

Notes:

1. The surface water drainage has been coordinated with Earthworks contours dated November 2016.
2. This drawing shows the proposed surface water drainage network for Site Preparation Phase 2.
3. For surface water drainage features refer to drawings YP-P10-DNF-CD-020 to 025.
4. The perimeter ditches around the platforms are to be lined with an impermeable liner.

Key:

- Land Ownership Boundary
- Proposed General Arrangement layout
- Surface water drainage attenuation pond
- Existing watercourses / ditch
- Manhole and carrier pipe
- Swale
- Check dam
- Silt fence
- Ditch
- Inlet/ outlet headwall

1	19/12/16	SM	NF	AH
Issue				
0	15/12/16	JB	NF	AH
Issue				
C	07/12/16	JB	NF	AH
Discharge Planning				
B	02/12/16	EC	NF	AH
Discharge Planning				
A	01/12/16	SM	NF	AH
Discharge Planning				
Issue	Date	By	Chkd	Appd

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Client
Sirius Minerals Plc

Job Title
York Potash

**Surface Water Drainage
General Arrangement**

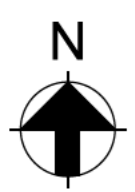
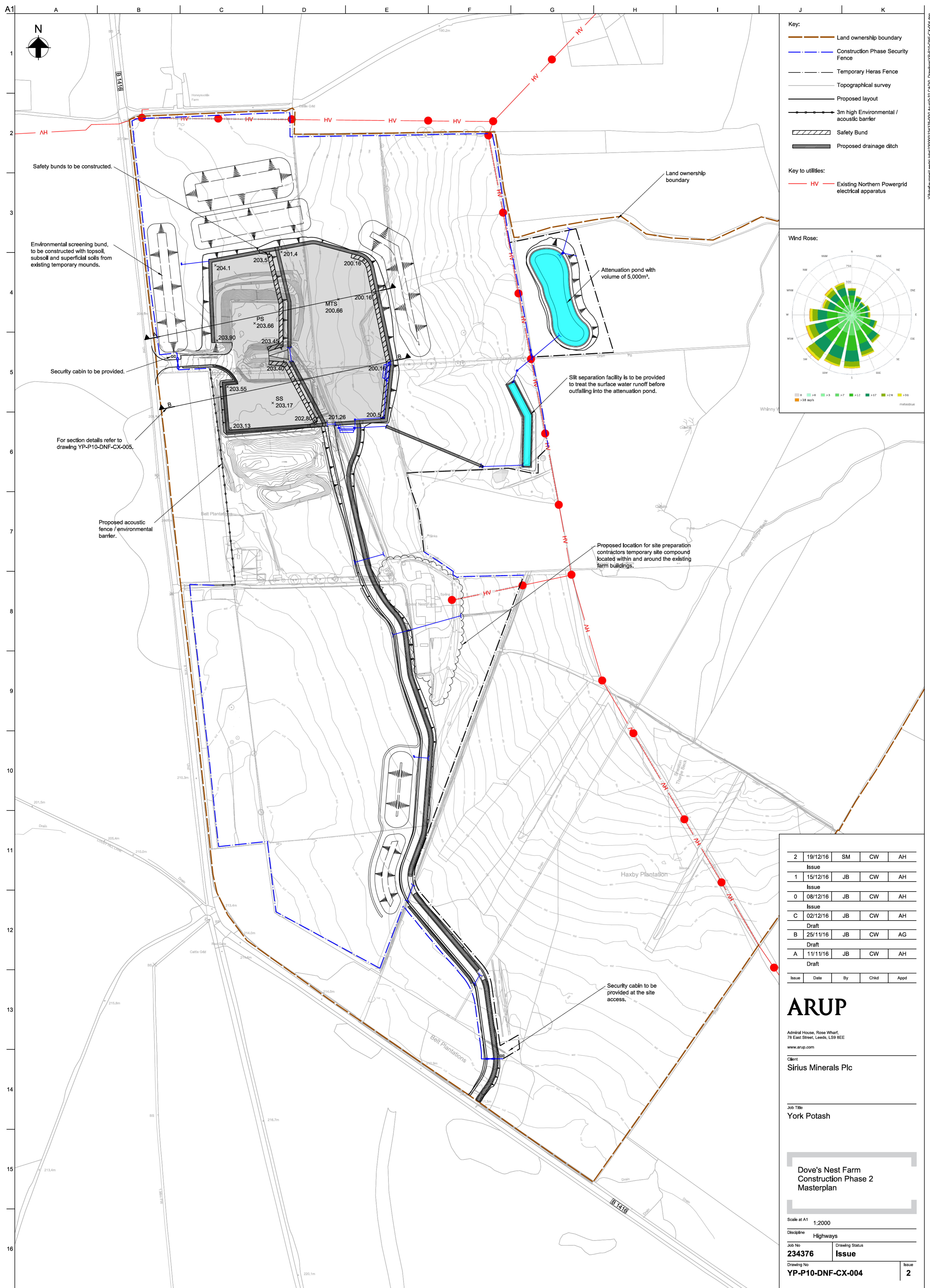
Scale at A1 1:2000

Discipline **Drainage**

Job No **234376** Issue

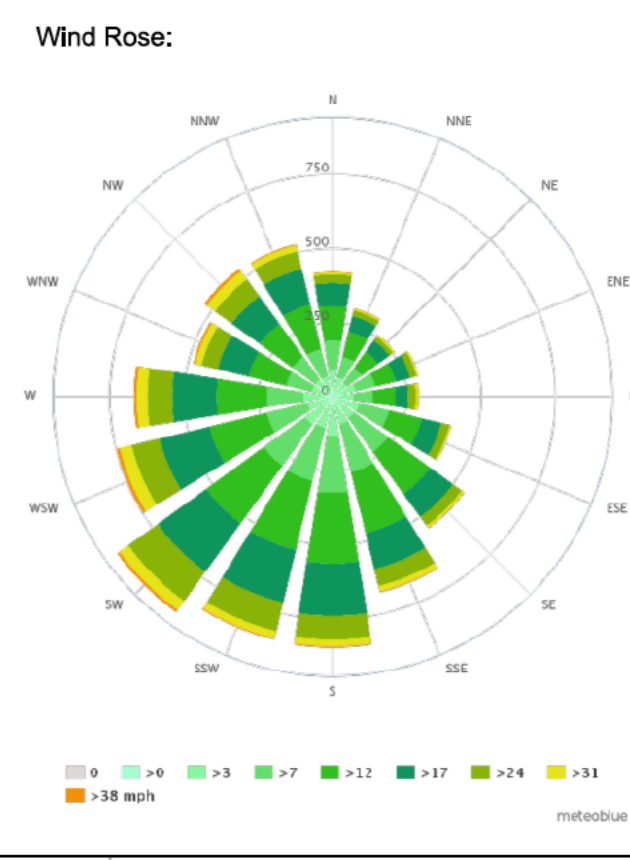
Drawing No **YP-P10-DNF-CD-001** Issue **1**

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- Key:**
- Land ownership boundary
 - - - Construction Phase Security Fence
 - - - Temporary Heras Fence
 - Topographical survey
 - Proposed layout
 - 3m high Environmental / acoustic barrier
 - Safety Bund
 - Proposed drainage ditch

- Key to utilities:**
- HV Existing Northern Powergrid electrical apparatus



Safety bunds to be constructed.

Environmental screening bund, to be constructed with topsoil, subsoil and superficial soils from existing temporary mounds.

Security cabin to be provided.

For section details refer to drawing YP-P10-DNF-CX-005.

Proposed acoustic fence / environmental barrier.

Attenuation pond with volume of 5,000m³.

Silt separation facility is to be provided to treat the surface water runoff before outfalling into the attenuation pond.

Proposed location for site preparation contractors temporary site compound located within and around the existing farm buildings.

Security cabin to be provided at the site access.

2	19/12/16	SM	CW	AH
Issue				
1	15/12/16	JB	CW	AH
Issue				
0	08/12/16	JB	CW	AH
Issue				
C	02/12/16	JB	CW	AH
Draft				
B	25/11/16	JB	CW	AG
Draft				
A	11/11/16	JB	CW	AH
Draft				
Issue	Date	By	Chkd	Appd

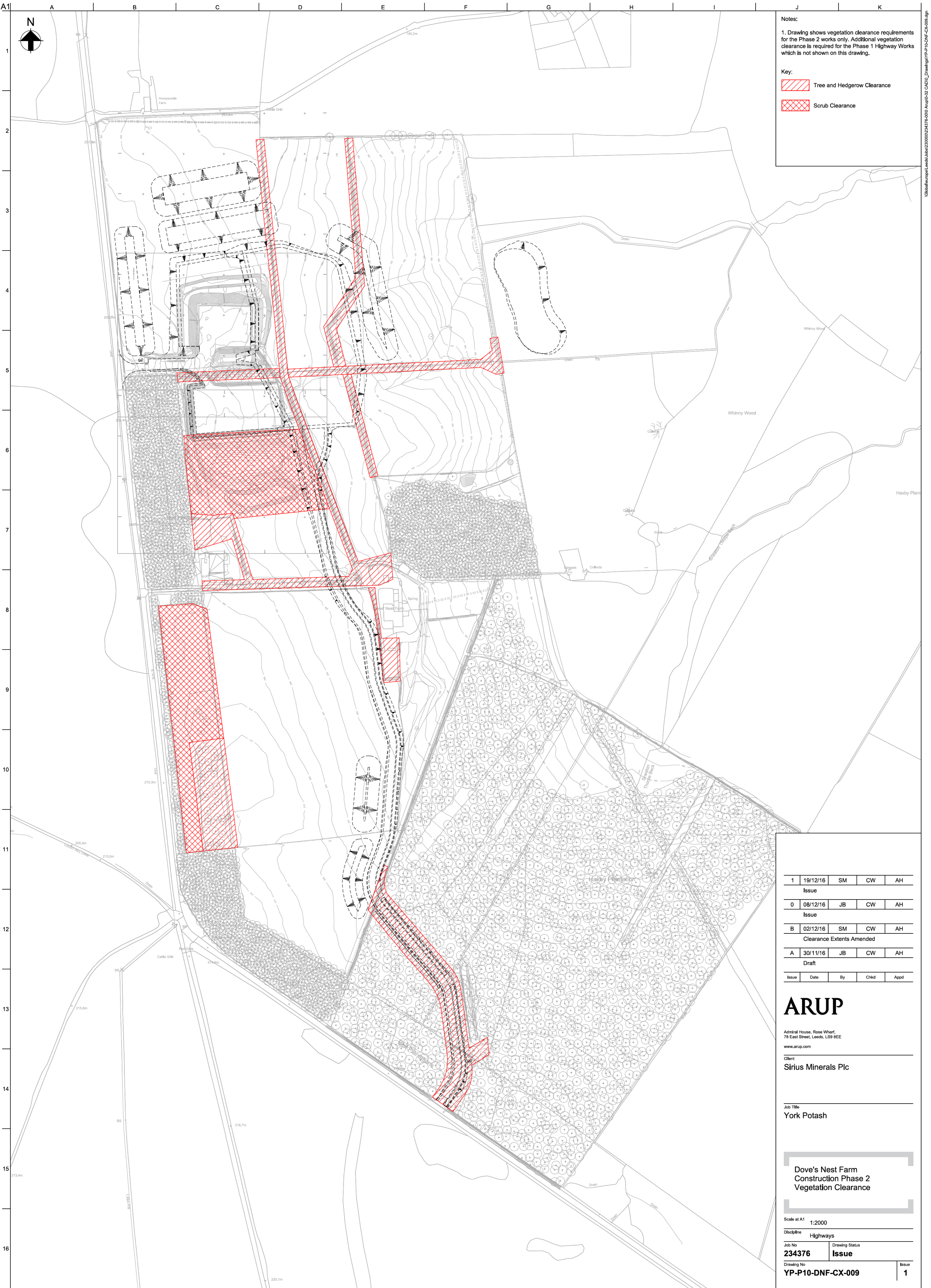
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Job Title
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**Dove's Nest Farm
 Construction Phase 2
 Masterplan**

Scale at A1 1:2000
 Discipline Highways
 Job No 234376
 Drawing Status Issue
 Drawing No YP-P10-DNF-CX-004
 Issue 2



Notes:
 1. Drawing shows vegetation clearance requirements for the Phase 2 works only. Additional vegetation clearance is required for the Phase 1 Highway Works which is not shown on this drawing.

Key:
 Tree and Hedgerow Clearance
 Scrub Clearance

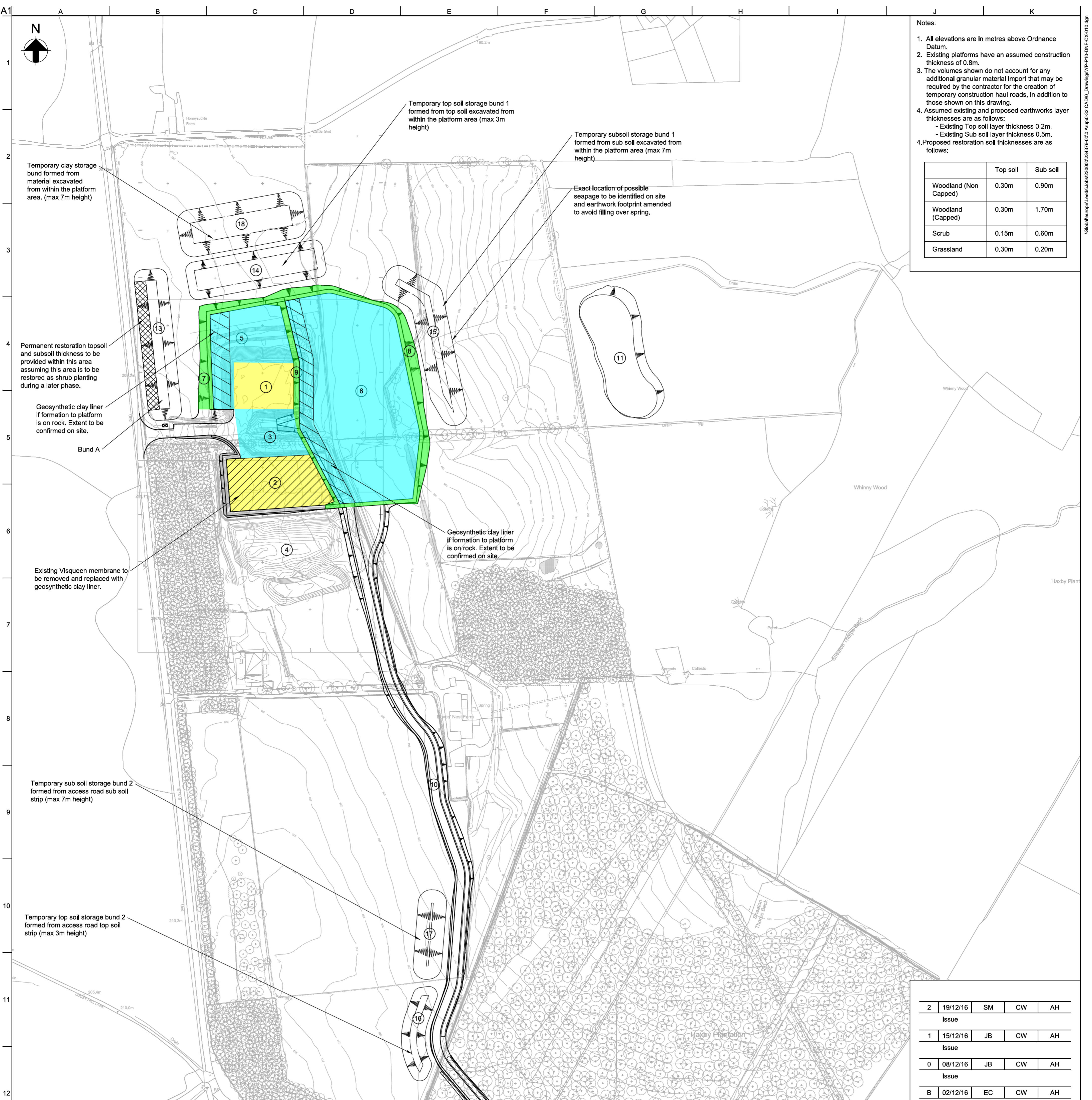
1	19/12/16	SM	CW	AH
Issue				
0	08/12/16	JB	CW	AH
Issue				
B	02/12/16	SM	CW	AH
Clearance Extents Amended				
A	30/11/16	JB	CW	AH
Draft				
Issue	Date	By	Chkd	Appd

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**Dove's Nest Farm
 Construction Phase 2
 Vegetation Clearance**

Scale at A1 1:2000
 Discipline Highways
 Job No 234376
 Drawing Status Issue
 Drawing No YP-P10-DNF-CX-009
 Issue 1



Notes:

- All elevations are in metres above Ordnance Datum.
- Existing platforms have an assumed construction thickness of 0.8m.
- 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.
- Assumed existing and proposed earthworks layer thicknesses are as follows:
 - Existing Top soil layer thickness 0.2m.
 - Existing Sub soil layer thickness 0.5m.
- Proposed restoration soil thicknesses are as follows:

	Top soil	Sub soil
Woodland (Non Capped)	0.30m	0.90m
Woodland (Capped)	0.30m	1.70m
Scrub	0.15m	0.60m
Grassland	0.30m	0.20m

2	19/12/16	SM	CW	AH
Issue				
1	15/12/16	JB	CW	AH
Issue				
0	08/12/16	JB	CW	AH
Issue				
B	02/12/16	EC	CW	AH
Minor Amendments				
A	01/12/16	EC	CW	AH
Issue				
Issue	Date	By	Chkd	Appd

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**Dove's Nest Farm
 Construction Phase 2
 Earthworks Strategy**

Scale at A1 1:2000
 Discipline **Highways**
 Job No **234376** Drawing Status **Issue**
 Drawing No **YP-P10-DNF-CX-010** Issue **2**

Area	Area m2	Cut (m3)				Existing Platform Material	Superficial / Clay		Permanent Fill (m3)				Platform Construction Class 1A (Import)	Platform Construction (Import)	Temporary Stockpiles	Comments	
		Top Soil		Subsoil			To Tip		Tip	Superficial / Clay	Existing Platform	Tip					Superficial / Clay
		To Tip	Reuse / Stockpile	To Tip	Reuse / Stockpile		To Tip	Reuse / Clay									
1 North Platform	3,055	611		1,528		917	4,780							1,315	0.3m depth of existing platform to be removed and new construction provided on top.		
2 South Platform	5,360				1,340									2,080	0.25m depth of existing platform to be removed and new construction provided on top. Assumes all material previously stripped from this area is stockpiled in Area 4.		
3 Middle Extension	3,285		657	1,643			3,160							1,970			
4 Existing spoil bund	16,545														No impact on this area during phase 4.		
5 North Extension	5,600		1,120	2,800			9,730							3,360			
6 East (Lower) Extension	23,420		4,684	11,710		6,330	9,610			2,257	6,770	14,052					
7 Slope	2,625		525	1,313			2,190				100						
8 Slope	4,835		967	2,418			990		788								
9 Slope	1,290		258	645			1,160		1,451	4,720							
10 Access Road	7,290		1,458	3,645			6,330		387			110					
11 Pond	7,626		1,525				2,323		1,550	2,080			6,197		Assume 30% of area top soiled		
13 Bund A	5,518		1,104	2,759				310	2,290	3,963					Assumed Scrub planting for basis of restoration soils thickness.		
14 Temp Top Soil Bund 1	5,790		1,158											8,779			
15 Temp Sub Soil Bund 1	6,391		1,278											21,177			
16 Temp Top Soil Bund 2	2,421		484											3,631			
17 Temp Sub Soil Bund 2	2,672		534											9,510			
18 Clay Stockpile	7,160		1,432											24,730			
Total	110,883	611	17,185	1,528	26,932	2,257	11,110	35,493	6,775	1,245	14,543	10,763	2,257	6,980	28,974	67,827	
					95,114						35,583			35,954	67,827		

Cut		Bulking		Cut (Total)		Fill		Stockpile	
Top Soil	0.2	17,185	1.05	18,044	6,775	10,410			
Sub Soil	0.5	26,932	1.10	29,625	1,245	25,687			
FILL Platform Construction	0.6	35,493	1.10	39,042	10,763	24,730			
Road Construction	0.85	2,257	1.00	2,257	2,257	-1			
Tip		611	1.05	642	14,543	0			
Top Soil		1,528	1.10	1,680					
Sub Soil		11,110	1.10	12,221					
Other									
Total		95,114		103,510	35,583	60,825			