



Cedar Barn
White Lodge
Walgrave
Northamptonshire
NN6 9PY

t: 01604 781877
f: 01604 781007
e: mail@soiltechnics.net
w: www.soiltechnics.net

Simon Goodband
Bourne Wood Partnership
Salisbury Hall
London Colney,
St Albans
Hertfordshire
AL2 1BU

Date: 25th August 2016

Our Ref: L-STM3043D-003

Dear Simon,

RE: Remediation strategy for Travis Perkins, Western Approach, South Shields

1 Introduction and brief

- 1.1 Further to our correspondence of 21st July 2016, and your subsequent instructions, we can provide the following remediation assessment for the above site. This report has been prepared for the sole benefit of our above named instructing client, but this report, and its contents, remains the property of Soiltechnics Limited until payment in full of our invoices in connection with production of this report.
- 1.2 A ground investigation was undertaken at the above site in April 2015 (refer to report STM3043D-G01 rev01). The report identified leachable concentrations of lead, sulphate and PAH within the soils, which could pose a risk to groundwater. Concentrations of contaminants were below guideline values for end users and construction operatives. No asbestos was identified in any of the screened samples. Although a potential risk to controlled waters was identified, such concentrations were considered likely associated with Made Ground in the general area and was not specific to the site. In addition, development proposals substantially reduced and replaced existing soft landscaped areas with positively drained hardstanding, which would sever the infiltration pathway. On this basis, a remediation strategy was not considered necessary.
- 1.3 Following the commencement of demolition and groundworks, corrugated cement sheet formwork was encountered around the existing ground beams within an area to the north-east (see photograph 1 and Drawing 01). A sample of the cement sheet formwork was sent for laboratory analysis and confirmed to be chrysotile asbestos. A copy of the laboratory test certificate is presented in Appendix A.



Photograph 01 - view of the chrysotile cement board surrounding a ground beam. Photograph provided by Brims Construction Limited.

- 1.4 Based on the above findings, a remediation strategy is now considered necessary for the site with respect to the asbestos encountered on site and the potential risks to identified receptors. This report thus describes the remediation strategy that has been produced in order to reduce identified risks to potential receptors and to render the site suitable for the proposed redevelopment. This remediation strategy only considers the process of remedial action in terms of addressing contamination recognised to date. If during development, contamination not previously identified, is found to be present at the site, then an addendum strategy will be required, and the appropriate measures taken on site.
- 1.5 The presence of asbestos on site potentially poses a risk to construction operatives and end users. The risk to controlled waters and vegetation from asbestos contamination is considered low and thus these receptors are not considered further.

2 Development proposals

- 2.1 We understand the proposals will comprise the demolition or partial demolition of existing buildings on site and construction of new industrial/commercial trade units including a Travis Perkins branch. It is possible that existing floor slabs and possibly hardstanding areas will be re-used as part of the redevelopment. It is also proposed to install new hardstanding areas toward the north and east of the site to accommodate site traffic, parking and loading areas. Some areas of existing landscaping will be retained to the south but these will be significantly reduced following redevelopment.
- 2.2 A plan showing the development proposals and the location of the ground beams with associated asbestos formwork is presented on Drawing 01.

3 Remediation strategy

- 3.1 With reference to the risk assessments and method statements produced by the earthworks contractors (presented in Appendices B and C), works in this area are to be carried out by a trained and certified contractor and an exclusion zone will be set up around the area. An asbestos trained operative will carry out a watching brief during the excavations with all personnel entering the exclusion zone required to wear category 5/6 disposable coveralls and a P3 respirator.
- 3.2 The excavated asbestos contaminated materials (estimated to be 40 tonnes) will be removed directly from site to an appropriately licensed facility.

- 3.3 On completion of the excavation works, this area of the site will be fully surfaced in hardstanding (refer to Drawing 01), which will encapsulate any residual asbestos contamination and sever the pathways to end users of the site. On completion of these works, the risk to end users from the identified asbestos contaminated concrete at the site is considered low.
- 3.4 Should the proposed layout of the site change to include areas of soft landscaping, this remediation plan and risk assessment will need to be revised.

We trust this report provides you with the information you require. If you have any queries please do not hesitate to contact us.

Yours sincerely,

Prepared by



Georgina Everest B.Sc, (Hons) FGS
georgina.everest@soiltechnics.net
 Assistant geo-environmental Engineer, Soiltechnics Limited

Supervised by



Sarah Drage B.Sc, (Hons)
sarah.drage@soiltechnics.net
 Senior geo-environmental Engineer, Soiltechnics Limited

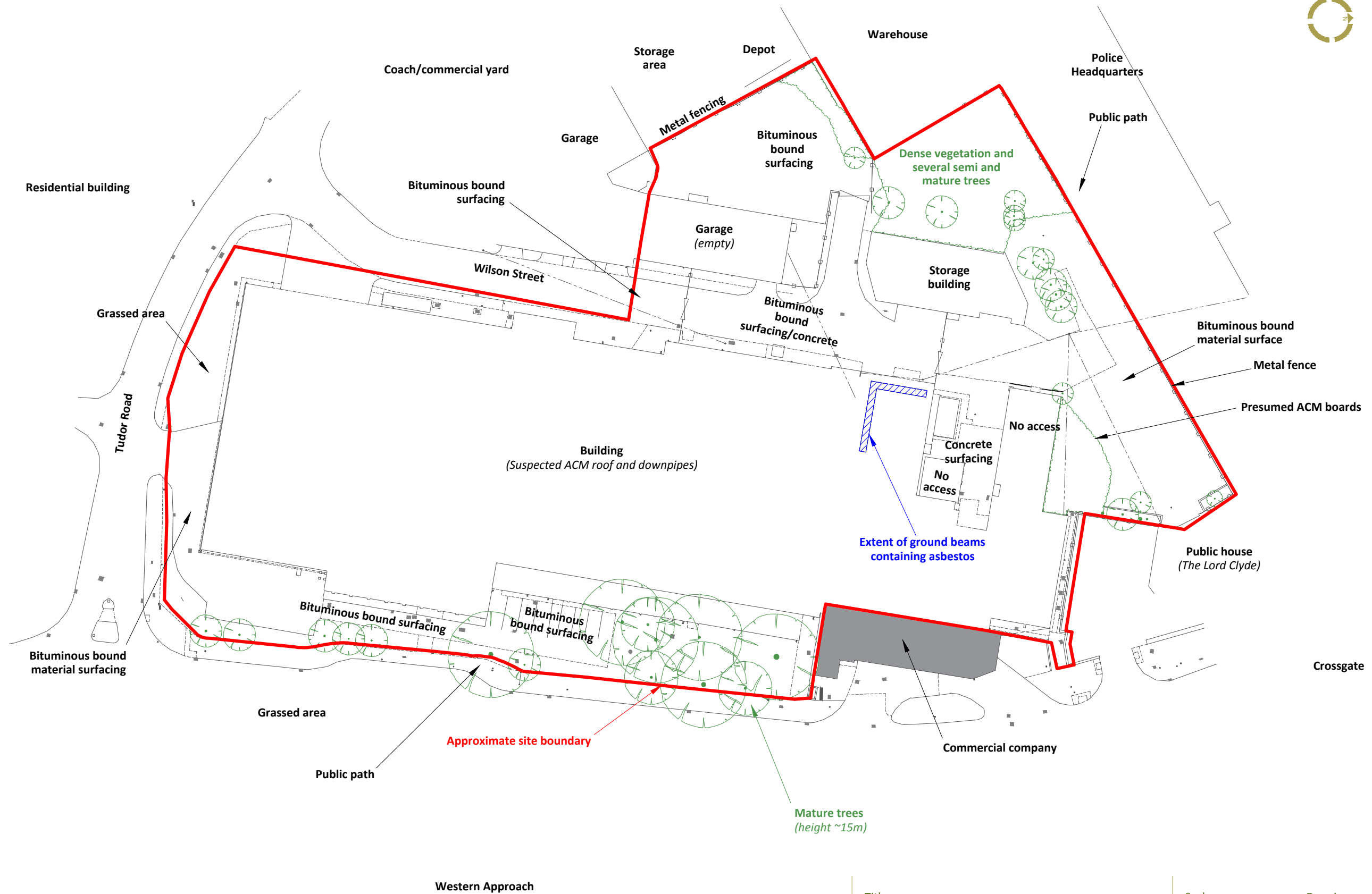
Reviewed by



David Dunkley B.Sc, (Hons)., CEnv, FGS
david.dunkley@soiltechnics.net
 Director, Soiltechnics Limited

Encs.

Drawing(s)	Principal coverage
01	Plan showing development proposals and location of identified ACM contamination.
Appendices	Principal coverage
A	Copy of laboratory test result certificates – asbestos screening
B	Earthworks Method Statement - Travis Perkins - Rev 2
C	Earthworks Risk Assessment - Travis Perkins - Rev2



Title	Scale	Drawing number
Plan showing existing external site features and location of ground beams with asbestos formwork identified during groundworks	1:750 at A3	01

ANALYTICAL TEST REPORT

Contract no: 60469
Contract name: Travis Perkins - South Shields
Client reference: -
Clients name: Thompsons of Prudhoe
Clients address: Princess Way
Low Prudhoe
Northumberland
NE42 6PL

Samples received: 13 July 2016

Analysis started: 13 July 2016

Analysis completed 18 July 2016

Report issued: 18 July 2016

Notes: Opinions and interpretations expressed herein are outside the UKAS accreditation scope. Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling. Methods, procedures and performance data are available on request. Results reported herein relate only to the material supplied to the laboratory. This report shall not be reproduced except in full, without prior written approval. Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

Key: U UKAS accredited test
M MCERTS & UKAS accredited test
\$ Test carried out by an approved subcontractor
I/S Insufficient sample to carry out test
N/S Sample not suitable for testing
NAD No Asbestos Detected

Approved by:



James Spittle
Customer Services Team Leader

Chemtech Environmental Limited

TILES

Lab number			60469-1
Sample id			Asb 1
Depth (m)			-
Date sampled			12/07/2016
Test	Method	Units	
Subcontracted analysis			
Asbestos (qualitative)	\$	-	Chrystoile

Chemtech Environmental Limited

METHOD DETAILS

METHOD	TILES	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-



METHOD STATEMENT

Earthworks
Travis Perkins
South Shields

REF: WMT/PT/321

Contract Ref: 6534E

REVISION STATUS

Revision:	Revision: 2 Date of Issue: 19th July 2016
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SIGNATURES OF AUTHORISATION

Title	Name	Signature
Thompsons H&S Officer	Paul Turbitt	
Client	Brims	

Contents

1. Summary of Works
2. Pre-amble
3. Methodology



Thompsons of Prudhoe Limited
Princess Way, Low Prudhoe, Northumberland, NE42 6PL
Tel: 01661 832422 Fax: 01661 833687

REVISION HISTORY

Revision	Date of Revision	Reasons for Revision
1 to 2	19/07/16	Include asbestos contaminated ground removal



1. SUMMARY OF WORKS

Thompsons of Prudhoe has been appointed by Brims Construction to conduct earthworks to facilitate the construction of the external works to a factory revite..

Thompsons will break out the existing concrete hardstand area and then carry out a crushing operation on site to allow for the re-use of the concrete materials (Thompsons will crush to 6F2 grade as specified within the contract specification) then carry out a reduced level dig (RLD) down to formation level, and then stone up the excavation using the 6F2 and if required imported aggregates to bring the site back up to construction levels.

PRE-AMBLE

Project Address:	Travis Perkins Western Approach South Shields
Principal Contractor:	Brims Construction 3 Austin Boulevard Quay West Business Park Sunderland SR5 2AL
Earthworks Sub-contractor:	Thompsons of Prudhoe Limited Princess Way Low Prudhoe Northumberland NE42 6PL



Project Management:	J. Burdon	Director	07702 491 331
	N. Shilling	Projects Director	07919 491 705
	N.Joscelyne	Contracts Manager	07919 491 726
	C. Dobson	Health & Safety Manager	07919 491 702
	P. Turbitt	Health & Safety Officer	07841 210 673

Person responsible for changes to the method	Mr Paul Turbitt is the appointed person for authorising changes to the method of works, under the instruction of the Site Supervisor and following advice from the appropriate persons (HSE), where required by legislation and Company Procedure.
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Details of local A&E Hospital	<p>South Tyneside District Hospital</p> <p>Tel: 0191 404 1000 Fax: 0191 2022197</p> <p>Address: Harton Lane, South Shields, Tyne and Wear, NE34 0PL</p>
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Plant & Equipment	<ul style="list-style-type: none"> • Komatsu PC210 360o Excavator Machine • Cat 653 roller • Cat 963 tracked shovel • Tracked Crusher
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Personal Protective Equipment	<p>Mandatory</p> <ul style="list-style-type: none"> • Hard hat (BS EN397 – Thompsons supplied only, Black – Supervisor, Blue – Operatives) • Safety boots (incl. reinforced toe cap and mid-sole) • Hi-vis clothing (Class 3 minimum i.e. long / short sleeve vest or coat) • Gloves - General use (minimum of BS EN888:1994) • Light eye protection (Safety Specs – BS EN166) • Hearing protection (minimum of BS EN 352-2)
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	<p>During operation in Asbestos impacted area</p> <ul style="list-style-type: none">• Safety Wellington Boot• 3M 7500 Ori-nasal P3 respirator• Category 5/6 disposable coveralls <p><i>Note specific risk assessments may require the use of additional PPE</i></p>
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Working Hours:	Work will be conducted during daylight hours. Work will commence at around 7:30am and will finish at 5:00 pm (or as daylight dictates) Mon – Fri.
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Services	<p>Prior to commencement of works Brims will liaise with the appropriate service providers to arrange for the disconnection of services where possible within the boundary of the development site. Thompsons will request copies of confirmation of service disconnection.</p> <p>No excavation works will be carried out without being briefed by Brims site management & signed onto the relevant permit to break ground.</p> <p>Any excavation works within 1m of a live service must be carried out using non-contactless methods i.e. vacuum excavation.</p> <p>Brims have specified that no live services are present within the working area.</p>
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Security Fencing and Protection	<p>The site is enclosed within a protective fence line and operates a security system. Brims will utilise / maintain these provisions during the period of the contract to ensure the security of the site and the protection of the public. All operatives involved in the works must be inducted by Brims and signed in to site and signed out when leaving site. All visitors must have a visitors brief induction and must be accompanied at all times while on site. Thompsons will adhere to the site security systems at all times. Site gates will be closed by Thompsons operatives at all times when plant is operating on site. Operatives, visitors and third parties etc will all be required to sign in upon arrival on site. Visitors and third parties will be escorted at all times when on site.</p>
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Thompsons will be required to segregate pedestrian movements from that of plant and vehicles by means of physical barriers. Thompsons will control the boundaries of our working areas as an exclusion zone. Access during excavations will be permitted to Thompson's personnel only. Warning signs will be erected in sufficient numbers around the site to ensure that all persons approaching are aware of the operations being carried out. Works will take place under the control of a banksman. The banksman will be segregated from the plant by a physical barrier, he will maintain contact with the plant via radio. If banksman are required to enter the working area then the machine operator will be notified and immediately cease works, place the machine attachment on the ground and switch off the engine until the banksman has exited the working area.

Traffic Management

Thompson's drivers are CPC, SAFED and NVQ trained. Vehicle movement is pre-planned via a Transport Coordinator. Thompson's drivers are CPC, SAFED and NVQ trained. Vehicle movement is pre-planned via a Transport Coordinator (Andy Mcgrouter).

Prior to commencement of works Brims will put a Traffic Management Plan in place to ensure the safe movement of vehicles to/from and within the development site. Thompson's operatives / wagon drivers will be briefed as to the requirements of the TMP during site induction. Vehicles will approach the site via an agreed route which is documented in the TMP and with due regard for the local traffic management systems and restrictions. Wagons will enter site via the approved entrance gate and will proceed across site following the approved traffic route and adhering to Site Traffic Management System to the specific working area. Welfare and car parking will be sited at a safe distance from the works and the vehicle routes.

All reversing should be carried out under banksman control.

Plant, vehicles and pedestrians will be segregated at all times in accordance with the site specific traffic management plan.



<p>Plant un – Loading or Loading</p>	<p>Prior to the delivery of plant to site Thompsons will liaise with the Principal Contractors Site Manager to confirm a suitable date / time.</p> <p>Thompson’s plant will be delivered to site via low loader and in accordance with the site Traffic Management Plan. The delivery of plant will be notified in advance. All Thompsons excavator machines are fitted with the appropriate guard / hand rails around the cab to ensure adequate provisions for any WAH during maintenance.</p> <p>The unloading operation will be carried out by a trained and experienced low loader operator. The operative will hold the CSCS CPCS Loader / Securer Card. The low loader operative will be briefed by Thompsons site supervisor as to the hazard of working at height to unload the excavator machine and advise to take extreme care and caution.</p> <p>The low loader operator is trained and experienced in the operation of plant (limited to moving to and from the low loader and the loading operation). His CSCS CPCS Loader / Securer qualification allows for this movement.</p> <p>The loading operation will be carried out within an exclusion zone and at a safe distance from the public and third parties.</p> <p>Thompsons vehicles will approach site via a pre-determined route and with due care and attention forwarded to third parties. Drivers will adhere to local traffic management restrictions to ensure the safety of the public and third parties.</p>
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<p>Noise & Vibration</p>	<p>Thompson’s contracts are conducted with regard to our Vibratory Tools and Noise at Work Policies and procedures. Methods will be sought which will eliminate the requirement to conduct such works where possible. If this is not possible then their use will be minimized and controlled. Specific details are outlined below:</p> <p><u>Vibration</u> – Thompsons will strictly control vibration via the selection of our plant & equipment. High impact works will be strictly minimised. Plant and equipment will be maintained to a high standard throughout works in accordance with our ISO 9001 policy and procedures.</p>
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	<p><u>Noise</u> - The machine operator and any banksman within a 10m radius will be required to wear hearing protection. Warning signage will be erected on approach to the working are to designate the area as a mandatory hearing protection area.</p>
<p>Permit to Work:</p>	<p>Before starting work a specific Safe Working Permit will be issued by Brims and accepted by Thompsons. A permit to dig will also be issued to excavate below ground level. In addition, if Thompsons come across any unidentified objects throughout the excavation works then Thompsons site supervisor will inform Brims site Management and an additional permit will be issued.</p> <p>Permits must be re-validated at each shift change in accordance with the current Brims procedures. Works will be signed as incomplete until such time as Brims have agreed that the works associated with the job are complete.</p>
<p>Environmental Precautions</p>	<p>At all times site operations will be undertaken with the protection of local stakeholders and the environment in mind. All operatives will be advised of the aspects of the site that require attention or protection within the site induction. Operatives will be provided with copies of the approved method statements prepared for the site working.</p>
<p>Re-fuelling of plant</p>	<p>Re-fueling of plant will be conducted on-site within designated re-fueling areas (established following consultation with Brims) Thompsons will use a mobile bowser (double bunded) to re-fuel plant with fuel pumps. Plant without fuel pumps (smaller rollers) will be filled using fuel barrels. Fuel should be stored in metal jerry cans / petrol cans etc, no plastic drums or containers will be permitted on site. Plant to plant re-fueling will not be permitted. Within the designated re-fueling area(s) Thompsons will ensure adequate supply of spill kits and fire extinguishers. Thompsons site supervisor is the nominated spill control person, all environmental training is carried out via ToP environmental Manager (Ryan Molloy) and via toolbox talks. In the event of a leak, spill or fire Thompsons operatives will contact Brims site management immediately and Thompsons will follow all Brims spill kit and fire procedures.</p>
<p>Training & Competency of Operatives:</p>	<p>Earthworks will be undertaken by experienced and trained plant operatives. All plant operatives hold CPCS competency cards for the items of plant that they operate. In addition our operatives have acquired vocational training at NVQ</p>

levels 2 and 3, to provide them with work based skills and certification.
A site induction will be given by Brims site staff. A record will be kept.

Following the site induction and prior to the commencement of works each day, Thompsons site supervisor will carry out a daily safety briefing in accordance with Thompsons H&S policies, this will cover the daily site activities, key hazards / risks & controls, interfaces with other including 3rd parties. Any permits or hold points / checks to adhere to plus any other instructions for the day's activities.

Prior to the commencement of works all RAMS must be briefed to all on site personnel and they must sign the register to state that they have read and understand the works to be carried out. The RAMS must be briefed at intervals not exceeding 14 days if the works are not complete within this time frame and they must sign a briefing attendance sheet each time they are briefed out to acknowledge acceptance and understanding.

4. METHODOLOGY

Welfare provisions

- Thompsons will be granted the shared use of the Brims site welfare during the duration of the project. Operatives will ensure that they maintain the welfare in a clean and orderly condition.

Removal of concrete hardstand

- Prior to commencement of works a Permit to break ground will be issued by Brims. All Thompsons site team will be signed onto this permit.
- Prior to the commencement of earthworks the reinforced concrete ground floor slab will be broken out, stockpiled and crushed on site for later re-use.
- The concrete floor slab will be broken out using a (20t) 360o excavator machine equipped with pecker attachment.
- Works will progress from one side of the floor slab to the other until the entire slab has been broken out.
- All arisings will be processed and then stockpiled on site to await crushing.



Processing of concrete stockpiles

- To enable the safe and efficient crushing of stockpiled concrete Thompsons will first undertake primary processing of the concrete.
- A demolition spec 360° excavator machine (equipped with pulveriser attachment) will be used to process the concrete into small sections and to extract any remaining re-bar.
- The excavator machine will be operated by a CPCS trained and experienced operator. The machine will operate within a defined area and site operatives will be instructed not to come within proximity to the crushing working area.
- The stockpiled concrete will be progressively reduced. This activity will be conducted with care and in a thorough manner to ensure that the crusher does not jam during the crushing operation. Once processed the concrete will be transferred to a separate stockpile to await crushing. As works progress any remaining re-bar will be extracted and then rolled, compacted and placed within a separate stockpile to await removal from site.

Crushing of stockpiled concrete

- The crusher plant will be operated in accordance with Thompson's site license requirements and the enclosed Safe Working Procedure. The crusher plant will only operate during designated working hours of 8:00am to 5:00pm. The crusher will be operated by a CPCS trained and experienced operator.
- To minimise dust release the crusher will be connected to a water supply (from an approved source). The crusher's water suppression system will be operational at all times. Where required an additional water hose will be used to wet stockpiles of concrete awaiting crushing and crushed concrete.
- The stockpiles of processed concrete will be loaded into the hopper of the mobile crusher plant using a 360° excavator machine equipped with bucket attachment. The excavator machine will be operated by a CPCS trained and experienced operator.
- The crusher will be used to reduce the hard materials to the grade specified by the Client. i.e. GSB TYPE1
- As the crushing operation progresses the crusher magnet system will extract ferrous metals from the feed material.
- The crushed, graded material will be allowed to neatly stockpile at the crusher belt end.



- The crushed material will be removed from the belt end and removed to a defined stockpile area to await its later re-use. Care will be taken to stockpile concrete separately from the other processed materials.
- Works will progress in this manner until the entire concrete has been refined to the required grade and have been neatly stockpiled to await re-use.

Reduced level excavations

- Prior to commencement of works a Permit to break ground will be issued by Brims. All Thompsons site team will be signed onto this permit.
- Thompson's will adhere to the requirements of the contracts specification and levels marked by the Site Engineer throughout works.
- Reduced level excavations will be conducted using a 20t 360o excavator machine (equipped with bucket attachment). The excavator machine will be operated by a CPCS trained and experienced plant operator working under the direction of our Site Supervisor. Plant will operate within an exclusion zone with only essential persons present.i.e. Banksman / vehicle marshall.
- Works will progress in a controlled and systematic manner. The plant operator will excavate the sub-soils in a controlled and systematic manner. Excavations will progress down to formation level, as specified by the Site Engineer and in accordance with our client's specification. Formation levels are to be checked once they have been reached and also finished stone construction levels etc.
- Surplus material is specified to be removed off site. The material will be loaded onto Thompsons 8 wheel tipper bodied wagons and removed off site to a licensed waste transfer station. No slewing while travelling will be allowed when using the excavator machine to load wagons. Drivers will adhere to site traffic management systems throughout works.

Import, spread and compaction of GSB type1 Materials

- Following reduction of the development site to formation levels, Thompsons will progress works to stone-up the required portions of the site to bring them to construction levels. Using onsite crushed material. These works will adhere to the levels marked by the Site Engineer in accordance with our client's specification.
- If additional GSB Type 1 materials are required then they will be imported to site via Thompsons 8 wheel tipper wagons. Vehicles will adhere to the site traffic management systems as they cross site to the working area. All vehicle movements on



site will be carried out under banksman control. The materials will be tipped with care adjacent to the required working areas.

- The GSB Type1 materials will each be spread to the required depth using the tracked shovel machine. The plant operator will work in a controlled and systematic manner from one side of the working area to the other.
- Following completion of spreading the GSB type1 materials they will be rolled and compacted to achieve finished construction levels, these will be checked by Brims site management. This will be achieved using a self-propelled roller (operated by CPCS trained and experienced plant operator). Compaction will be achieved using method compaction, based upon the contract specification or the D.O.T specification for Highway Works 1991.

Asbestos Contaminated Ground Removal

- Prior to the commencement of works, Thompsons were required to carry out sample analysis of the ground within this area. The survey results show that asbestos contamination is present, please refer to Chemtec Report 60469.
- The report has highlighted that there is a specific area on site which all of the associated materials have asbestos contamination and are to be classed as asbestos contaminated material.
- The area of asbestos contamination will be marked out by Brims site engineer.
- Adhering to the instructions of the Site Engineer Thompsons will progressively excavate and load-away the concrete hardstand materials. The asbestos contamination will be excavated by remote means, using a 360° excavator machine (equipped with bucket attachment). The excavator will be operated by a CPCS trained and experienced plant operator. The excavator will operate within an exclusion zone, with only essential persons present.
- An asbestos trained operative will carry out a watching brief during these works (see pre-amble for details). At safe and regular intervals, the excavator machine will cease works and allow the asbestos trained operative to enter the exclusion zone and hand pick any loose lying pieces of asbestos cement / shuttering. The asbestos waste will be placed directly into an asbestos waste bag.
- The contaminated concrete will be loaded directly onto a Thompsons 8 wheel tipper bodied wagon. The driver will adhere to the site traffic management plan at all times. Following removal of the contamination the wagon load will be sheeted. The load



will be transferred under Thompsons waste carriers license to a designated licensed site.

APPENDIX

CRUSHER / SCREENER SAFE WORKING PROCEDURES

PRIOR TO USE

Before you operate the crusher / screener, or any other item of plant make sure that you are competent to operate the machine (that you have the training and experience to carry out the task safely). Make sure that you know the correct way to operate the specific item of plant, and if it differs from your usual machine that you know the position of the controls. If unsure seek an explanation of the controls and read the instruction manual. In addition, ensure the following:

- Do I know enough to be able to work safely or do I require further advice and training?
- Have I planned how to do the work and is there sufficient time?
- Has the daily check been completed and is the plant safe to operate?

CAB ACCESS / EGRESS

The mobile crusher plant is equipped with an operator access platform however a properly designed crushing operation should not need any persons to be present on the crusher platform during normal crushing operations.

A fixed crusher plant is often equipped with an operators cab. The cab should be isolated as far as possible from the crusher plant to reduce vibration and the cab should be sealed to reduce dust and noise.

You must know how to get to and from the operators platform / cab safely, know how to operate the controls and know how to lock-off the plant prior to maintenance or clearing a blockage. The following points **MUST** be adhered to:



- Climb the access ladder facing INWARDS, so that you have a good grip on the steps and always use the handholds. If an access stair is provided then existing front facing is permitted, however the handrail should still be held.
- Once in position check the seat position (where present) to check that you can safely operate the controls.
- Wear safety boots with a good and clean grip (boots must adhere to Thompson's specification of ankle support boots with reinforced toe cap and mid-sole).
- Wear neat fitting clothes that will not snag on the machinery. Remove rings and chains and if you have long hair tie it back.
- Do not keep tools etc on the floor of the cab / access platform.

BLOCKED CRUSHERS

Crusher blockages are divided into two areas, stalling and bridging:

Stalling of the plant can be due to:

- Electrical or mechanical failure
- Material jammed in the chamber causing an overload
- Overfeeding of material into the hopper
- Entry of tramp metal or wood into the hopper
- Accumulation of material in the crusher plant crash box
- Accumulation of fines in the crusher discharge chute

Bridging can be due to:

- Oversized feed material fed into the crusher
- Excessive clay or other fines in the crushing cavity, preventing small material passing through the crusher
- A foreign body in the crusher feed or discharge chamber obstructing the feed material

To minimise crusher blockages every effort should be made to prevent oversized material or tramp metal entering the crusher feed hopper. This can be achieved by:

- Efficiently blasting the quarry rock to achieve optimum rock fragmentation



- Reducing the feed material by processing, using pulveriser / muncher, breaker or drop-ball techniques
- Training / instruction of the loader operator to ensure that oversized material is not fed into the hopper
- Provision of sizing bars on the crusher feed
- Follow manufacturers settings on crusher settings, feed rate and material size
- Good house keeping to remove scrap from the feed material
- Ensure buckets are a suitable size to load the type of crusher plant
- Inspection of crusher parts on an ongoing basis, to ensure that crusher teeth etc. are not likely to brake off and enter the crusher
- Use of electro-magnets to prevent tramp metal from entering the crusher feed
- Use of level indicators for feed control
- Maintenance of drive systems
- Removal and cleaning of discharge chute

METHOD FOR THE REMOVAL OF BLOCKAGE FROM THE CRUSHER JAWS

- Prior to the removal of a blockage from the crusher jaws the crusher operator will stop the crusher plant and will follow the approved lock-off procedures. The keys to the crusher will be removed and will be kept with the crusher operator at all times.
- Where required an operative will then assess the blockage. Once the crusher has been locked-off the operator will carefully climb the access stairs to the inspection gantry, and will secure his safety harness lanyard to the approved harness point. The blockage will then be assessed for removal, prior to the operator climbing down from the inspection gantry.
- Following inspection the operative will retreat to a safe standoff distance. The unblocking operation must be carried out with no operatives present adjacent to the crusher. Only the plant operator will be permitted within the working area, all other persons will be sited at a safe standoff distance due to the risk of falling or flying debris.
- A hydraulic breaker (excavator attachment or fixed breaker) will be used to clear the blockage.



- Only once the blockage has been removed and the excavator machine ceases work can operatives re-enter the working area to inspect and then re-start the crusher, in a reverse of the approved lock-off procedure.

METHOD FOR THE REMOVAL OF BLOCKAGE FROM THE CRUSHER BELT

- Prior to the removal of a blockage from the crusher belt the crusher operator will stop the crusher plant and will follow the approved lock-off procedures. The keys to the crusher will be removed and will be kept with the crusher operator at all times. The operative and the Site Manager will then assess the blockage.
- Ideally the trapped re-bar will be removed with the aid of an excavator machine. The operative will retreat to a safe standoff distance. The operation must be carried out with no operatives present adjacent to the crusher. Only the plant operator will be permitted within the working area. The excavator machine will be used reduce and remove the section of re-bar.
- Where an excavator machine equipped cannot clear the blockage then other methods of removal must be considered. Risk assessment control is required. The task will be assessed by the Site Manager. If it becomes necessary for a person to enter the crusher to sever the re-bar or to position hooks or slings to facilitate its removal, the crusher and feeder must be stopped, isolated and locked off (in accordance with manufacturers/suppliers instructions) and safety harness worn.
- Only once the blockage has been removed can operatives re-enter the working area to inspect and then re-start the crusher, in a reverse of the approved lock-off procedure.
- The above procedure will be repeated as required if the blockage has not been cleared on the first attempt.

METHOD FOR DEALING WITH STALLED CRUSHERS

A stalled crusher should be treated as possibly being jammed with tramp metal, which could be ejected with fatal consequences. Written instructions should be issued to plant operators. This should detail the procedures to follow in the event of a crusher stalling. These instructions should include the following:



- Isolation of motive power to the crusher and associated plant procedure in operation at the site
- Clear the area of all personnel
- Notify the site manager of the stalled crusher

If, after careful examination, there appears to be no electrical or mechanical reason why the crusher has stalled, it may indicate that the crusher is jammed by tramp metal.

This work should only be carried out by person/s who are suitably trained and competent.

Wherever possible any inspection of the crushing cavity of a jaw crusher should be carried out from below the crusher, not from above.

Remember: -

Fatal accidents (due to material being ejected) have occurred to people who have examined the crushing cavity of a stalled crusher from above.

WORKING FROM THE ACCESS PLATFORM OF A MOBILE CRUSHER

The mobile crusher plant is equipped with an operator access platform. However a properly designed crushing operation should not need any persons to be present on the crusher platform during normal crushing operations. When required to work from the access platform it must be for a limited period (setting of feed rate or aiding in blockage removal etc.). At these intervals the operator must wear a full body safety harness and strop, attached to the protective handrail.

Working from the crusher access platform can present the following risks:

- Struck by objects ejected from the crusher (stone or metal etc.).
- Being pulled into the crusher chamber whilst pulling out contaminants (e.g. re-bar).
- Struck by the bucket of the loading plant if the platform is within the working radius of the machine arm.
- Falling if inadequate guard rails are in place.



- Process noise causing deafness if inadequate hearing protection is used.
- Dust from crushing concrete or bricks or any other high silica content material. Breathing silica dust can cause serious respiratory diseases.
- Whole body vibration.

STOPPING

The following procedure **MUST** be followed when the plant is stopped and prior to leaving the cab.

The procedure **MUST** also be followed when anyone approaches the machine or work is required to be undertaken on or near to the plant (e.g. the clearing of a blockage):

- Bring the plant to a secure halt and apply the parking brake.
- Put the levers into the neutral position.
- Disengage machinery such as the belts etc.
- Stop the engine and allow all moving parts to come to rest.
- Remove the key from the ignition. Keep the key with you.

THIRD PARTIES

Always be on the look-out for third parties who may approach you whilst working. This includes other employees or the public. The following points must be adhered to:

- Prior to starting the plant be on the lookout for third parties. Check where other people are working and ensure that they are not in immediate proximity to your proposed working area.
- Communicate with any other persons within the area and ensure that they are aware of your proposed working area and that they stay clear.
- If other company employees are required to work within proximity to your works then they must wear hi-vis clothing to ensure ease of visibility.

MOVEMENT OF A MOBILE CRUSHER



The Mineral Products Association in conjunction with the HSE has launched a UK wide ban on anyone moving mobile crushing and screening machines when working alone. All movements must now be supervised by a banksman. In addition the following points are to be adhered to:

- The movement of mobile crushing and screening plant **MUST** always be carried out under the supervision of at least 1 banksman. Where possible (due to the size of the plant) additional banksmen should be used to ensure safe movement.
- The driver should maintain a safe standoff distance from the machine during its movement (via the use of the remote control system).
- Movements should be made across a planned route. The route should be clear of obstruction.
- Failsafe controls should be in place to prevent the machine from operating when the driver releases the controls.

SLIPS AND TRIPS - SPILLAGE

Keeping clear working areas clear of spillages improves operational efficiency and also reduces the risk of slips and trips – a major cause of lost time accidents.

Minimise spillages by:

- Maintaining conveyor skirts
- Maintaining the correct adjustment and condition of belt scrapers. Ensure that any feed conveyor discharges centrally into the feed hopper.
- Designing loading shovel ramps to minimise the amount of material that will spill from the ramp itself.

Never remove guards to clean up while the machine is in operation. If guards need to be removed, shut off **and** lock off.

GUARDING

Inadequate guarding is a major cause of injury. Guarding integrity should be checked at regular intervals, particularly after cleaning or maintenance work

ADDITIONAL INFORMATION



In addition to the points noted above within the safe working procedures, the following points must be adhered to:

- Always use the safe stopping and starting procedures.
- **NEVER** attempt to make any adjustments or clear blockages when machinery is running.
- Check the plant each day for potential defects. Record this on a daily inspection form and if present report them to the plant manager / fitter team via defect report forms.
- Make sure you are competent (suitably experienced and trained) to operate the machine.

Emergency Procedures

Site Accident / Injury Procedure:

- Anyone who is injured whilst working on site must report their injury immediately to their Site Supervisor. The Site Supervisor is trained in 1st aid and will assess the injury. Where required the operative will be treated. **First Aid treatment must only be administrated by trained persons.** For serious injury the operative will be transferred to the local A&E Hospital (as detailed within the Method Statement) or an ambulance will be summoned by use of the site mobile telephone.
- If the injured party is transferred to Hospital then a Thompson's representative will accompany them where possible.
- Our client will be alerted of the injury as quickly as possible. An accident report will be compiled within 24 hours (as per Thompsons Accident Reporting Procedure). The report will be passed to our client and all required persons. Following their return to work the injured person will be interviewed.

Site Emergency Procedure:

- If operatives observe fire or an emergency situation then they will alert other operatives by means of shouting or using the warning klaxon located within the mess cabin. The klaxon will also be used by Thompsons Site Supervisor if an emergency situation is ongoing within the Main Site Area (as per the site induction) and which



requires Thompson's operatives to leave our area and assemble within the Main BB Compound.

- On hearing the site emergency klaxon Thompsons operatives will cease works and will make the area safe.
- Operatives will then transit to the designated assembly point (BB compound area) via the quickest, safe route. Care will be taken when crossing the internal roadway to access the compound.
- A head-count will then be conducted at the assembly point by Thompsons Site Supervisor. Thompsons Site Supervisor will contact BB Site management and where required operatives will then be directed to assemble at the Main BB Compound for an additional head count by BB staff. Operatives will be instructed to take care adjacent to internal roadways which will provide access to site for emergency service vehicles.

Procedure in event of contact with live services:

- Operatives are to maintain a safe standoff distance from live services at all times.
- If a live service is struck then works will immediately cease. Thompsons Site Supervisor will be alerted immediately.
- Thompsons Site Supervisor will then contact BB site management who will in turn then contact the service provider via their emergency response telephone number.
- An exclusion zone will be established at a safe distance around the damaged service. All persons will be prevented from entering this area until the service emergency response arrives and advises Thompsons that works are safe to recommence.

METHOD STATEMENT / RISK ASSESSMENT REGISTER

EARTHWORKS
Travis Perkins
Western Approach



South Shields

This is to certify that the method statement / risk assessment has been explained to me and that I understand my duties in relation to Health & Safety and the companies ISO 9001:2008 Quality Policy & ISO 14001:2006 Environmental Policy.

DATE	NAME	SIGNATURE

Question & Answer Session Conducted by:	
Name:	Signature:
<i>Comments:</i>	

WMT/PF/083 REV3 December 2013



Risk Assessment

Form WMRA F1

Contract ref: 6534E

Doc Reference WMT/PT/321 - RA Rev 2

Site	Travis Perkins ,South Shields	Task or work operation	Earthworks
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Date of Assessment	19/07/16	Assessors Name	Paul Turbitt	Assisted by	N. Joscelyne
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(1) Hazard	(2) Hazard Sub-category	(3) Persons at Risk	Initial Risk Level		(6) Risk Score	(7) Control measures	Residual Risk Level		(10) Risk Score	(11) Accepted
			(4) Severity	(5) Likelihood			(8) Severity	(9) Likelihood		
Slips, trips and falls	a. Un-even ground conditions b. Poor standard of housekeeping	Operatives, visitors	2	2	4	Works will be conducted within an exclusion zone, with only essentials persons present. The plant operative will ensure good housekeeping within the working area. Operatives will adhere to the site housekeeping standards. Hazard Spot system in place. Mandatory PPE will include the wearing of safety boots with ankle support.	2	1	2	YES

Severity

Likelihood

1 – Minor accident (First Aid)	2 – Major accident (RIDDOR)	3 – Fatality	1 - Low	2 – Medium	3 – High
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Risk Rating & Control & Monitoring Protocols

1-2: Work may proceed in accordance with TOP policy and procedures	3-4: Work may proceed providing stringent control measures have been implemented (e.g. permit to work, monitoring, etc.)	6-9: The work cannot commence until alternative method of work or additional control measures implemented
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Buried services within area of excavation	a. Electrocutation	Operatives	3	2	6	<p>Prior to commencement of works Brims will conduct investigations to ascertain the location and status of service supplies within the boundary of the working area. Brims will arrange for any live services within the footprint of the site to be diverted or terminated.</p> <p>If any disconnections are not carried out prior to Thompsons commencing works on site then due care and attention will be forwarded to these locations and Thompson will break the associated slab approximately 1m2 around these services.</p> <p>If any services that are to remain live in proximity to the working area they will be identified to Thompsons and marked / protected as required.</p> <p>Prior to commencement of works a Permit to break ground will be issued by Brims. All Thompsons site team will be signed onto this permit.</p>	3	1	3	YES
Erection and removal of fence and barriers	a. Manual handling b. Cuts, abrasions	Operatives	2	2	4	<p>Brims has secured the boundary of the site prior to Thompsons commencing works.</p> <p>Heras fence panels are to be handled and lifted using a two-man team lift if required.</p> <p>Gloves will be worn when handling fence panels and barriers.</p> <p>Good housekeeping will be in place within the working area to allow for unrestricted handling and movement of fence panels and barriers.</p>	2	1	2	YES
Vehicle movement	a. Access / egress to site b. Movement around site	Operatives, third parties, public	3	2	6	<p>Prior to commencement of works Brims will put in place Traffic Management to ensure the safe movement of vehicles to/from and within the development site. Thompsons operatives will be inducted as to the requirements of the Traffic Management Plan and will ensure that it is followed at all times.</p> <p>All vehicle movements on site will be conducted under banksman control.</p>	3	1	3	YES

Severity

Likelihood

1 – Minor accident (First Aid)	2 – Major accident (RIDDOR)	3 – Fatality	1 - Low	2 – Medium	3 – High
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Working adjacent to third parties / public	a. Mobile plant striking public or third parties	Operatives, third parties, public	3	2	6	<p>Works will be contained within the boundary of the development site. The Site operates a strict security system and is enclosed within a protective fence line. Thompsons will abide by all site security requirements during the period of the works.</p> <p>Thompson's working area will be controlled as exclusion zone during the period of the works. Heras fencing will be erected if required to partition the working areas from other operational areas. Access to the exclusion zone will be permitted to essential Thompson's persons only.</p>	3	1	3	YES
Loading & un-loading of plant	a. Vehicle movement b. Improper loading operations	Operatives, third parties, public	3	2	6	<p>The loading and unloading operation will be carried out by a trained and experienced low loader operator. The operative will hold the CSCS CPCS Loader / Securer Card.</p> <p>The low loader operator is trained and experienced in the operation of plant (limited to moving to and from the low loader and the loading operation). His CSCS CPCS Loader / Securer qualification allows for this movement. The low loader operative will be briefed by Thompsons site supervisor as to the hazard of working at height to unload the excavator machine and advise to take extreme care and caution.</p> <p>Thompsons will adhere to all traffic management procedures and security controls whilst on site.</p> <p>The loading operation will be carried out within an exclusion zone and at a safe distance from the public, third parties and other contractors.</p>	3	1	3	YES

Severity

Likelihood

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Use of Mobile Plant (Excavator machines, Loading Shovel roller &)	a. The unsafe operation of plant can result in serious injury or death	Operatives	3	2	6	<p>Each item of mobile plant will be operated by a CPCS trained and experienced operator.</p> <p>The working area will be controlled as an exclusion zone during the period of the works using physical barriers.</p> <p>Works will be undertaken under the supervision of a Site Supervisor and banksman.</p> <p>If Thompsons supervisor / banksman are required to enter the working area then the machine operator will be notified and immediately cease works, place the machine attachment on the ground and switch off the engine until the banksman has exited the working area.</p>	3	1	3	YES
Greasing, storage of fuel & re-fueling of plant	<p>a. Damage to operative's health & welfare</p> <p>b. Spillages</p>	Operatives, third parties, public	3	2	6	<p>Leaks and spills emergency procedure has been prepared in accordance with ISO14001 Environmental Management System.</p> <p>Operatives will adhere to the leaks and spills emergency procedure in the event of a spillage.</p> <p>Operatives will be provided with a specific method statement prior to working.</p> <p>Greasing and re-fueling of plant will be carried out in accordance with COSHH assessments.</p> <p>A specified area will be used for storing fuel and the re-fueling and greasing of plant (are adjacent site wall well away from traffic routes).</p> <p>The fuel will be stored within a double bunded storage tank. The tank will be located within the fenced off storage area.</p> <p>Operatives will wear the required PPE during greasing and re-fueling works (gloves, overalls and site PPE).</p> <p>Spill kits are available in the event of a spillage. In the event of a leak, spill or fire then Thompsons operatives will contact BB site management immediately and Thompsons will follow all BB spill kit and fire procedures.</p>	3	1	3	YES

Severity

Likelihood

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Noise	<p>a. Hearing damage to operative</p> <p>b. Hearing damage to others within area</p>	Operatives, third parties & public	2	2	4	<p>Thompsons proposed method of works is to use a combination of excavator machine equipped with low impact attachments to strictly control noise.</p> <p>An exclusion zone will be in force around the working area during excavations to prohibit access to all but essential persons this will limit personal noise exposure.</p> <p>Works will be undertaken during approved site working hours only.</p> <p>The use of the hydraulic breaker produces noise in excess of 85dB(A) and will require operatives to wear hearing protection.</p> <p>Works will be conducted in exclusion zone away from other workers. Any operatives working within a 10m radius will also be required to wear hearing protection.</p>	2	1	2	YES
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Severity

Likelihood

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Working at heights during crushing operation	a. Falls from height b. Falls of materials from height	Operatives	3	2	6	<p>When required to work from the access platform it must be for a limited period (setting of feed rate or aiding in blockage removal etc.).</p> <p>The operator must wear a full body safety harness and 1m fall restraint strop (attached to the protective handrail).</p> <p>A safe working procedure is in place, which must be followed to isolate and shut-down the crusher prior to the clearance of blockages.</p> <p>Ensure that boots are clean of mud and have a good grip prior to climbing stairs. Do not hurry up stairs.</p> <p>Hand rails are fitted on the stairs and must be used. Guard rails are fitted around the gantries and crusher openings and must not be removed.</p> <p>No equipment is to be carried up the stairs both hands must be used for climbing.</p> <p>When descending the steps do not jump.</p> <p>Look for hazards on or around the steps and move them.</p> <p>Check the steps and handrail for defects on a daily basis and report if found.</p> <p>Keep the area around the top and bottom of the stairs free from materials and debris.</p>	3	1	3	YES
Crushing operation - Unblocking	a. Trapping limbs in crusher	Operatives, third parties, public	3	2	6	<p>Only an experienced & trained operative who holds a CITB CPCS card (or equivalent) will operate the crusher.</p> <p>Numerous emergency stop buttons situated around the crusher in case of emergency.</p> <p>The safe lock-off procedure must be followed to isolate the crusher prior to any un-blocking or maintenance works.</p> <p>The crusher should be un-blocked using an excavator mounted breaker and in accordance with the SWP.</p>	3	1	3	YES

Severity**Likelihood**

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Crushing operations	a. Damaged guarding	Operatives, third parties, public	3	2	6	<p>A daily check should be made on all fitted guards. Problems with guards should be reported immediately to the site manager.</p> <p>Plant with missing or damaged guards should not be used.</p> <p>The unauthorised movement of guards is prohibited. If guards are removed for cleaning or maintenance then the crusher must first be turned off and isolated and the guards must be securely fastened prior to commencement of operation.</p> <p>Guards and handrails must not be misused or damaged.</p>	3	1	3	YES
Maintenance of crusher	a. Trapping limbs in crusher	Operatives, third parties, public	3	2	6	<p>MAINTENANCE MUST NOT BE CARRIED OUT WITHOUT FIRST SHUTTING DOWN & ISOLATING THE CRUSHING PLANT.</p> <p>Following isolation remove the master key from the lock and place it in a safe position close to the operative working on the machine. He can then keep an eye on the key and prevent others from starting the unit.</p> <p>Blockages must be cleared by mechanical means where possible.</p> <p>Operatives should not enter the crusher jaw area when the machine is live.</p> <p>Operatives must not place iron bars into the crusher jaws.</p> <p>Large items of material should be reduced using machines where possible and not lifted out as large sections.</p> <p>The crushing plant must only be started gain when it is certain that all persons are clear of danger.</p> <p>Place an “under maintenance” sign on the crusher to warn others not to start the unit.</p> <p>The keys to the crusher must be kept with the operative / fitter undergoing the works, to prevent the accidental starting of the plant by another person.</p>	3	1	3	YES

Severity

Likelihood

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Asbestos contaminated ground	a. Uncontrolled removal / disturbance of asbestos can lead to respiratory diseases	Operatives, third parties	3	2	6	<p>Due to the presence of asbestos contamination works will take place under the watching brief of asbestos trained banksmen.</p> <p>The banksmen will be required to wear category 5/6 disposable coveralls and a P3 respirator.</p> <p>Thompsons will control the boundaries of the working area as an exclusion zone. Access during excavations will be permitted to essential Thompson's personnel only.</p> <p>The contaminated concrete will be loaded directly onto a Thompsons 8 wheel tipper bodied wagon.</p> <p>At safe and regular intervals, the excavator machine will cease works and allow the asbestos trained operative to enter the exclusion zone and hand pick any loose lying pieces of asbestos cement / shuttering. The asbestos waste will be placed directly into an asbestos waste bag.</p>	3	1	3	YES
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Severity

Likelihood

1 – Minor accident (First Aid)	2 – Major accident (RIDDOR)	3 – Fatality	1 - Low	2 – Medium	3 – High
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