone Lane Angmering BN16 4AX
Client & Principal Contractor	Cala Homes (South Home Counties) Ltd Tilford House, Farnham Business Park Weydon Lane Farnham Surrey GU9 8QT
Watching Brief / Asbestos Consultant (To be on-site for high risk works & called in if operatives identify suspicious materials)	Economic Insulations (Portsmouth) Limited 8 Whittle Avenue Segensworth West Fareham Hampshire PO15 5SH
Asbestos in Air testing (To be undertaken during high risk works)	Envirochem Analytical Laboratories Ltd 12-14 The Gardens Broadcut Fareham Hampshire PO16 8SS
Scope of Works	This document covers the excavation of a borrow pit in the south west corner of the site, spreading of clean material across Phase 2 to raise levels and filling of borrow pit with contaminated materials from bunds, Phase 1C/3 (original site offices & car park area) & site stockpiles, and installation of geomarker membrane & clean cover. This does not cover works to any licensable materials (which, if required, are to be carried out by a licensed contractor) or the removal of any materials from site (which will be in covered lorries at the sole discretion of the client). This document has been prepared with reference to setting out, levels, details, volumes, remediation strategies & testing results, etc provided by Cala (and prepared by their consultant engineers, etc) and all work is to be completed in accordance with drawings, details and instructions issued by Cala Homes.
Current Status and Remedial Requirements Summary	Geo-environmental investigations carried out by RSK identified hydrocarbon, metal and asbestos (sporadic cement bonded asbestos containing materials (ACM) and low level concentrations of asbestos fibres) in made ground across Phase 1B. Where this was removed for foundations/roads and installation of clean cover system it was stockpiled on site pending a decision as to final location. Any ACM encountered was handpicked during excavation by RSK advisors, with remaining soils (containing fibre content as detailed in report 27621 L08) deemed suitable for re-use at depth – results from air sampling carried out prior to works were not above the detection limit of 0.01 fibres/ml. Areas of hydrocarbon contamination were stockpiled separately for later removal from site. In accordance with the remedial strategy for the site (RSK reports 27621 R08 & 27621 R03) the primary measures to mitigate potential risks to personnel from these materials during the construction process are good personal hygiene practices and dust mitigation measures. Any additional mitigation measures proposed within this RAMS have been included as precautionary

	measures, to protect personnel in the event that higher risk contaminants are unexpectedly identified during the works, and may be relaxed dependent on results. A watching brief by all personnel conducting any excavation works at the site should be maintained at all times for unexpected contamination (staining, odours, suspected ACM). In the event that any unexpected contamination is identified, works are to immediately cease <u>(with exception of dust mitigation which must be maintained)</u> and advice sought from environmental consultant. During the works from 16/04-11/06/2018 air testing results remained well below the clearance level, with one small area of potentially licensable material being discovered & removed by operatives from Economic Insulations. Operatives should continue to have FFP3 masks available, but wearing of masks will not be enforced except in high risk areas. Implementation of mitigation measures relating to future residents (garden and soft landscaping 3 layers) and the environment (i.e. materials management and measures to prevent cross contamination to 'clean' areas of the site) are also referred to in this document.
Supervision	Consultant from Economic Insulations (Portsmouth) Limited to supervise all high risk works, advise on control measures required, and whether changes are required to the scheme of work. Cala's consultants (RSK) to advise on carry out testing if required and advise on other contaminants (eg hydrocarbons). All operatives will have received asbestos awareness training, and have been advised to stop works to seek advice of consultant(s) upon discovery of suspected Asbestos or other contaminants (eg visual or olfactory evidence of hydrocarbons).

Preparatory Works

1. Ensure all stockpiles fenced off with herras panels (double clipped), location recorded and stockpile references assigned. (already carried out)
2. Clearance of vegetation from proposed borrow pit area. (already carried out)
3. Carry out air monitoring to establish baseline levels of asbestos. (already carried out)
4. Consultant to walk the proposed storage area and transport route to visually check for any contaminants prior to movement of materials starting.
5. Erect fencing to areas of contaminated material (South East Corner, Bund Cut-Through to A280). (already carried out)
 - Cala Homes to erect fencing along proposed route from Phase 3 to Borrow Pit, following route Road 7, Road 7a, temporary link road, Road 8A, Road 8.
6. Place operative decontamination unit & sign in hut on Road 8 (ie by Plot 100) – or other location as agreed with Cala Homes. (already carried out)
7. Set up vehicle exit & washdown area at Road 8, by decontamination unit (already carried out)
 - Trailer mounted water bowser with pressure washer to be available
 - CALA Homes to provide water supply to this area.
8. Ensure plant is marked “clean” or “dirty” and ensure “dirty” plant only on contaminated works. (already carried out)
 - Gateman to issue construction plant with dirty stickers if moved into contaminated work area.
 - Gateman to ensure plant has been decontaminated and dirty stickers removed if to be removed from work area. Plant decontamination form to be completed upon removal of construction plant from work area (see Appendix 4).
9. Place Dustlayer mobile dust suppression units to agreed locations prior to disturbing ground. (already carried out)

Phase 3 Works

1. Once Cala Homes have vacated offices, demolish existing welfare facilities. (already carried out)
 - Hardcore to be crushed for re-use on site.
2. Break out existing concrete hardstanding and crush for re-use.
3. Damp down soils using Dustlayer mobile dust suppression unit.
4. Reduce dig across entire area (Plots 197-214) to level of underside of cover system.
5. Dig & pour foundations.
6. Strip off & re-contour bund to front of site, including replace cover geo-marker membrane. (already carried out)
7. Transport arisings to borrow pit area using dumptrucks once borrow pit dug (already carried out)
 - To prevent loss of material, dumptrucks not to be filled above the rim.
8. Lay Fastrack 609 Geomarker to plots.
 - Great care is to be taken in laying Geomarker to prevent contamination.
 - i. Geomarker to be rolled out with ‘clean’ inside facing up, 300mm laps to be used.
 - Once Geomarker is laid the foreman will record details, take photos, and ask the consultant to confirm geomarker laid correctly & ready for clean fill.
9. Use roadbrush to clear haul road of any arisings.

10. Carry out reassurance monitoring prior to resuming activity in the area.
 - Operatives should clean (eg boots, respirator) or dispose of potentially contaminated PPE (eg gloves, filters, overalls, etc) if continuing to work in Phase 3 area.
11. Remove Heras panels surrounding Phase 3, and haul road to borrow pit.
 - Adjust heras around borrow pit area to extend around corner of Road 8, to allow access from borrow pit to decontamination unit and washdown area.
12. Using “clean” dumpers or dump truck, move clean natural subsoil from stockpile to borrow pit area laying 450mm over Geomarker as cover system and spread/grade using excavator. Leave ready for landscaping by others.
 - Topsoil (if required) to be imported Woodhorn topsoil.

Main Works

1. Set out.
2. Damp down soils using Dustlayer mobile dust suppression unit, if required.
3. Reduce dig to strip off topsoil & made ground from base & batters of existing pond area (already carried out)
 - RSK report 27621 R08 Figure 4 states that there is asbestos contamination to this area. Advisor to confirm when clean natural soils reached.
 - If necessary remove part of made ground stockpile where over borrow pit location.
 - Soils to be stored in location to be agreed on site (far south east corner proposed, ie location of future attenuation tank – may be inadequate and require use of Phase 2 area, in which case terram should be laid under temporary storage stockpile.)
4. Form access ramp in vicinity of plot 224 to enable access to excavation. (already carried out)
5. Excavate out to depths & dimensions all as approved plans, maintaining sides of excavation at gradient no steeper than 1 in 4. (already carried out)
 - As work proceeds excavate sides of borrow pit to alter bank gradients to 1 in 2 if required.
 - Deeper area near existing made ground stockpile to be excavated first, to enable filling at lower level whilst excavation continues at higher level nearer to initial access ramp.
 - Level survey to be carried out when base of borrow pit reached (prior to filling each section) to quantify volumes excavated / deposited.
6. Move clean material by site dumper, or dumptruck, to clean stockpile in Phase 2. (already carried out)
 - Samples to be taken for moisture testing every 500m³ (minimum) and results forwarded to Cala / RSK to inform compaction regime (to be confirmed by Cala Homes).
 - May spread and level directly to level of underside of cover system.
7. Install stop block at end of Road 8 to allow tipping direct into borrow pit, or form ramp if space allows. (already carried out)
8. Transport material from Phase 3 works to borrow pit. (already carried out)
9. Move & Level tipped material using 360 excavator (marked ‘dirty’) and compact in layers in accordance with approved compaction regime.
 - Samples to be taken for moisture testing every 500m³ (minimum) and results forwarded to Cala / RSK.

10. Once all clean material is moved, alter route fencing and carry out excavation through bund adjacent to A280 (High risk area – Economic Insulations to supervise & air testing to be carried out).
 - .
 - Supply & lay Fastrack 609 Geomarker to exposed surfaces.
 - Sacrificial 150mm to be removed from haul route and transported to borrow pit (using Dozer).
11. Move & Level tipped material using 360 excavator (marked 'dirty') and compact in layers in accordance with approved compaction regime using 13T sheepsfoot Roller.
 - Samples to be taken for moisture testing every 500m³ (minimum) and results forwarded to Cala / RSK.
12. Move material from existing made ground stockpile & material previously stripped from borrow pit area into borrow pit, continuing to compact and take samples for moisture testing. (already carried out)
 - This is likely to be via 'haymaking' using excavator, or dumptrucks using ramped access.
13. Once overlying material removed, and as work proceeds, excavate for attenuation tank & connection to site storm water system. (already carried out)
 - Details to be provided – it is anticipated that pipes will run above the geomarker membrane, in which case connection will follow item 17.
 - It is believed that heavy duty crates are to be used.
14. Continue moving material to achieve underside of geomarker membrane.
15. Once entire stockpile removed, including 150mm sacrificial scrape from area underneath (or to level of underside of cover system, whichever is lower), borrow pit area to be profiled to correct levels.
16. Clean plant at designated wash point and remove to 'clean' area.
17. Lay Fastrack 609 Geomarker.
 - Great care is to be taken in laying Geomarker to prevent contamination.
 - i. Geomarker to be rolled out with 'clean' inside facing up, 300mm laps to be used.
 - Once Geomarker is laid the foreman will sign the handover form, take photos, and ask the consultant to confirm geomarker laid & ready for clean fill. Operatives should clean (eg boots, respirator) or dispose of potentially contaminated PPE (eg gloves, filters, etc) if continuing to work in area.
18. Carry out reassurance monitoring prior to resuming activity in the area.
 - Operatives should clean (eg boots, respirator) or dispose of potentially contaminated PPE (eg gloves, filters, overalls, etc) if continuing to work in this area.
 - Possibility of carrying out reassurance testing to bunds/haul road along A280 at earlier stage, in which case heras panels should be adjusted to suit revised remediation area prior to continuing work in the area adjacent to A280.
19. Remove Herras Panels
20. Using "clean" dumpers or dump truck, move clean natural subsoil from stockpile to borrow pit area laying 450mm over Geomarker as cover system and spread/grade using excavator. Also move clean soils as cover to bunds alongside A280. Leave ready for landscaping by others.
 - Topsoil (if required) to be imported Woodhorn topsoil.
21. RSK to carry out verification testing.

22. Spread and compact clean soil to Phase 2 & central POS area in accordance with approved compaction regime, continuing to take samples for moisture testing.

- Form bund on POS with material required to cover compound area, for later profiling to correct levels.

Control Measures Required (when working in 'dirty' area)

1. All operatives to be inducted in these RAMS & sign briefing record.
2. All operatives to have received asbestos awareness training, and be aware that they should stop works and contact consultant if concerned about potential contaminants.
3. All visitors to receive induction relevant to their work.
4. Operatives to wear P3 filtering face pieces. *
5. Operatives to have oversuits for working in the area. Boots to be of wellington style (ie no laces or stitching), and meet EN 20345 requirements for midsole and toe protection. *
6. Stockpiles & any exposed soils to be dampened down as required to prevent fibres becoming airborne.
7. Plant not to be removed from designated dirty areas unless decontaminated.
8. All operatives to clean boots and remove potentially contaminated PPE when leaving the work area.

* Dependent on results of (representative) personal air monitoring carried out by Envirochem, and advice received from Economic Insulations, RPE/PPE requirements may be adjusted. It is envisaged that where a relaxation is proposed follow up testing will be carried out to ensure conditions remain safe, and where a change occurs (eg location, material, etc) standard procedures will be in place until further testing indicates that it may be safe to relax requirements.

Risk Matrix

Hazard	Person(s) at risk	Worst Case	Initial Risk	Control Measures to be put in place	Residual Risk
Inhalation of asbestos fibres	Operatives	Asbestosis	High	All operatives to have received asbestos awareness training	Medium
				Consultant to be on site to identify asbestos when working in high risk areas. (Only sporadic non-licensable ACM materials to be considered suitable for re-use at depth. If any licensable or large quantities of non-licensable ACM are observed, works are to cease in this area, and the area made safe i.e. dampened down, covered/boarded and fenced off, and advice sought from licensed asbestos contractor)	
				All operatives to be face-fit tested for P3 filtering facepiece or provided with powered respirator. Masks <u>must</u> be worn whilst breaking / disturbing potentially impacted ground. Personal monitoring results may be used to allow removal of masks where results below 0.01 fibres/ml.	
	Persons outside the work area (due to wind dispersal)		Medium	Soils to be wetted down to prevent fibres becoming airborne	Low
	Persons outside the work area (due to contact)		High	Area to be herrassed off and signed to prevent unauthorised access	Low
				Workers to carry out personal decontamination	

	dispersal)			procedure when leaving 'dirty' area	
				Plant to be decontaminated before leaving 'dirty' area	
Ingestion of Metals / Oil Substances	Operatives	Ingestion of Metals / Oil Substances	High	Operatives to wear gloves.	Low
				No Smoking / Drinking / Eating in work area – welfare facilities in clean area.	
				Workers to carry out personal decontamination procedure when leaving 'dirty' area	
	Future users of land		Medium	Cover system consisting of geo-marker membrane and 450mm clean site won subsoil & 150mm clean imported topsoil to be laid to private gardens prevent absorption by future growing of foodstuffs.	Low
Contamination of clean soils	Client	Increased cost for disposal of contaminated soils / importation of additional clean soils	Medium	Plant to be clearly labelled 'clean' or 'dirty'	Low
				Separate routes to be established for clean & dirty plant	
				'Dirty' dumpers / dumptrucks not to be filled above the rim	

												PLAN OF WORK AND RISK ASSESSMENT			
		Likelihood	Imminent (5)	25	20	15	10	5	High Risk	Activities must not be undertaken					
			Very Likely (4)	20	16	12	8	4	Medium Risk	Activities may proceed with caution and adequate precautions					
			Likely (3)	15	12	9	6	3	Low Risk	Normally safe to proceed without any additional precautions					
			Possible (2)	10	8	6	4	2							
			Unlikely (1)	5	4	3	2	1							
Calculation is Risk = Severity x Likelihood	Severity					Contractor	Blaze Construction Ltd 93 Leigh Road Eastleigh, Southampton Hampshire, SO50 9DQ								
	Death (5)	Major Injury (4)	3 Day (3)	Minor Injury (2)	No Injury (1)					Site Address	Cresswell Park, Rounstone Lane, Angmering Littlehampton, BN16 4AX				
						Reference No.	16746								
						RAMS No.				152					
	Details		Information							SoP Ref (if app)					
DETAILS OF CONTRACT															
1.	Contact Details	Economic Insulations (Portsmouth) Limited													
		Contracts Manager				Mr Gary Archer		01489 582588 / 07887 781255		01.01					
		Supervisor				TBC				01.01					
		Client													
		Manager				Mr Paul Broderick		02380 615 888							
		Other													
Analyst															
2.	Programme	TBC													
3.	Employee Nos.	TBC								02.01					

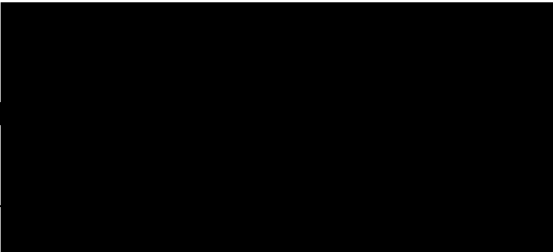
4.	Supervisor	The supervisor will ensure that all works are carried out in accordance with the standard procedures and this plan of work		02.01
5.	Air monitoring	Background monitoring around the perimeter of the respirator zones will be undertaken during the work and personal monitoring will be carried out on all personnel within the respirator zones daily.		11.03
SCOPE OF WORKS				
6.	Scope of Works	To work in conjunction with our client’s machine operators and engineers in the removal and transportation of spoil from various locations to the pre-excavated borrow pit. Works to be carried out as follows : • Visually inspect surface of the area that is to be excavated • Hand pick any visible debris. • Witness spoil being Mechanically excavated into the transport vehicles. • Inspect the soil once it has been deposited in to the pit to establish that all the contamination has been removed Our works will be carried out in accordance with this document and in conjunction with our clients plan of work.		08
7.	Preparatory Works by Client	1. Vacation of our working area by all unauthorized personnel for the duration of our works. 2. Fixed Heras fencing to be erected. 3. Adequate space adjacent to the working area for our decontamination unit to be sited. 4. Supply of mains power and water. 5. Use of toilet and welfare facilities.		
8.	Asbestos	Quantity (No of Bags)	Unknown	
		Type	Chrysotile	
		Form	Soil with small amounts of asbestos cement	
		Condition	Poor	
9.	Access/Fire Risks	Fire Risk is LOW		10.01
10.	PoW Changes	Who is authorised to change	Supervisor or Manager	01.03
		How change recorded	On attached Amendment Sheet	01.03

CONTROL MEASURES

Hazard	Potential for Harm	Persons Effected	Risk Estimate	Control Measures	Residual Risk Estimate
Employees & others exposed to asbestos fibres	Operatives and other trades may come into contact with asbestos fibres	Operatives Machine operator Other Trades	5 x 4 = 20	a) Spoil will be sprayed with dust layer suppression unit supplied by the client. b) The machine operator is stay in the cab at all times unless otherwise instructed by the supervisor c) Perimeter and personal air monitoring will be undertaken during the removal process to ensure safe working levels. d) Route will be checked for hazards before moving bags.	5 x 1 = 5
Identification of licensed asbestos materials	Operatives and other trades may come into contact with asbestos fibres	Operatives Machine operator Other Trades	5 x 2 = 10	If licensed asbestos materials are identified, we will carry out the following: a) Immediately cease work. b) Spray the visible debris with diluted surfactant with allowing time to soak. c) clean the visible debris by way of hand picking, waste will be placed into red asbestos waste sacks, double bagged into clear asbestos waste sacks and sealed at the neck with tape. d) Seal the area using polythene sheeting weighted down into place. e) Contact contract manager to make further assessment of what is required.	5 x 1 = 5
Movement of Machines	Crushing	operatives	4 x 4 = 16	No movement of machines unless the banksman is in attendance to ensure that all personnel are clear to enable safe movement	4 x 1 = 4
Working in close proximity to machine	Crushing	operatives	4 x 4 = 16	Supervisor is to stand well back from the machine when in operation. A distance of at least 6 meters is to be kept at all times	4 x 1 = 4

	Failure of decontamination procedures through human error or otherwise	Operatives and other trades may come into contact with asbestos fibres	Operatives Other Trades	4 x 4 = 16	Written decontamination procedures are to be thoroughly audited against actual decontamination practices.	4 x 1 = 4
	Slips, Trips and Falls	Cuts and broken bones	Operatives	4 x 3 = 12	a) Supervisor to walk the route prior to work commencing and to ensure that all tripping, slipping or tearing hazards are removed. b) Care is to be taken at all times	4 x 1 = 4
	Leptospirosis	Bacterial Infection	Operatives	3 x 2 = 6	a) All cuts, lacerations and abrasions to be thoroughly covered with waterproof dressings and the wearing of gloves and protective clothing to be compulsory. b) Provide information, instruction and supervision at introduction level on Leptospirosis. c) Ensure that employees at risk advise their GP's of their occupation and possible exposure to this bacterium in order to assist early diagnosis (Flu symptoms to be taken seriously) d) Leptospirosis cards to be issued.	3 x 1 = 3
11.	Exposure Levels	During previous land contaminant removal works on this site, personnel and background air monitoring has been conducted and not exceed the control limit of < 0.1 f/cm³.				05.01
12.	Controls Applied	Warning signs and barrier tape H Type vacuums, fibre suppression				07
13.	PPE & RPE Type	Type 5/6 blue disposable overalls and P3 filter Sundstrom half masks will be worn				06
METHOD OF WORK						
14.	Working Method & Fibre Suppresion	<u>Set up</u> 1. The decontamination unit will be sited adjacent to our work area, exact location to be confirmed. 2. Power and water will be gained within the decon using a 3kva generator and internal water pump, water will be supplied to fill the tank by the client. 3. Warning signs and barrier tape will be erected around the area of work to form a respirator zone. Additional warning signs and barrier tape will then be erected 3 metres out from the respirator zone to form an asbestos zone. 4. An area will be chosen to install preliminary EM8 decontamination facilities within the asbestos zone.				08

		<u>Removal</u> 1. The surface will be first be visually inspected for any visible debris. This will be hand-picked, placed into clear asbestos waste sacks, double bagged into clear asbestos waste sacks and sealed at the neck with tape. Waste will be disposed of within the on-site asbestos waste skip. 2. The site foreman will mark out the area to be excavated. 3. The soil will be dug using the mechanical excavator and loaded into the transport vehicles and transported to the burrow pit, this will be then deposited, and the surface visually inspected again. 4. Once the first section has been dug down and disposed of, the above process will be repeated until all the spoil has been removed. 5. The area will be cleaned; the mechanical digger will be shut down and the bucket and boom vacuumed and wiped where necessary. 6. The area will then be visually inspected again by the supervisor, and only when he is satisfied will he hand back the area to the client			
15.	Decontamination	Refer to Standard Procedures			07.08
16.	Entry/Exit	Refer to Standard Procedures			07.08
17.	Equipment	Equipment Type	No. of	Details	03.01.01.02
		DCU	1	A Decontamination unit will be sited adjacent to the work area. power and water will be gained within the decon using a 3kva generator and internal water pump, water will be supplied to fill the tank by the client.	
18.	Waste Disposal	All asbestos waste will be placed in sealed lockable containers and transported, direct to landfill site by waste disposal company for disposal as hazardous waste. Copies of all consignment notes will be kept on record and made available for inspection at all times.			09
OTHER SITE SPECIFIC INFORMATION					
19.	Toilet and Welfare Facilities	Toilet and welfare facilities will be available on site			
20.	Power and Water	Power & water supply will be available on site			
21.	Emergency	Fire	When arriving on site the supervisor is to ensure that he knows the location of fire fighting equipment, fire alarm and the muster point in the event of a fire. A mobile phone will be used for emergencies and the supervisor is to ensure that he has a signal when arriving on site.		10.01
		Injury	All operatives and supervisor on site will be emergency first aid trained The nearest first aid kit will be located within the company vehicle A mobile phone will be used for emergency calls as above		10.02

			Nearest A&E Hospital is: St Richard's Hospital, Spitalfield Lane, Chichester, West Sussex PO19 6SE	
		Asbestos	As Per Standard Procedures	10.03 & 4
		Power	Power will be supplied by the client, in the event of power failure a 110v generator will be used.	10.05
22.	Variations to SoP	See attached sheet, as / if necessary		
AUTHORISATION				
I confirm that this Plan of Work has been checked for accuracy and quality				
Name: G. Archer		Signed 		Date: 04/04/2018

VARIATIONS

To SoPs

SoP Ref

Variation

To POW

PoW Ref

Variation

Date &
Initials



APPENDIX I

AIR MONITORING RESULTS



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens, Broadcut, Fareham
Hampshire. PO16 8SS

Fibre Counting Report



CLIENT: Blaze Construction

SITE ADDRESS: West End Nursery, Roundstone Lane, Angmering, Littlehampton BN16 4AX

Our Ref: J141124 FC-12

Your Ref:

SAMPLING PROTOCOL: Reassurance

SAMPLED BY: Stefan Kitchener

ANALYSED BY (if different):

DATE OF SAMPLING: 16:04:18

DATE OF ANALYSIS (if different):

Filter No.	Pump	Head	Location	Time on	Time off	Flow (litres/min)			Volume (V) litres	Grats (n)	Fibres (N)	Calculation fibres/ml	Reported result fibres/ml
						Flow (start)	Flow (finish)	Flow (used)					
1	ENV24	SK1	Location 22, Westerly perimeter (approx 40m from contaminated mound)	11:29	12:29	8.0	8.0	8.0	480	200	1.5	0.001	<0.01
2	A4	SK2	Location 22, North-western perimeter (approx 40m from contaminated mound)	11:31	12:31	8.0	8.0	8.0	480	200	0.5	0.001	<0.01
3	ENV42	SK3	Location 22, Northern perimeter of mound (approx 20m from contaminated mound)	11:33	12:33	8.0	8.0	8.0	480	200	2.5	0.001	<0.01
4	ABC	SK4	Location 22, Easterly perimeter of mound (approx 40m from contaminated mound)	11:36	12:36	8.0	8.0	8.0	480	200	2.0	0.001	<0.01
5	PO2	SK5	Location 22, South-easterly perimeter of mound by sub-station (approx 10m from contaminated mound)	11:37	12:37	8.0	8.0	8.0	480	200	1.0	0.001	<0.01
7	ENV24	SK1	Location 16, Southerly perimeter of mound (approx 50m from contaminated mound)	13:50	14:50	8.0	8.0	8.0	480	200	1.0	0.001	<0.01

1. Unless otherwise stated, the detection limit is 0.01 fibres/ml.

3. Comments, observations and opinions are outside the scope of UKAS accreditation.

5. For clearance sampling, this report must be read in conjunction with the certificate of reoccupation.

2. Samples collected by the client are evaluated using information provided by the client.

4. Fibres were counted on membrane filter(s) in accordance with the HSE Guidance Note HSG 248.

Equipment Numbers:

Microscope: Meji 12

Stage Micrometer: WSM-21

Tally Counter: 8/US

Barometer: BTC-37

Thermometer: BTC-37

Flow Meter: FM45

Environment:

Temperature (°C): 17

Pressure (mb): 1007

Correction Factor (F): -

Diam. of dust deposit (D) (mm): 22.5

Test Slide (5 bands): Yes/No

W/B Grat diameter (µm): 100

Blank Filter

Head: SK6

Graticules:

Fibres:

Place of Analysis:

Lab HY14 DFC

On Site

Mod Lab

Comments

Reassurance air testing carried out in various locations during excavation of asbestos contaminated earth. Air testing to ascertain airborne fibre concentration. Results satisfactory.

SIGNATURE
(on behalf of)
ENVIROCHEM

PRINT NAME: Stefan Kitchener

7/NOV06



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens, Broadcut, Fareham
Hampshire. PO16 8SS

Fibre Counting Report



CLIENT: Blaze Construction

SITE ADDRESS: West End Nursery, Roundstone Lane, Angmering, Littlehampton BN16 4AX

Our Ref: J141124 FC-12

Your Ref:

SAMPLING PROTOCOL: Reassurance

SAMPLED BY: Stefan Kitchener

ANALYSED BY (if different):

DATE OF SAMPLING: 16:04:18

DATE OF ANALYSIS (if different):

Filter No.	Pump	Head	Location	Time on	Time off	Flow (litres/min)			Volume (V) litres	Grats (n)	Fibres (N)	Calculation fibres/ml	Reported result fibres/ml
						Flow (start)	Flow (finish)	Flow (used)					
8	A4	SK2	Location 17, South-easterly perimeter of mound (approx 30m from contaminated mound)	13:51	14:51	8.0	8.0	8.0	480	200	1.5	0.001	<0.01
9	ENV42	SK3	Location 16, Easterly perimeter of mound (approx 60m from contaminated mound)	13:53	14:53	8.0	8.0	8.0	480	200	3.0	0.002	<0.01
10	ABC	SK4	40m North of location 18, North-easterly perimeter of mound (approx 70m from contaminated mound adjacent road)	13:56	14:56	8.0	8.0	8.0	480	200	1.0	0.001	<0.01
11	PO2	SK5	30m North of location 16, Westerly perimeter of mound (approx 70m from contaminated mound within construction area)	14:03	15:03	8.0	8.0	8.0	480	200	0.5	0.001	<0.01

1. Unless otherwise stated, the detection limit is 0.01 fibres/ml.

3. Comments, observations and opinions are outside the scope of UKAS accreditation.

5. For clearance sampling, this report must be read in conjunction with the certificate of reoccupation.

2. Samples collected by the client are evaluated using information provided by the client.

4. Fibres were counted on membrane filter(s) in accordance with the HSE Guidance Note HSG 248.

Equipment Numbers:

Microscope: Meji 12

Stage Micrometer: WSM-21

Tally Counter: 8/US

Barometer: BTC-37

Thermometer: BTC-37

Flow Meter: FM45

Environment:

Temperature (°C): 17

Pressure (mb): 1007

Correction Factor (F): -

Diam. of dust deposit (D) (mm): 22.5

Test Slide (5 bands): Yes/No

W/B Grat diameter (µm): 100

Blank Filter

Head: SK6

Graticules:

Fibres:

Place of Analysis:

Lab HY14 DFC

On Site

Mod Lab

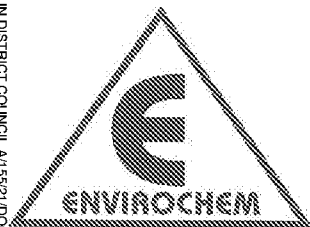
Comments

Reassurance air testing carried out in various locations during excavation of asbestos contaminated earth. Air testing to ascertain airborne fibre concentration. Results satisfactory.

SIGNATURE
(on behalf of)
ENVIROCHEM

PRINT NAME: Stefan Kitchener

ISSUE07/NOV06



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens, Broadcut, Fareham
Hampshire. PO16 8SS

Fibre Counting Report



CLIENT: Blaze Construction

SITE ADDRESS: West End Nursery, Roundstone Lane, Angmering, Littlehampton BN16 4AX

Our Ref: J141124 FC-12

Your Ref:

SAMPLING PROTOCOL: Personal

SAMPLED BY: Stefan Kitchener

ANALYSED BY (if different):

DATE OF SAMPLING: 16:04:18

DATE OF ANALYSIS (if different):

Filter No.	Pump	Head	Location	Time on	Time off	Flow (litres/min)			Volume (V) litres	Grats (n)	Fibres (N)	Calculation fibres/ml	Reported result fibres/ml
						Flow (start)	Flow (finish)	Flow (used)					
6	AP3	SK6	Billy Bastable	11:42	12:43	3.0	3.0	3.0	183	200	0.5	0.001	<0.026

1. Unless otherwise stated, the detection limit is 0.01 fibres/ml.

3. Comments, observations and opinions are outside the scope of UKAS accreditation.

5. For clearance sampling, this report must be read in conjunction with the certificate of reoccupation.

2. Samples collected by the client are evaluated using information provided by the client.

4. Fibres were counted on membrane filter(s) in accordance with the HSE Guidance Note HSG 248.

Equipment Numbers:

Microscope: Meji 12

Stage Micrometer: WSM21

Tally Counter: 8/US

Barometer: BTC-37

Thermometer: BTC-37

Flow Meter: FM50

Environment:

Temperature (°C): 18

Pressure (mb): 1008

Correction Factor (F): -

Diam. of dust deposit (D) (mm): 22.5

Test Slide (5 bands): Yes/No

W/B Grat diameter (µm): 100

Blank Filter

Head: SK6

Graticules:

Fibres:

Place of Analysis:

Lab HY14 DFC

On Site

Mob Lab

Comments

Personal monitoring carried out during excavation of contaminated soil. Air testing to ascertain airborne fibre concentration.

SIGNATURE
(on behalf of Envirochem)
ENVIROCHEM

PRINT NAME: Stefan Kitchener



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens
Broadcut, Fareham
Hampshire. PO16 8SS

Ref No: J141124 FC-12

Personal Monitoring Observation Form

Type & Scale of work: Tidying up stock pile next to mound contaminated with asbestos products (NW side)

Purpose of monitoring: (select all that apply)

Checking effectiveness of methods ☒ Providing data for personal exposure records ☒ Confirming appropriate RPE being worn ☒

General control measures in use: (select all that apply)

Enclosure (under negative pressure) ☐ Partial enclosure ☐ Injection ☐
Gel/Foam ☐ Shadow vacuum ☐ Spraying ☐
Other (Please specify): Soil is wet

Sampling Details:

Operative's Name/job title: Billy Bastable
Type of RPE worn: none
Length of time Operative is / has been exposed: 8 hours approx

Asbestos Product(s) being removed including detail of fixings, size, surface treatment and tools used during works and dust suppression methods being used by operative:

General Description of activities being undertaking during sampling:
Consolidating smaller stock piles into larger mound

Is the asbestos in good or bad condition (as per the method statements description): Broken in ground

Other factors which may affect the result (eg approximate size of the enclosure, external location, etc):

Time weighted average (4 Hour TWA) =
$$\frac{(F_1 \times T_1) + (F_2 \times T_2) + \dots (F_n \times T_n)}{4}$$
 TWA = NA f/ml

Where F = concentration f/ml
T = Time for that exposure, hours and minutes, 1 hr 30 mins = 1.5

Notes: The sampling period must be sufficient to ensure it is fully representative of the work. Sampling periods should be for 4 hours to access the control limit or for the duration of a specific task for shorter duration activities. A minimum sample time of 10 minutes is required to assess the Short Term Exposure Limit. In general, the client is to specify their requirements depending on previous personal air sampling carried out. All information was collected from the method statement or / and the site contact and this information is deemed as accurate / correct for the purpose of this report.

Analyst: Stefan Kitchener

Signature:



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens, Broadcut, Fareham
Hampshire. PO16 8SS

Fibre Counting Report



CLIENT: Blaze Construction

SITE ADDRESS: West End Nursery, Roundstone Lane, Angmering, Littlehampton BN16 4AX

Our Ref: J141124 FC-12

Your Ref:

SAMPLING PROTOCOL: Personal

SAMPLED BY: Stefan Kitchener

ANALYSED BY (if different):

DATE OF SAMPLING: 16:04:18

DATE OF ANALYSIS (if different):

Filter No.	Pump	Head	Location	Time on	Time off	Flow (litres/min)			Volume (V) litres	Grats (n)	Fibres (N)	Calculation fibres/ml	Reported result fibres/ml
						Flow (start)	Flow (finish)	Flow (used)					
12	AP3	SK6	Gholamreza Cheraghi (earthworks)	14:07	15:07	3.0	3.0	3.0	180	200	0.5	0.001	<0.026

1. Unless otherwise stated, the detection limit is 0.01 fibres/ml.

3. Comments, observations and opinions are outside the scope of UKAS accreditation.

5. For clearance sampling, this report must be read in conjunction with the certificate of reoccupation.

2. Samples collected by the client are evaluated using information provided by the client.

4. Fibres were counted on membrane filter(s) in accordance with the HSE Guidance Note HSG 248.

Equipment Numbers:

Microscope: Meji 12

Barometer: BTC-37

Stage Micrometer: WSM21

Thermometer: BTC-37

Tally Counter: 8/US

Flow Meter: FM50

Environment:

Temperature (°C): 18

Pressure (mb): 1008

Correction Factor (F): -

Diam. of dust deposit (D) (mm): 22.5

Test Slide (5 bands): Yes/No

W/B Grat diameter (µm): 100

Blank Filter

Head: SK6

Graticules:

Fibres:

Place of Analysis:

Lab HY14 DFC

On Site

Mob Lab

Comments

Personal monitoring carried out during excavation of contaminated soil. Air testing to ascertain airborne fibre concentration.

SIGNATURE:

(on behalf of Envirochem)

ENVIROCHEM/FORMS/WORKSHEETS/02/ISSUE07/NOV06

PRINT NAME: Stefan Kitchener



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens
Broadcut, Fareham
Hampshire. PO16 8SS

Ref No: J141124 FC-12

Personal Monitoring Observation Form

Type & Scale of work: Tidying up stock pile next to mound contaminated with asbestos products (SE side)

Purpose of monitoring: (select all that apply)

Checking effectiveness of methods ☒ Providing data for personal exposure records ☒ Confirming appropriate RPE being worn ☒

General control measures in use: (select all that apply)

Enclosure (under negative pressure) ☐ Partial enclosure ☐ Injection ☐
Gel/Foam ☐ Shadow vacuum ☐ Spraying ☐
Other (Please specify): Soil is wet

Sampling Details:

Operative's Name/job title: Gholamreza Cheraghi
Type of RPE worn: none
Length of time Operative is / has been exposed: 8 hours approx

Asbestos Product(s) being removed including detail of fixings, size, surface treatment and tools used during works and dust suppression methods being used by operative:

General Description of activities being undertaking during sampling:
Consolidating smaller stock piles into larger mound

Is the asbestos in good or bad condition (as per the method statements description): Broken in ground

Other factors which may affect the result (eg approximate size of the enclosure, external location, etc):

Time weighted average (4 Hour TWA) =
$$\frac{(F1 \times T1) + (F2 \times T2) + \dots (Fn \times Tn)}{4}$$
 TWA = NA f/ml

Where F = concentration f/ml
T = Time for that exposure, hours and minutes, 1 hr 30 mins = 1.5

Notes: The sampling period must be sufficient to ensure it is fully representative of the work. Sampling periods should be for 4 hours to access the control limit or for the duration of a specific task for shorter duration activities. A minimum sample time of 10 minutes is required to assess the Short Term Exposure Limit. In general, the client is to specify their requirements depending on previous personal air sampling carried out. All information was collected from the method statement or / and the site contact and this information is deemed as accurate / correct for the purpose of this report.

Analyst: Stefan Kitchen

Signature:



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens, Broadcut, Fareham
Hampshire. PO16 8SS

Fibre Counting Report



CLIENT: Blaze Construction

SITE ADDRESS: West End Nursery, Roundstone Lane, Angmering, Littlehampton, BN16 4AX

Our Ref: J141125 - FC12

Your Ref: No Number Stated

SAMPLING PROTOCOL: Reassurance

SAMPLED BY: Marc Pohl

ANALYSED BY (if different): -

DATE OF SAMPLING: 17.04.2018

DATE OF ANALYSIS (if different): -

Filter No.	Pump	Head	Location	Time on	Time off	Flow (litres/min)			Volume (V) litres	Grats (n)	Fibres (N)	Calculation fibres/ml	Reported result fibres/ml
						Flow (start)	Flow (finish)	Flow (used)					
FC1	ENV28	M1	Location 1	10:10	11:10	8.0	8.0	8.0	480	200	0.5	0.001	<0.01
FC2	FU2	M2	Location 2	10:14	11:14	8.0	8.0	8.0	480	200	2.5	0.001	<0.01
FC3	24	M3	Location 3	10:17	11:17	8.0	8.0	8.0	480	200	4.0	0.002	<0.01
FC4	JS10	M4	Location 4	11:25	12:25	8.0	8.0	8.0	480	200	0.5	0.001	<0.01
FC5	ENV28	M5	Location 5	11:28	12:28	8.0	8.0	8.0	480	200	3.5	0.002	<0.01
FC6	24	M6	Location 6	11:32	12:32	8.0	8.0	8.0	480	200	3.0	0.001	<0.01

1. Unless otherwise stated, the detection limit is 0.01 fibres/ml.

3. Comments, observations and opinions are outside the scope of UKAS accreditation.

5. For clearance sampling, this report must be read in conjunction with the certificate of occupation.

2. Samples collected by the client are evaluated using information provided by the client.

4. Fibres were counted on membrane filter(s) in accordance with the HSE Guidance Note HSG 248.

Equipment Numbers:

Microscope: PCM7

Barometer: BTC 39

Stage Micrometer: WSM 16

Thermometer: BTC 39

Tally Counter: 2/US

Flow Meter: FM 3

Environment:

Temperature (°C): 13

Pressure (mb): 1002

Correction Factor (F): -

Diam. of dust deposit (D) (mm): 22.5

Test Slide (5 bands): Yes/No

W/B Grat diameter (µm): 100

Blank Filter

Head: M7

Graticules: -

Fibres: -

Place of Analysis:

Lab HX63 YVK

On Site

Mod Lab

Comments

Reassurance air monitoring to determine airborne fiber concentrations around the perimeter of the asbestos contaminated area during ground remediation works

Air test results: Satisfactory.

SIGNATURE:

(on behalf of Envirochem)

PRINT NAME: Marc Pohl



ENVIROCHEM

Analytical Laboratories Ltd

12 The Gardens, Broadcut, Fareham
Hampshire. PO16 8SS

Fibre Counting Report



CLIENT: Blaze Construction

SITE ADDRESS: West End Nursery, Roundstone Lane, Angmering, Littlehampton, BN16 4AX

Our Ref: J141125 - FC12

Your Ref: No Number Stated

SAMPLING PROTOCOL: Reassurance

SAMPLED BY: Marc Pohl

ANALYSED BY (if different): -

DATE OF SAMPLING: 17.04.2018

DATE OF ANALYSIS (if different): -

Filter No.	Pump	Head	Location	Time on	Time off	Flow (litres/min)			Volume (V) litres	Grats (n)	Fibres (N)	Calculation fibres/ml	Reported result fibres/ml
						Flow (start)	Flow (finish)	Flow (used)					
FC7	ENV28	M1	Location 7	12:45	13:45	8.0	8.0	8.0	480	200	1.0	0.001	<0.01
FC8	FU2	M2	Location 8	12:50	13:50	8.0	8.0	8.0	480	200	1.0	0.001	<0.01
FC9	24	M3	Location 9	12:51	13:51	8.0	8.0	8.0	480	200	2.0	0.001	<0.01
FC10	JS10	M4	Location 10	14:00	15:00	8.0	8.0	8.0	480	200	4.0	0.002	<0.01
FC11	ENV28	M5	Location 11	14:01	15:01	8.0	8.0	8.0	480	200	2.5	0.001	<0.01
FC12	24	M6	Location 12	14:02	15:02	8.0	8.0	8.0	480	200	2.5	0.001	<0.01

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(on behalf of Envirochem)

ENVIROCHEM/FOUR/WORKSHEET/02/ISSUES/1/NOV08

PRINT NAME: Marc Pohl