

NOTES / KEY

Due to technical faults with the weather station no rainfall data is available from the 23 May -13 June 2014, 5 August - 19 September 2014, 27 September - 14 November 2014, and October 2015 - December 2015.

3 point cumulative rainfall – summation of 3 consecutive ½ hourly rainfall values , utilised to show an exaggerated rainfall trend.

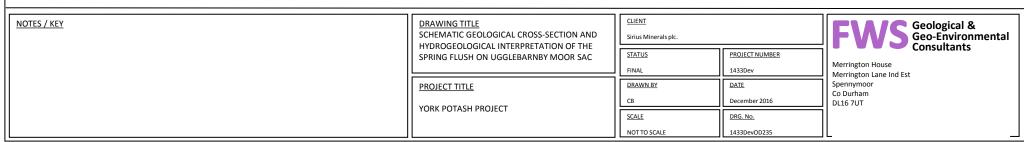
PROJECT TITLE YORK POTASH PROJECT

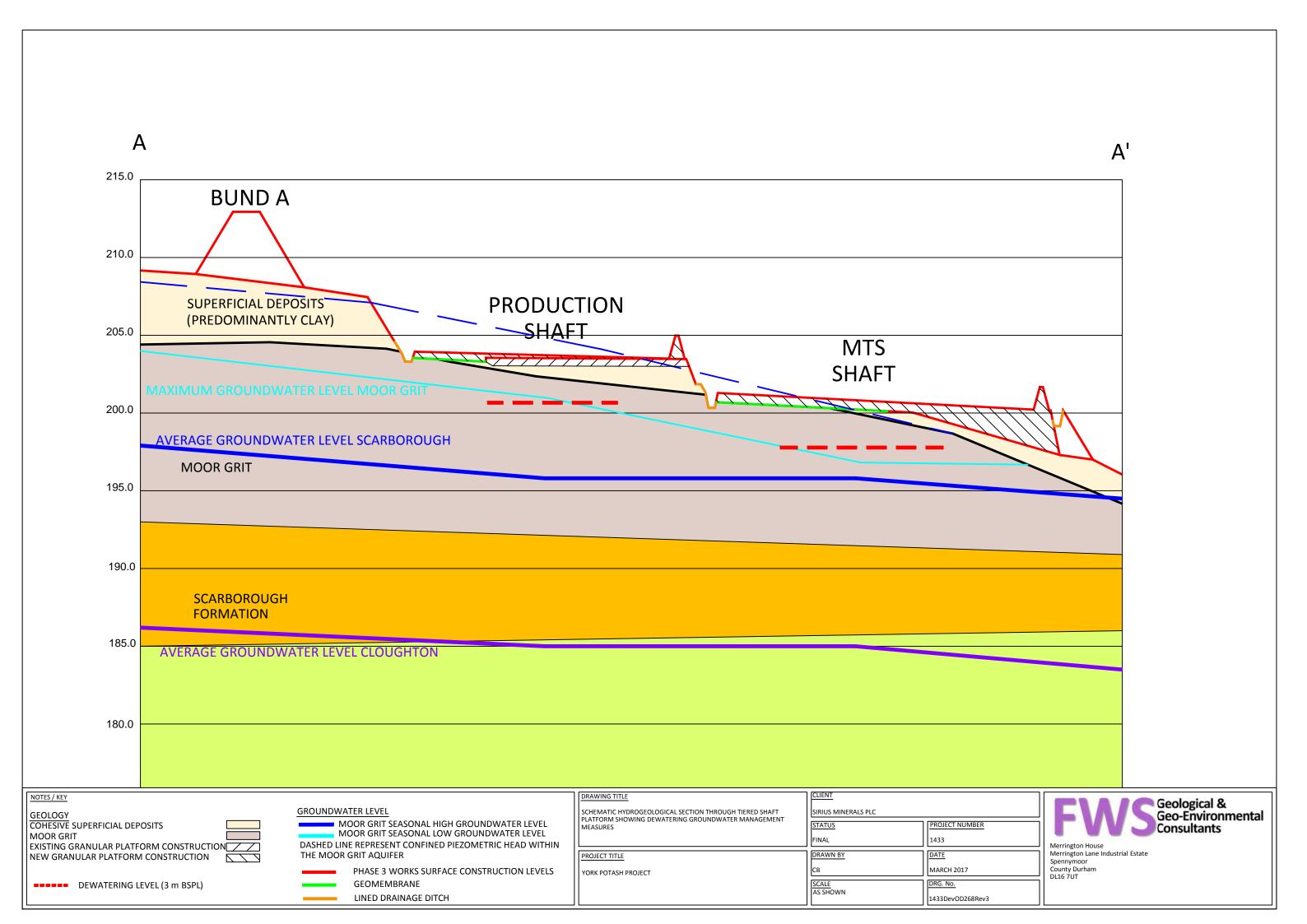
DATE DRAWN BY December 2016 DRG. No. NOT TO SCALE 1433DevOD239

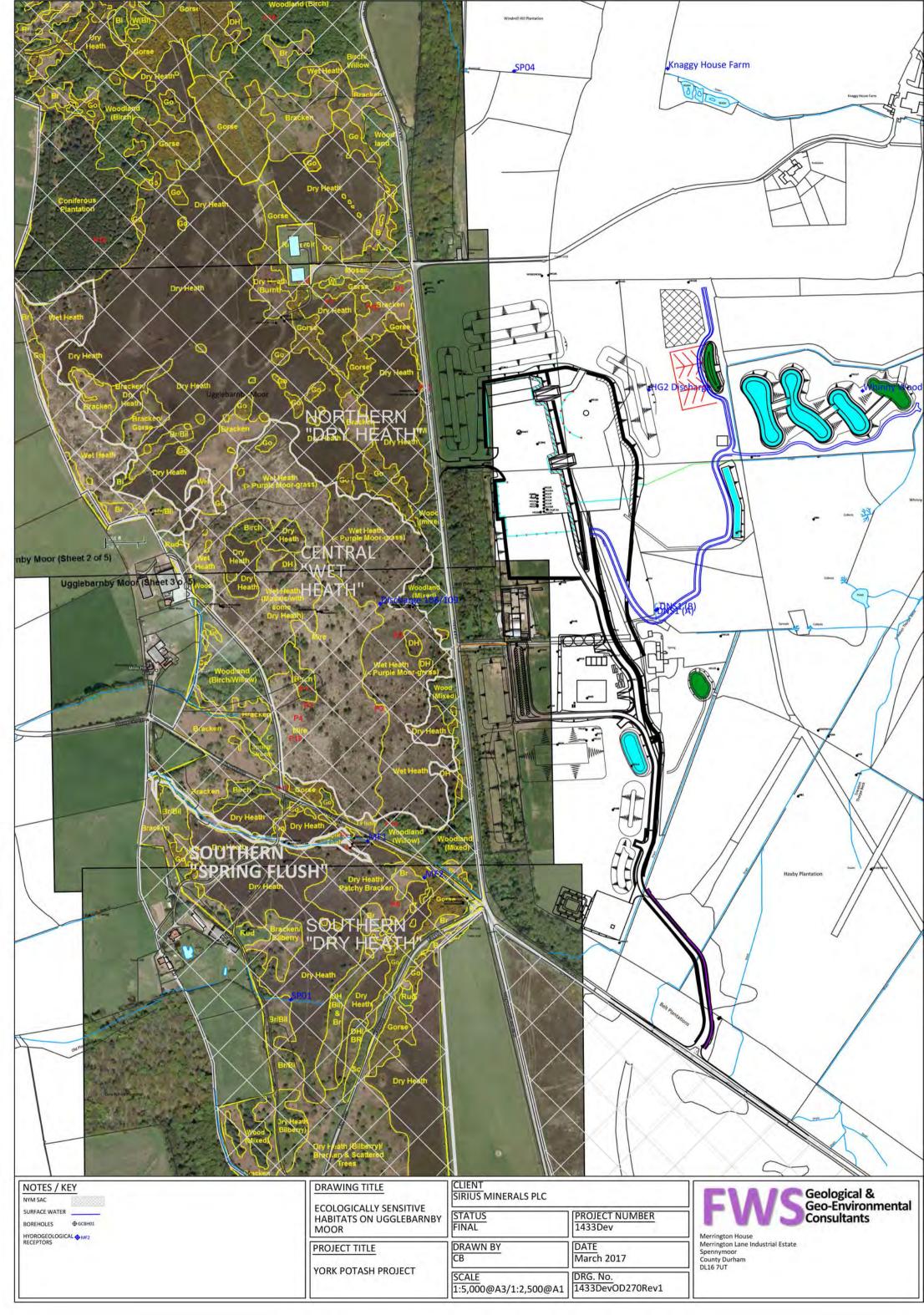
Geological & Geo-Environmental Consultants

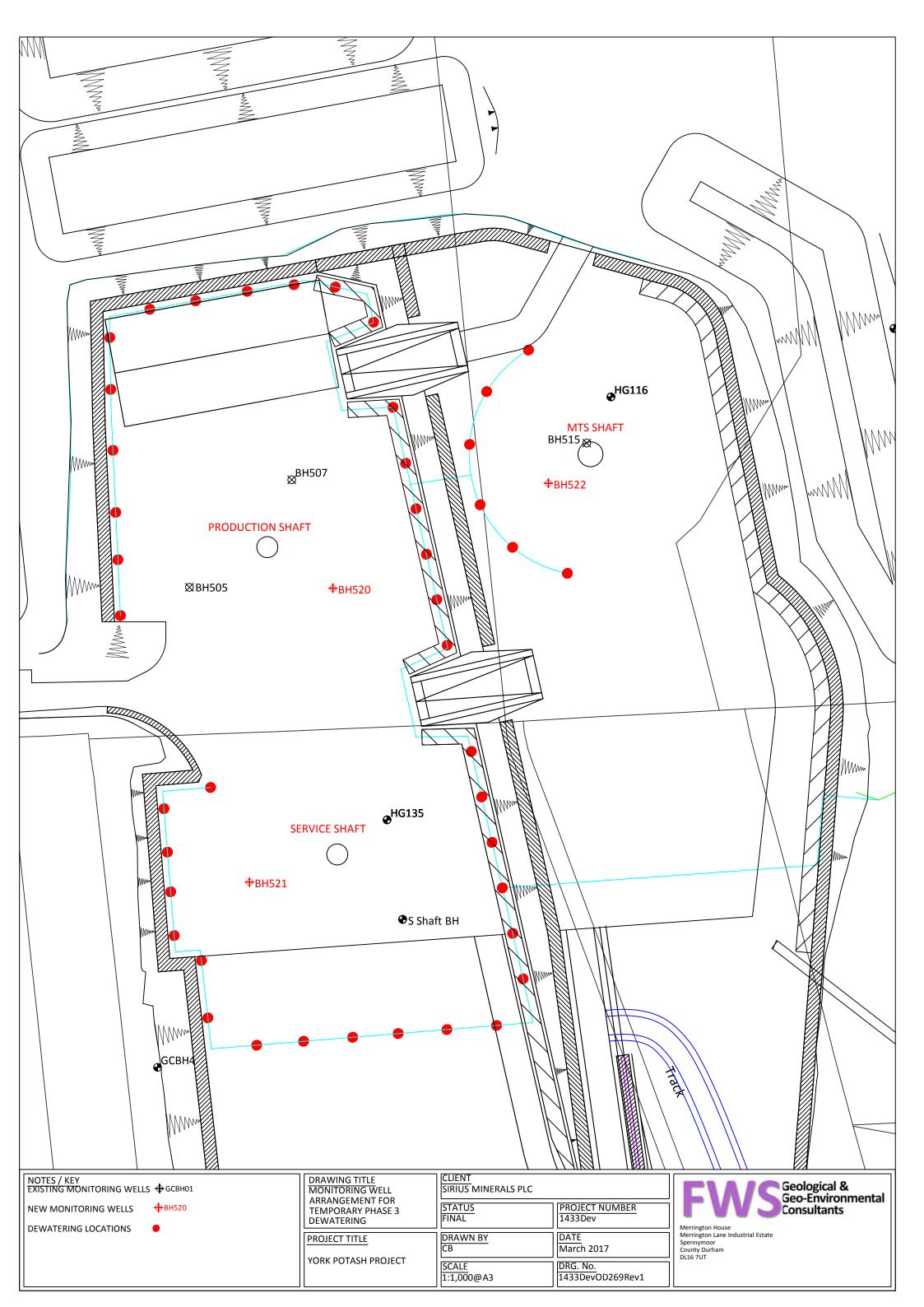
Spennymoor Co Durham DL16 7UT

NB: Seasonal High and Low Groundwater Level periods in the Scarborough Formation at this location is based on Drawings 1975OD40 and 1975OD39 respectively. Spring Flush Dry Heath Interpolated piezometric MOORSIDE groundwater table in **FARM SPING** Superficial Deposits (Seasonal High Groundwater Level) (MF2) 210.8 m AOD - Groundwater level 210 (210mAOD) in HG111A BELOW which there will Interpolated piezometric be no Moor Grit aquifer discharge groundwater table in to MF2. Superficial Deposits (Seasonal Low Upper Scarborough **Moor Grit** Eolivation adritato Groundwater Level) Scarborough FM Aquifer Aquifer Shallow (<1mbgl) saturated zone within the 205 Superficial deposits that maintains the spring flush ecology Lower Scarborough 200 Dry Heath Thickness based on 195 sequence seen in (Base of superficial deposits) HG108A and BH7B **Cloughton Fm Aquifer** Unsaturated Zone Break in scale Max 🔓 Groundwater level in Cloughton Formation 180





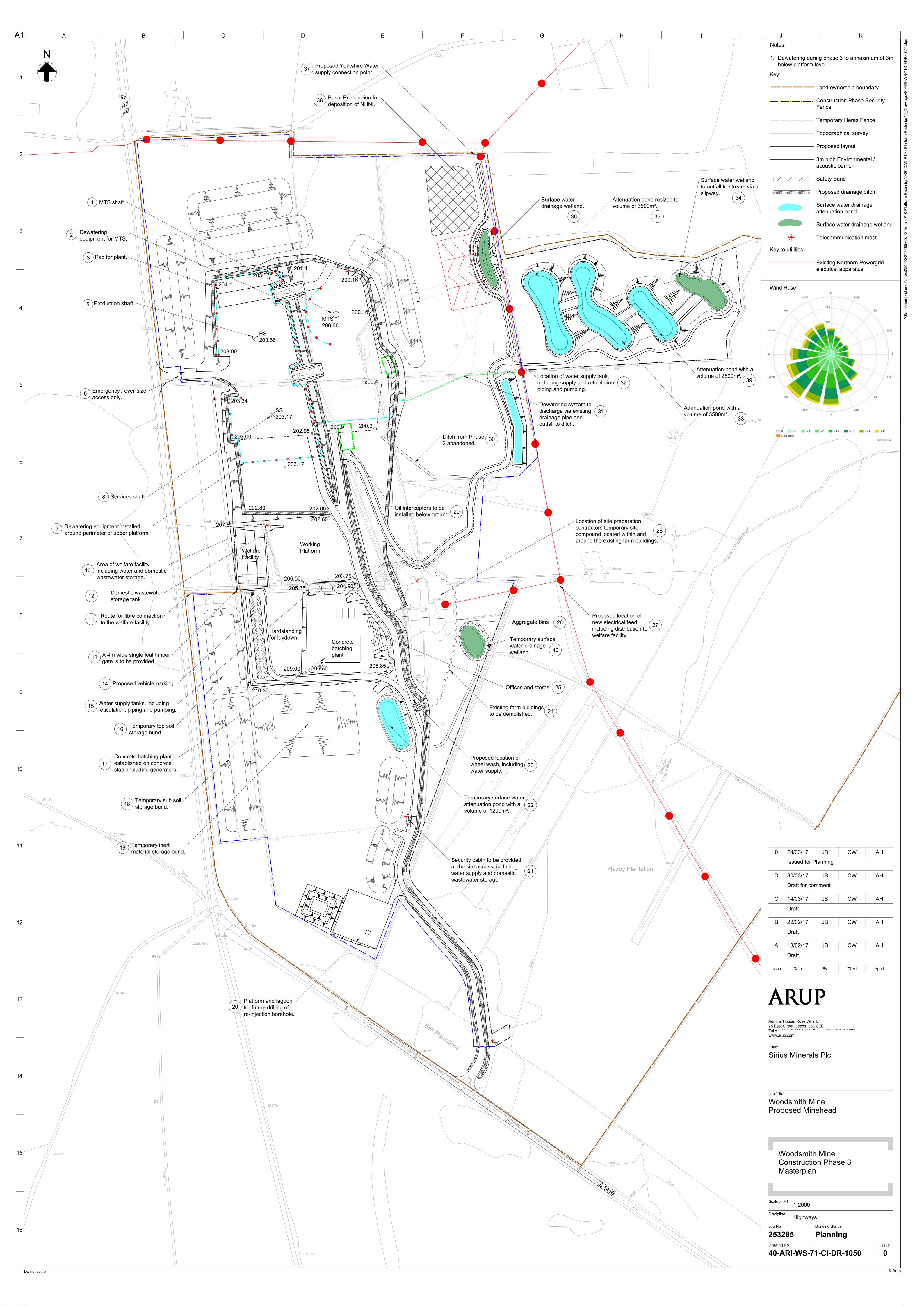






APPENDIX 2

CONSTRUCTION DEVELOPMENT DETAILS



Phase 2 Phase 3 Temporary Temporary Cut (m3) Permanent Fill (m3) Cut (m3) Permanent Fill (m3) Stockpiles Stockpiles Superficial Existing Type 1 Platform Platform Bituminou Subsoil Top Soil Sub Soil Superficial Clay Top Soil Sub Soil Superficial Clay Existing Superficial / Clay Top Soil Sub Soil Tip Platform Type 1 Platform Bituminou Area Location Area m2 Top Soil Comments3 /Clay Platform (Import) Constructi Constructi s Surfacing (Import) Constructi s Surfacing Platform Constructi Material on Class 1A on Type 3 on Class 1A on Type 3 (Import) (Import) (Import) Reuse To Tip To Tip 0.3m depth of existing platform to be removed and new construction provided on top. It is assumed that top, sub 1,528 1,315 1 North Platform 3,055 4,780 and sperficial soil cut volumes from this area are currently stored in the landscaped bunds surrounding the northern platform. 0.25m depth of existing platform to be removed and new construction provided on top. 2 South Platform 5,360 2,680 1,340 5,580 2,080 8,454 Assumes all material previously stripped from this area is stockpiled in Area 9. 3,160 1,970 3 Middle Extension 3,285 1,643 712 3,560 3a Upper Eastern Extension 4 North Extension 5,600 1,120 9,730 2,800 5 East (Lower) Extension 22,240 4,448 11,120 1,900 13,000 2,190 6 Slope 2,625 1,313 4,835 2,418 990 7 Slope 8 Slope 1,100 1,665 833 200 9 Vent Shaft Platform 13,800 2,760 21,930 7,000 6,900 12,000 2,400 10 Laydown Area 6,000 10,000 2,000 2,100 4,320 11a Laydown Area 5,000 11b Laydown Area 14,000 2,800 4,800 6,850 12 Laydown Area 12,100 2,420 6,050 6,508 Assume 30% of area top 13 Access Road 7,300 1,227 1,700 1,600 1,460 3,650 5,580 14 Recharge Well 3,600 720 1,800 2,160 15 Access Tracks 6,520 1,304 1,200 1,200 2,323 2,290 16 Attenuation Ponds (Ph2) 3,963 17 Attenuation Ponds (Ph3) 4,926 4,926 14,400 Assumed Scrub planting for basis of restoration 18 Bund A 1,100 18,616 soils thickness. 20 Spoil Disposal Area 960 4,800 2,400 21 Inert Bund 8,400 1,680 22 Temp Top Soil Bund 1 5,790 1,158 8,779 6,377 6,400 1,280 21,177 23 Temp Sub Soil Bund 1 480 24 Temp Top Soil Bund 2 2,400 3,631 25 Temp Sub Soil Bund 2 9,510 2,700 26 Temp Top Soil Bund 3 3,800 12,000 27 Temp Sub Soil Bund 3 35,881 28 Clay Stockpile 24,730 Total 189,795 1,683 17,020 4,208 26,525 2,257 11,110 28,200 5,338 1,245 18,616 14,463 2,257 1,700 13,210 22,075 1,600 67,827 24,182 40,190 48,419 26,840 1,200 34,530 54,978 1,600 67,827 54,978 91,002 41,919 36,985 112,791 26,840 35,730 830 Bulking Cut (Total) Total In Fill Bulking Cut (Total) Fill Stockpile Stockpile Stockpile Cut Top Soil 17,871 12,534 Top Soil Top Soil 17,020 1.05 5,338 37,925 24,182 1.05 25,391 25,391 Sub Soil 0.5 Sub Soil 26,525 1.10 29,178 1,245 27,933 Sub Soil 72,142 44,209 40,190 1.10 44,209 16,557 Fill Platform Construction 0.6 Superficial / Clay 28,200 31,020 14,463 1.10 1.10 16,557 0.85 2,257 1.00 2,257 2,257 Existing Platform Tip (inert material) Road Construction 24,000 48,419 1.05 50,840 26,840 24,000 1,767 Laydown Construction Top Soil 1.05 18,616 115,265 5,086 184,076 122,660 117,574 Sub Soil 4,628 4,208 1.10 Other (Inert 11,110 1.10 12,221 91,002 98,941 41,919 57,023

1. For the area locations refer to 40-ARI-WS-71-CI-DR-1053. 2. The volumes shown do not account for any additional granular material import that may be required by the contractor for the creation of temporary construction haul roads, in addition to those shown on this drawing.

> Platform levels and material volumes are subject to confirmation and change.

0	31/03/17	JB	CW	AH
Issue for Planning				
В	30/03/17	JB	CW	AH
Draft				
Α	07/03/17	JB	CW	AH
Draft				
Issue	Date	Ву	Chkd	Appd

ARUP

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Sirius Minerals Plc

Woodsmith Mine

Woodsmith Mine Site Construction Phase 3 Earthworks Strategy Volume Calculations

Scale at A1 As Shown Discipline Civil

253285 Planning

Drawing No 40-ARI-WS-71-CI-DR-1054

Do not scale

Issue

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