

Document No.:	40-AMC-WS-72-SW-RA-0001	Rev:	0
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PART 1 – General Details									
Title of method statement:	Phase 3 – Concrete Batch Plant Set Up								
Contract Name:	Early Contractor Involvement (ECI)	Contract Number:	RPA-127						
	AAAO LIIV.S:: Off:	Start Date:	04-June-2017						
Site Address &	AMC UK Site Office, Woodsmith Mine,	Finish Date:	09-Oct-2017						
Telephone No:	Off B1416.	Duration:	18 weeks						
relephone No.	Sneatonthorpe YO22 5HZ	Working Hours:	6 am – 6 pm / 7 days per week						
Location of Works:	Sneatonthorpe								
Scope of Works / Work Activity:	Install and commission the concrete batch plant.								

	Signed	Print Name	Position/Status	Date	Notes
Prepared by		Steve Farrell	Site Planning and Preparation	29/03/2017	To be completed by Person Preparing Method Statement or Sub- Contractor)
Employee consultation		TBD	Project Manager		Persons carrying out the work MUST be consulted and sign here
Tech review by		Jonathan White	Project Director	29/03/2017	To be completed by a Competent Person or Sub- Contractor)
H&S, Env. review by		Hugh Medcalf	Environment Advisor	29/03/2017	To be completed by a Competent Person
Authorised for construction (Contractor / Peer Review)		Jürgen Franz	Engineering Director	29/03/2017	To be completed by the Contractor or a peer of the person preparing the RAMS
Rejected by					To be completed by the Contractor or Competent Person

The RAMS must be reviewed by someone other than the person who has prepared it.



PART 3 – Personnel	and Resources					
	Labour (Role/Trade and numb	er of)	Qualification Required, to be shown at induction			
Resources Required: (Including supervision)	1 x Site Manager 1 x Supervisor 1 x Engineering/QAQC		Management Safety Certification Supervisor Certification Safety Certification			
	See Appendix A for Labour Loa	ding				
Subcontractors	2 x Supervisors 2 x Mobile Crane Operators 2 x Machine Operators 4 x Mechanics 3 x Electricians 5 x Labourers See Appendix A for Labour Loa	ding	Supervisor Certification Crane Operator Certification Operator Certification Trade Certificate Trade Certificate			
	How will they be supervised		Subcontractor Supervisors & AMC UK			
Plant and Equipment:	Refer to the Plant Register in A	ppendix B.				
Materials:	Civil Works: Form work Rebar / wire mesh Concrete Grout Aggregate Piping Electrical cables Precast barriers	Batch Plant: Mixing plant Feed Hoppers Feed Conveyor Control room Silos Water Tanks Compressor Stairs, ladders a Cladding Concrete reclai Generators Storage contain Welfare facilitie Concrete Aggregate	and landings imer ners			



Key Operational Risks	Reference	Applicable to this activity Y/N		
Site access, deliveries and removal of materials	Procedure	Υ		
Avoidance of buried underground services	Dig Permit	Υ		
Stability of structures		N		
Demolition operations		N		
Temporary works		Υ		
Prevention of falls / work at height	Procedure	Υ		
Control of lifting operations	Procedure and Lift Plans	Υ		
Plant and machinery	Procedure	Υ		
xcavations	Procedure	Υ		
Confined spaces		N		
Norking near open water		N		
Norking with compressed air	Procedure	Υ		
Cutting/Grinding operations	Hot Work Permit	Υ		
Personal protective equipment	Procedure	Υ		
Norking on electrical systems	Procedure	Υ		
Manual handling	Procedure	Υ		
Control of substances hazardous to health (COSHH)	COSHH Manual	Υ		
Noise	Procedure	Υ		
/ibration	Procedure	Υ		
Non-English speakers		Υ		
Environment risk assessment	Phase 3 Environmental Aspect and Impacts Assessment (EAIA)	Υ		
Site waste management	Site Waste Management Plan (SWMP)	Υ		
Site pollution or water contamination	Environmental Emergency Preparedness Plan (EEPP)	Υ		
Site – protected animals		N		
ite – hedgerows		N		
Dil storage	Procedure	Υ		
Refuelling / Mobile Refuelling	Procedure	Υ		

PART 5 – 0	PART 5 – COSHH													
соѕнн							(!)							
Assessment	Explosive	Oxidizing	Highly Flammable	Acutely Toxic	Corrosive	Hazardous to Environment / Aquatic Life	Skin/Eye Irritant	Long Term Health Hazard	Gas under Pressure					
Applicable			Υ			Y	Υ	Υ						



PART 6 - Record of Reviews of RAMS										
	RAMS Review Record									
The RAM	S must be reviewed upon a significant change and after a maximum of every 30	days.								
	Following each review the RAMS must be re-briefed to the team									
Date of Review	Notes	Signature								
01-Feb-2017	Rev. A for Internal review	SF								
23-Feb-2017	Rev. B for Project review	SF								
27-Mar-2017	Rev. C revised as per Project comments	SW								
29-Mar-2017	Rev. 0 Issued for Use	SW								



PART 7 – Risk A	Assessment										
Activity / Task Individual elements of the task	Hazard Anything with the potential to cause harm. Include H&S, Include S=Sub-contractor		ed Potential Outcome		Pre-Control Risk Assessment		Control Measures required Control measures must be effectively implemented if they are to work as intended	Post Control Risk Assessment Have risks been reduced as far as reasonably practical			Risk
being carried out	Environmental, Operational / Process and Design hazards	V=visitor P=public O=other	e.g. injury, damage etc.	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Include the title and controls of the applicable Operating Procedures identified in Part P4	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Ranking
					5	10	Access to site will be via the new Haul Road or Over-Size Access, off B1416.				
Access to site	Live traffic	E/S/V/P	Road traffic accident causing injury	2			Signage will be in place to forewarn vehicles of the site access junction.	1	5	5	Low
							Deliveries are to be staggered to prevent large numbers of vehicles accessing site at the same time.				
							Supervisor or delegate to control all deliveries.				
	Office the soul shows				4	8	Offloading to be undertaken using mobile equipment.		4	4	Low
Deliveries	Offloading and storage of materials	E/S	Injury due to materials being offloaded/stored incorrectly	2			Loose items to be palletized, where possible.	1			
							Materials to be stacked securely.				
							Stacking heights to be limited to 2 m where practical.				

LIKELIHOOD	RATING	SEVERITY - HEALTH	SEVERITY - SAFETY
Almost Certain	Е	Multiple worker deaths e.g. Asbestos /	Fatal accident to member of
(>90%)	ח	Silica dust	public or worker
Probable	4	Single worker death / life shortening	Major injury (RIDDOR) resulting
(50% - 90%)	4	health effect e.g. Lung disease	in lost time. Irreversible disability
Possible	2	Irreversible health effects e.g. Loss of	Injury resulting in over 7 days lost
(10% - 50%)	n	hearing, HAVS, Serious dermatitis	time
Remote	2	Reversible health effects e.g. Minor	Injury resulting in 1 to 7 days lost
(1% - 10%)	2	dermatitis, respiratory, treatment off site	time
Unlikely	1	Minor health effect for short period, no	Injury requiring First Aid but no
(<1%)	1	lost time e.g. skin irritation	lost time

			Likelihood											
•			1	2	3	4	5							
		1	1	2	3	4	5							
	Se	2	2	4	6	8	10							
	Severity	3	3	6	9	12	15							
		4	4	8	12	16	20							
		5	5	10	15	20	25							

25	RISK RANKING	ACTION REQUIRED
20	High	Do NOT start task; either engineer or design out the
L5	(12 – 25)	hazard, look at alternative methods
LO	Medium	Do NOT start task; impose further control measures
5	(7 – 11)	such as alternative methods or plant / materials
5	Low	No additional control measures required
	(1 – 6)	



PART 7 – Risk A	Assessment										
Activity / Task Individual elements of the task being carried out	Hazard Anything with the potential to cause harm. People Affected E=employee		Affected E=employee Potential Outcome		Pre-Control Risk Assessment		Control Measures required Control measures must be effectively implemented if they are to work as intended	Post Control Risk Assessment Have risks been reduced as far as reasonably practical			Risk
	Include H&S, Environmental, Operational / Process and Design hazards	S=Sub-contractor V=visitor P=public O=other	e.g. injury, damage etc.	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Include the title and controls of the applicable Operating Procedures identified in Part P4	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Ranking
Use of mobile equipment	Mobile equipment	E/S	Severe injury or death	2	5	10	 Designated haul routes to be established across site. Working areas to be taped/barricaded/fenced as necessary. All equipment to have reversing beepers. Operatives to maintain a safe distance from operated plant (e.g. outside of slew area of excavators). All equipment operators to hold training. Equipment to be operated in line with manufacturer's guidance (e.g. seat belts). All people on site to wear high-visibility PPE. 	1	5	5	Low

LIKELIHOOD	RATING	SEVERITY - HEALTH	SEVERITY - SAFETY
Almost Certain	Е	Multiple worker deaths e.g. Asbestos /	Fatal accident to member of
(>90%)	ה	Silica dust	public or worker
Probable	4	Single worker death / life shortening	Major injury (RIDDOR) resulting
(50% - 90%)	4	health effect e.g. Lung disease	in lost time. Irreversible disability
Possible	2	Irreversible health effects e.g. Loss of	Injury resulting in over 7 days lost
(10% - 50%)	0	hearing, HAVS, Serious dermatitis	time
Remote	2	Reversible health effects e.g. Minor	Injury resulting in 1 to 7 days lost
(1% - 10%)	2	dermatitis, respiratory, treatment off site	time
Unlikely	1	Minor health effect for short period, no	Injury requiring First Aid but no
(<1%)	1	lost time e.g. skin irritation	lost time

			Lik	eliho	od	
		1	2	3	4	5
	1	1	2	3	4	5
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Severity	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

5	RISK RANKING	ACTION REQUIRED
0	High	Do NOT start task; either engineer or design out the
5	(12 – 25)	hazard, look at alternative methods
0	Medium	Do NOT start task; impose further control measures
,	(7 – 11)	such as alternative methods or plant / materials
3	Low (1 – 6)	No additional control measures required



PART 7 – Risk A	Assessment Hazard	People						Post	Control F	Risk	
Activity / Task Individual elements of the task	Anything with the potential to cause harm. Include H&S,	Affected E=employee S=Sub-contractor	Potential Outcome	Pre-Cont	rol Risk As	ssessment	Control Measures required Control measures must be effectively implemented if they are to work as intended	Assessment Have risks been reduced as far as reasonably practical			Risk
being carried out	Environmental, Operational / Process and Design hazards	V=visitor P=public O=other	e.g. injury, damage etc.	Likelihood Severity Risk Score 1 - 5 1 - 5 1 - 25			Include the title and controls of the applicable Operating Procedures identified in Part P4	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Ranking
Use of mobile cranes	Mobile cranes Lifted loads	E/S	Severe injury or death Property damage	2	5	10	Working areas to be taped/barricaded/fenced as necessary. Cranes to set up on stable ground and away from overhead hazards e.g. cables. All equipment to have reversing beepers. All lifting equipment to undergo statutory inspection at regular intervals, as required. All persons to maintain a safe distance from mobile cranes. All crane operators to hold relevant competency tickets. Cranes to be operated in line with manufacturer's guidance (e.g. seat belts). All people on site to wear high-visibility PPE. Use lift plans.	1	5	5	Low

LIKELIHOOD	RATING	SEVERITY - HEALTH	SEVERITY - SAFETY
Almost Certain (>90%)	5	Multiple worker deaths e.g. Asbestos / Silica dust	Fatal accident to member of public or worker
Probable (50% - 90%)	4		Major injury (RIDDOR) resulting in lost time. Irreversible disability
Possible (10% - 50%)	3	Irreversible health effects e.g. Loss of hearing, HAVS, Serious dermatitis	Injury resulting in over 7 days lost time
Remote (1% - 10%)		Reversible health effects e.g. Minor dermatitis, respiratory, treatment off site	Injury resulting in 1 to 7 days lost time
Unlikely (<1%)	1	Minor health effect for short period, no lost time e.g. skin irritation	Injury requiring First Aid but no lost time

				Lik	eliho	od		
•			1	2	3	4	5	
		1	1	2	3	4	5	
	Se	2	2	4	6	8	10	
	Severity	3	3	6	9	12	15	
		4	4	8	12	16	20	
		5	5	10	15	20	25	

F	RISK RANKING	ACTION REQUIRED
	High (12 – 25)	Do NOT start task; either engineer or design out the hazard, look at alternative methods
	Medium (7 – 11)	Do NOT start task; impose further control measures such as alternative methods or plant / materials
	Low (1 – 6)	No additional control measures required



Activity / Task Individual elements of the task	Hazard Anything with the potential to cause harm. Include H&S,	the potential to harm. Affected E=employee	Potential Outcome	Pre-Control Risk Assessment			Control Measures required Control measures must be effectively implemented if they are to work as intended	Post Control Risk Assessment Have risks been reduced as far as reasonably practical			Risk
being carried out	Environmental, Operational / Process and Design hazards	V=visitor P=public O=other			Risk Score 1 - 25	Include the title and controls of the applicable Operating Procedures identified in Part P4	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Ranking	
Construction works	Slips, trips and falls	S/E	Injury	2	4	8	 Excavations to be backfilled as soon as possible. Excavations to be taped/barricaded/fenced as necessary. Materials and other equipment not in use are to be stored appropriately and not congest the working area. Loading/unloading to be carried out on level ground, within designated areas. Operatives to be informed of the presence of swales and drainage ditches. 	1	4	4	Low

LIKELIHOOD	RATING	SEVERITY - HEALTH	SEVERITY - SAFETY
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(>90%)	ה	Silica dust	public or worker
Probable	4	Single worker death / life shortening	Major injury (RIDDOR) resulting
(50% - 90%)	4	health effect e.g. Lung disease	in lost time. Irreversible disability
Possible	2	Irreversible health effects e.g. Loss of	Injury resulting in over 7 days lost
(10% - 50%)	n	hearing, HAVS, Serious dermatitis	time
Remote	2	Reversible health effects e.g. Minor	Injury resulting in 1 to 7 days lost
(1% - 10%)	2	dermatitis, respiratory, treatment off site	time
Unlikely	1	Minor health effect for short period, no	Injury requiring First Aid but no
(<1%)	1	lost time e.g. skin irritation	lost time

				Lik	eliho	od		
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RISK RANKING	ACTION REQUIRED
High (12 – 25)	Do NOT start task; either engineer or design out the hazard, look at alternative methods
Medium (7 – 11)	Do NOT start task; impose further control measures such as alternative methods or plant / materials
Low (1 – 6)	No additional control measures required



Activity / Task Individual elements of the task	Hazard Anything with the potential to cause harm. Include H&S, People Affected E=employee S=Sub-contractor		Pre-Control Risk Assessmen Potential Outcome	ssessment	Control Measures required Control measures must be effectively implemented if they are to work as intended	Post Control Risk Assessment Have risks been reduced as far as reasonably practical			Risk		
being carried out	Environmental, Operational / Process and Design hazards	V=visitor P=public O=other	V=visitor P=public Likelihood Severity	Risk Score 1 - 25	Include the title and controls of the applicable Operating Procedures identified in Part P4	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Ranking		
Work at height	Falls from height	S/E	Fatal fall, falling objects	2	5	10	Work at height to be avoided if possible Edge protection to be provided where required Work at height equipment suitably inspected by a competent person at regular intervals Suitable fall protection to be provided where necessary e.g. safety harness All persons provided with suitable information, instruction, training and supervision.	1	5	5	Low

LIKELIHOOD	RATING	SEVERITY - HEALTH	SEVERITY - SAFETY
Almost Certain (>90%)	5	Multiple worker deaths e.g. Asbestos / Silica dust	Fatal accident to member of public or worker
Probable (50% - 90%)	4		Major injury (RIDDOR) resulting in lost time. Irreversible disability
Possible (10% - 50%)	3	Irreversible health effects e.g. Loss of hearing, HAVS, Serious dermatitis	Injury resulting in over 7 days lost time
Remote (1% - 10%)	2	Reversible health effects e.g. Minor dermatitis, respiratory, treatment off site	Injury resulting in 1 to 7 days lost time
Unlikely (<1%)		Minor health effect for short period, no lost time e.g. skin irritation	Injury requiring First Aid but no lost time

		Likelihood						
		1	2	3	4	5		
	1	1	2	3	4	5		
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Severity	3	3	6	9	12	15		
	4	4	8	12	16	20		
	5	5	10	15	20	25		

RISK RANKING	ACTION REQUIRED
High (12 – 25)	Do NOT start task; either engineer or design out the hazard, look at alternative methods
Medium (7 – 11)	Do NOT start task; impose further control measures such as alternative methods or plant / materials
Low (1 – 6)	No additional control measures required



Activity / Task Individual elements of the task	Hazard Anything with the potential to cause harm. Include H&S.	Hazard Anything with the potential to cause harm. People Affected E=employee		nything with the potential to cause harm. Affected E=employee Potential Outcome Pre-Control		Pre-Control Risk Assessment		Control Measures required Control measures must be effectively implemented if they are to work as intended	Post Control Risk Assessment Have risks been reduced as far as reasonably practical			Risk Ranking
being carried out	Environmental, Operational / Process and Design hazards	V=visitor P=public O=other	e.g. injury, damage etc.	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Include the title and controls of the applicable Operating Procedures identified in Part P4	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Kanking	
Use of COSHH materials (concrete, cement, etc.)	COSHH materials	E/S	Injury	3	3	9	 Use of COSHH materials to be avoided where possible. All COSHH materials to be stored in a lockable, bunded COSHH store at the Woodsmith Mine when not in use. COSHH Assessments to be produced for all COSHH materials, including fuel, oil, cement, concrete. SDS (safety data sheets) to be held on site and readily accessible at all times during site works. Only trained and competent operatives to use COSHH materials, in line with COSHH Assessment. Suitable PPE to be provided in accordance with COSHH assessment findings. First-aid arrangements provided including trained personnel, first aid kit and eye wash station. Suitable health surveillance to be provided where necessary. 	2	3	6	Low	

LIKELIHOOD	RATING	SEVERITY - HEALTH	SEVERITY - SAFETY
Almost Certain (>90%)	5	Multiple worker deaths e.g. Asbestos / Silica dust	Fatal accident to member of public or worker
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Possible (10% - 50%)	3	Irreversible health effects e.g. Loss of hearing, HAVS, Serious dermatitis	Injury resulting in over 7 days lost time
Remote (1% - 10%)	2	Reversible health effects e.g. Minor dermatitis, respiratory, treatment off site	Injury resulting in 1 to 7 days lost time
Unlikely (<1%)	1	Minor health effect for short period, no	Injury requiring First Aid but no

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	5	5	10	15	20	25

RISK RANKING	ACTION REQUIRED			
High (12 – 25)	Do NOT start task; either engineer or design out the hazard, look at alternative methods			
Medium (7 – 11)	Do NOT start task; impose further control measures such as alternative methods or plant / materials			
Low (1 – 6)	No additional control measures required			



PART 7 – Risk Assessment											
Activity / Task	Hazard Anything with the potential to cause harm. People Affected E=employee Potential Outcome			Pre-Control Risk Assessment		ssessment	Control Measures required Control measures must be effectively implemented if they are to work as intended	Post Control Risk Assessment Have risks been reduced as far as reasonably practical			Risk
being carried out	Environmental, Operational / Process and Design hazards	S=Sub-contractor V=visitor P=public O=other	e.g. injury, damage etc.	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Include the title and controls of the applicable Operating Procedures identified in Part P4	Likelihood 1 - 5	Severity 1 - 5	Risk Score 1 - 25	Ranking
Lifting of heavy/bulky objects	Manual handling	E/S	Injury	3	3	9	Manual handling to be avoided where practicable (e.g. through mechanical lifting). For bulky objects which can be safely lifted by hand (e.g. small drainage pipes), use 2-person lifting.	2	3	6	Low
Placing form work and rebar	Struck by materials or tools	E/S/V	Injuries	3	2	6	Use of Field Level Risk Assessments Conduct start of shift safety meeting	2	2	4	Low
Placing concrete	Struck by materials or tools	E/S	Injuries	2	2	4	Use of Field Level Risk Assessments Conduct start of shift safety meeting	1	2	2	Low
Specialist works	Various	E/S/V/P	Various	-	-	-	Risk assessments to be produced by appointed contractors for all specialist works.	-	-	-	-

LIKELIHOOD	RATING	SEVERITY - HEALTH	SEVERITY - SAFETY
Almost Certain	5		Fatal accident to member of
(>90%)		Silica dust	public or worker
Probable	4	•	Major injury (RIDDOR) resulting
(50% - 90%)	-	health effect e.g. Lung disease	in lost time. Irreversible disability
Possible	2	Irreversible health effects e.g. Loss of	Injury resulting in over 7 days lost
(10% - 50%)	3	hearing, HAVS, Serious dermatitis	time
Remote	2	Reversible health effects e.g. Minor	Injury resulting in 1 to 7 days lost
(1% - 10%)		dermatitis, respiratory, treatment off site	time
Unlikely	1	Minor health effect for short period, no	Injury requiring First Aid but no
(<1%)	1	lost time e.g. skin irritation	lost time

		Likelihood						
		1	2	3	4	5		
	1	1	2	3	4	5		
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	4	4	8	12	16	20		
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RISK RANKING	ACTION REQUIRED
High (12 – 25)	Do NOT start task; either engineer or design out the hazard, look at alternative methods
Medium (7 – 11)	Do NOT start task; impose further control measures such as alternative methods or plant / materials
Low (1 – 6)	No additional control measures required



PART 8 – Contacts and Emergency								
Emergency Contact Numbers	Name:	Contact Number:						
Person Responsible For Works	Jonathan White	+						
Supervisor	TBD	TBD						
Hospital	Scarborough General (A&E) Whitby Community Hospital (medical treatment only)	(EMERGENCY 999/112)						
First Aider	TBD							
Location of First Aid Box	First Aid boxes will be available at the Site Offices, Concrete Batch Pla within all AMC UK vehicles.							
Process Impact Assessment Contacts	N/A							
Gas Emergency Call Out	National Grid							
Electricity Emergency Call Out	Northern Power Grid							
Water Emergency Call Out	Yorkshire Water							
Sewage Emergency Call Out	Yorkshire Water							
Emergency Procedures & Permits Required	Permit to Excavate, Permit to Lift							



PART 9 – Method Statement

Overview of Works

The purpose of this project is to construct the temporary concrete batching plant for future shaft construction works on a prepared platform. The works comprise:

- Installing temporary office and welfare facilities.
- Installing temporary concrete batching plant slabs.
- Installing a temporary wedge pit/sump.
- Erecting the temporary concrete batching plant.
- Installing temporary concrete recycling equipment.
- Installing temporary generators.
- Installing temporary water storage tanks.

See Appendix C for the site master plan, and concrete batch plant plan view and sections.

See Appendix D for information on typical water storage tanks.

Housekeeping

- This scheme involves the co-ordination of a number of elements of work, including earthworks, concrete construction and mechanical installation; as such, high standards of housekeeping are of particular importance.
- All materials not being used during the days work must be transported and stored at the designated location within the site.
- Materials transported onto site for incorporation into the works must be stored close to the relevant working area.
- Daily inspections on housekeeping will be undertaken.

Delivery and Storage of Materials

• See the Phase 3 Project Management Plan document number 40-AMC-WS-71-PM-PL-0001, Section 3.2.4.

Abnormal Loads

The estimated abnormal loads, with reason(s) in parenthesis, related to setting up the concrete batch plant are:

- 1 x Batch Plant Mixer Assembly (width)
- 1 x Batch Plant Weighting Unit (width)
- 6 x Batch Plant Cement Silos (length)
- 2 x 73t Truck Crane (axles over weight)



1 x 5m³ Front End Loader (width)

See Appendix B for the Plant Register.

Re-fuelling (generally)

- Fuel deliveries and re-fuelling of plant and equipment will be undertaken in accordance with AMC UK's pollution prevention guidance. The Fuel Storage and Handling Pollution Prevention Guidance is included in the Phase 3 Environmental Management Plan (EMP). See document number 40-AMC-WS-71- EN-PL-0001, Appendix B.
- Re-fuelling of small plant and equipment will be undertaken with a spill-kit in place at all times during the re-fuelling operation.
- Should any spillages occur, AMC UK's Environmental Emergency Preparedness Plan (EEPP) contained in the Phase 3 Environmental Management Plan (EMP) will be followed. See document number 40-AMC-WS-71- EN-PL-0001, Appendix B.

Re-fuelling on site with fuel trailer

- A towable fuel trailer will be taken to suitable locations and secured.
- Re-fuelling with fuel trailer will be undertaken away from any pollution pathways such as watercourses, open excavations and other areas with pathway to the groundwater.
- The machine shall approach the fuel trailer with care; use a spotter when necessary.
- Adequate space will be maintained between the machine and fuel trailer, ensuring space for the pump operator without being so far away that the hose becomes stretched or a trip hazard.
- The machine shall apply its parking brakes and the engine turned off; on level, firm ground.
- A dip tray will be placed on the ground under the tank inlet and other places where dripping might occur.
- Spill absorbent pads and spill kits need to be available for catching any spill that might occur during refuelling.
- The machine's bonnet/hatch door will be secured to prevent it from swinging shut.
- The cap from the machine's fuel tank will be removed.
- The fuel trailer's generator will be switched on.
- The hose will be extended and the hose nozzle locked into the fuel tank when possible.
- Refuelling the machine will be undertaken at an appropriate flow speed to prevent overfilling.
- The refuelling of machines will always be supervised throughout the whole process, even at automatic refuelling fuel trailers.
- Upon refuelling the machine, the fuel trailer's generator will be switched off, the nozzle will be shaken into the machine fuel tank, the fuel tank cap secured, and the hose will be placed back into the designated location.
- The machine and the ground around the refuelling point will be inspected for spillages.
- Should any spillages occur, the spill reporting and clean up procedure will be followed.



Fuel deliveries are to be undertaken in bulk loads to reduce the number of deliveries to site.

6,000 litre fuel trailers, double skinned with at least 110% secondary containment, are to be used at the site to provide adequate storage in case inclement weather affects planned deliveries.

Spill absorbent pads and spill kits will be immediately available as a precaution.

Permit to Excavate

 A Permit to Excavate will be issued ahead of all mechanical excavation works; the Permit will detail all known underground utilities and stipulate a safe system of work for excavation which may include CAT scanning and trail holes to locate all known services.

Compound Fencing

- 2 m tall anti-climb fencing will be provided by others around the work site perimeter.
- Temporary fencing may be in place of the anti-climb fencing.

Concrete Batch Plant Excavation

The following plant will be used to undertake the excavation works:

Excavator

Excavators will be used for mechanical excavation works associated with slabs and foundations.

Front End Loader

- A front end loader will be used to excavate for shallow slabs.
- A front end loader may be used to remove excavated material from the immediate construction area. Alternatively, it may be used for backfilling after concrete forms are removed.

Wheel Wash

• If tires become soiled, the project provided wheel wash will be used if equipment such as mixer trucks use the public road to transport concrete.

Setting Out

All works will be undertaken to a line and level marked on site by a surveyor.

Archaeological Considerations

- Works will be carried out on a prepared platform already checked for archaeological items. As such,
 AMC UK does not expect any archaeological encounters.
- Should any archaeology be encountered at any stage of the works, excavation works will stop, an exclusion zone will be established, and the guidance of a qualified archaeologist will be followed.

The Importance of Surface Water Management During Construction

• High levels of silt suspended in water can suffocate fish by clogging their gills, can remove essential



oxygen from the water and can kill plants, animals and insects living in the water by stopping sunlight reaching them.

- Silt pollution spoils the appearance of watercourses, is easily traceable to the site from where it originated and in the past has been a major cause of prosecution.
- When a site is water logged, water accumulates on the surface which is associated with several types of hazards and inconveniences, including:
 - Unsafe surfaces for vehicle traffic.
 - o The concealment of trip hazards on the ground or excavations.
 - o Aiding in the transportation of contaminated or polluted water.
 - o Hosting wildlife such as rats, exposing site operatives to disease.
 - Halting progression of works.
 - o Erosion of surfaces.
 - Pollution of watercourses.
 - o Reduction of stability and bearing capacity of excavations, slopes or cuttings.

Measures to Reduce Silt Generation

The work site will be prepared by others complete with ditches, filters, clean-outs, etc. AMC UK will
monitor the water management system which it affects and will perform remedial action as necessary.
Such action may include stopping excavation works during heavy rain, or adding filter material (e.g.
bales of heather/hay) to the system.

Concrete Batch Plant Installation - Sequence of Works

The following sequencing will be undertaken:

- Setup welfare facilities. The welfare is detailed below.
- Stake out the excavations for concrete slabs and the wedge pit. This will include concrete works for the batch plant, silos, aggregate bins, conveyors, and concrete reclaimer.
- Excavate for the concrete works.
- Form the slabs while installing reinforcing bar / wire mesh.
- Install anchor bolts and inserts which will be cast in the concrete.
- Install services conduits.
- Cast the concrete.
- Prepare and stage batch plant components while the concrete is curing.
- Erect the batch plant components when the concrete is cured sufficiently to support the loads.
- Strip the concrete forms after sufficient curing.
- Backfill and compact around the slabs.
- Continue erecting the batch plant components.
- Install electrical as practical concurrent with the mechanical installation.
- Install the generators (one working and one back up) and fuel trailer.



- Grade the area with gravel.
- Commission the concrete batch plant.

Details of Welfare

• The following welfare will be provided by AMC UK for this phase and will be set up at the beginning of the construction sequence:

The following facilities will be provided at the Woodsmith Mine by AMC UK for setting up the concrete batch plant:

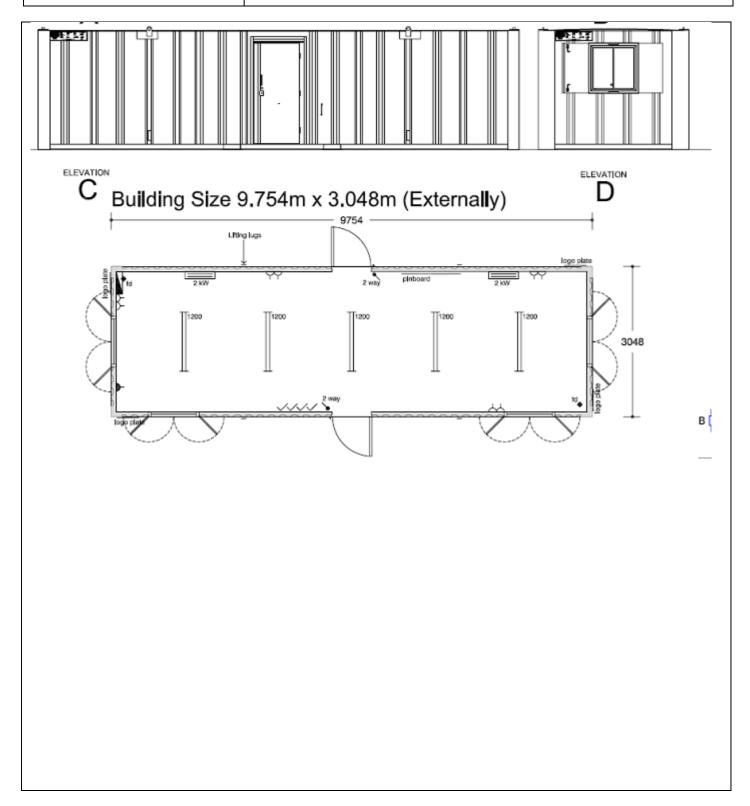
- 1 x Site office
- 1 x Site office with kitchenette
- 1 x Canteen with kitchenette
- 1 x Toilet block
- Washing facilities with hot running water within toilet block and kitchenettes
- 1 x Drying room
- 1 x Generator for welfare facility power

For location of the welfare installation please refer to the Site Layout drawing in Appendix C.

Typical Office/Welfare/Storage Units to be Used

Office/Canteen/Meeting/Drying Room (9.8 m x 3.1 m x 2.5 m tall), steel construction, colour to be RAL 6008, Brown Green:



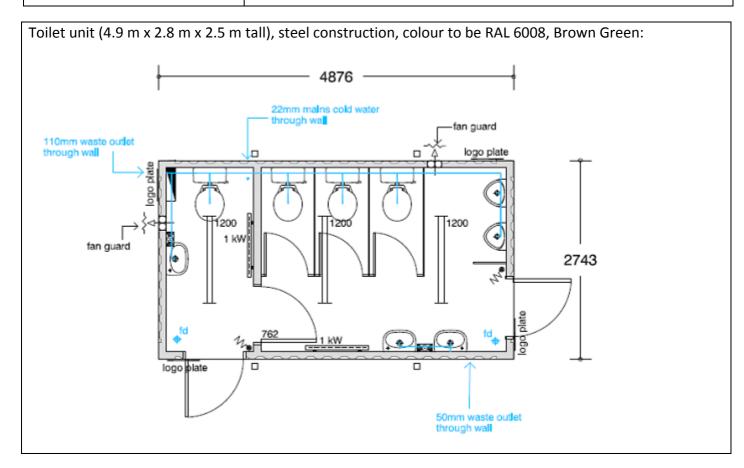






Office Container, typical







Appendices:

Appendix A – Labour Loading

Appendix B – Plant Register

Appendix C – Drawings

Appendix D – Typical Water Tanks



Appendix A – Labour Loading

Sirius Minerals - Woodsmith Mine

Phase 3 - Concrete Batch Plant Installation and Commissioning AMC UK Labour Loading

Month	Site Management Dayshift 6 am - 6 pm Mon Fri.	Site Management Nightshift 6 pm - 6 am Mon Fri.	Site Operatives Dayshift 6 am - 6 pm Mon Fri.	Site Operatives Nightshift 6 pm - 6 am Mon Fri.	Total Dayshift 6 am - 6 pm Mon Fri.	Total Nightshift 6 pm - 6 am Mon Fri.	Total Number of Locals	Total Number of In-Migrants	TOTAL
Jun-17	5	0	16	0	21	0	13	8	21
Jul-17	3	0	5	0	8	0	5	3	8
Aug-17	3	0	5	0	8	0	5	3	8
Sep-17	3	0	5	0	8	0	5	3	8
Oct-17	3	0	5	0	8	0	5	3	8

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Appendix B – Plant Register

Sirius Minerals - Woodsmith Mine

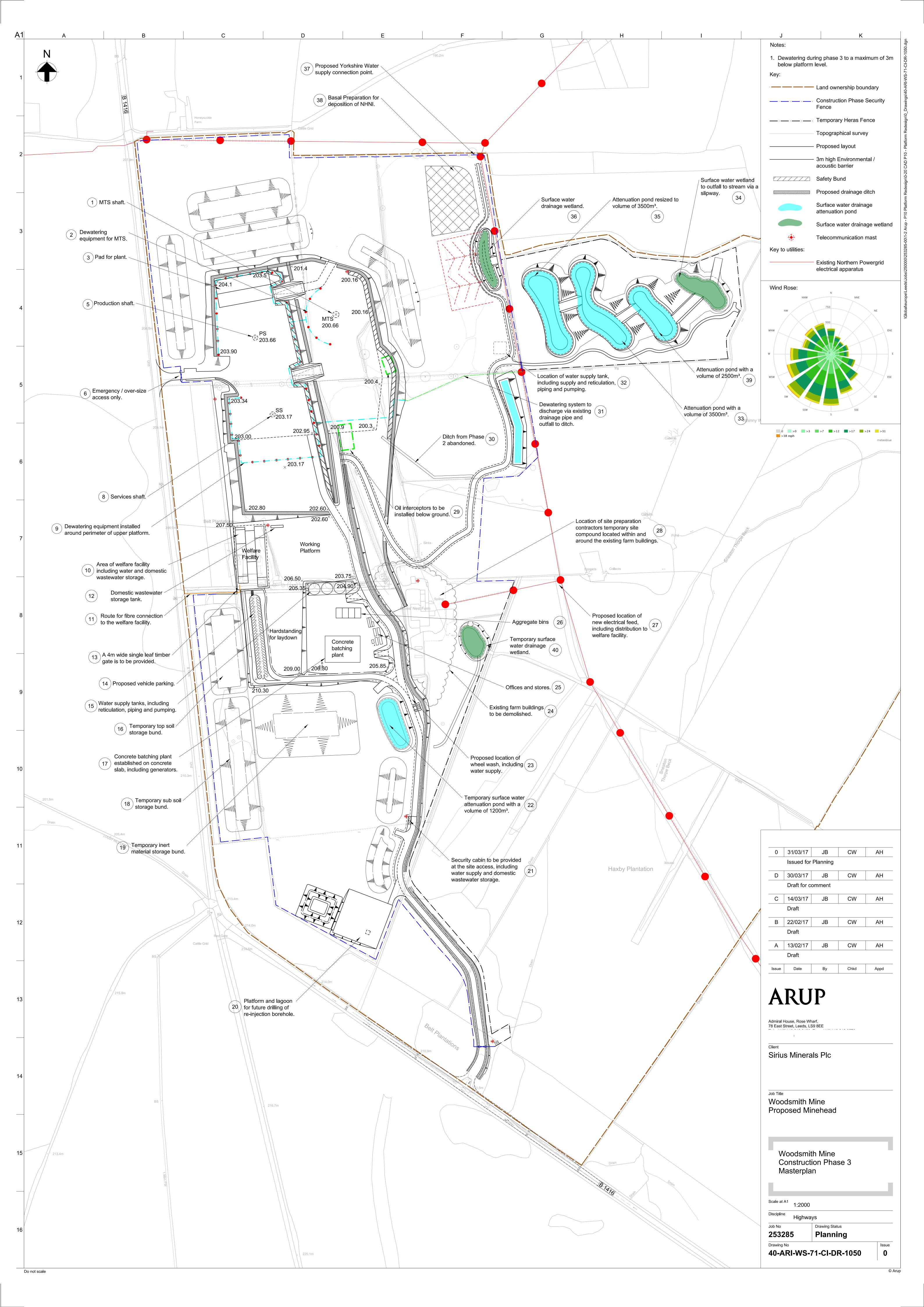
Phase 3 - Concrete Batch Plant Installation and Commissioning Plant Register

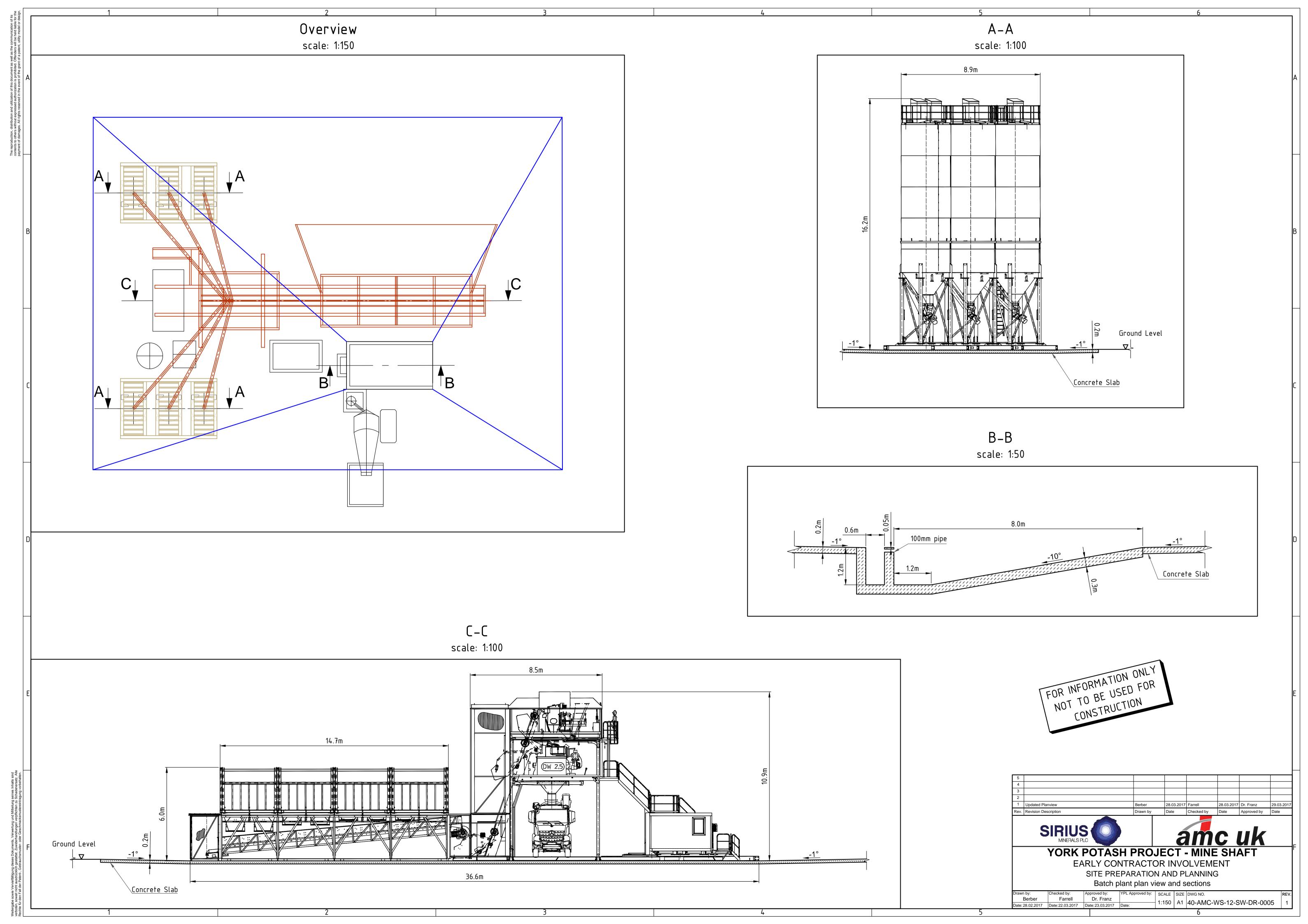
Plant	Numbers	Туре	Sound power level LWA [db(A)]	Sound pressure level LpA [db(A)]	Power rating [kW]	% on-time	Start	Finish	24 hour working	Comments
Concrete Batch Plant	1 Unit (18 truck loads)	Liebherr Mobilmix 2.5	As per noise emission forecast, Appendix X	As per noise emission forecast, Appendix X	140	50	4-Jun-17	N/A	Day only	New
73t Mobile Crane	2	Terex T780 or similar	110		335	50	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old
5m^3 Front End Loader	1	Cat 966M or similar	108		232	70	4-Jun-17	N/A	Day only	New / Less than 5 years old
6T Telehandler	1	Cat TL1255C or similar	104		106	50	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old
0.76m^3 Excavator	1	Cat 316F L or similar	102		88	50	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old
18m Telescopic Boom Lift	1	JLG 600S or similar	104		62	50	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old
8m^3 Concrete Trucks	2	DAF CF 400MX-11 or similar	106		291	50	18-Jun-17	N/A	Day only	New / Less than 5 years old
1 MVA Batch Plant Generator	1	Frerk	103.3	85 @ 1 m 80 @ 7 m	800	50	18-Jun-17	N/A	Day only	New / Less than 5 years old
1 MVA Batch Plant Generator	1	Frerk	103.3	85 @ 1 m 80 @ 7 m	800	0	18-Jun-17	N/A	Back Up	New / Less than 5 years old
350 kVA Batch Plant Welfare Generator	1	Inmesol	95	72 @7 m	280	100	4-Jun-17	N/A	Day only	New / Less than 5 years old
350 kVA Sub-contractor Welfare Generator	1	Inmesol	95	72 @7 m	280	100	4-Jun-17	N/A	Day only	New / Less than 5 years old
Fuel Tank, towable, 6000 L, double bunded	2	-	N/A	N/A	N/A	N/A	4-Jun-17	N/A	Day only	New / Less than 5 years old
Fuel Tank stationary, 6000 L, double bunded	2	-	N/A	N/A	N/A	N/A	4-Jun-17	N/A	Day only	New / Less than 5 years old
Delivery Lorries	Estimated: 8 per day	various: 20' rigid, 45' artic, low loaders	85		150	25	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old Estimated average values
MEWP	2	Z45D or similar	85		36	25	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old
Hand tool: Saw	4	tbc	91		1	5	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old
Hand tool: Drill	4	tbc	91		1	5	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old
Welding set	3	Miller	82		35	25	4-Jun-17	1-Jul-17	Day only	New / Less than 5 years old Estimated average values

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Appendix C – Drawings







Appendix D – Typical Water Tanks

