

Scope of Works - North Nottinghamshire/Derbyshire Coalfield Rising Mine Water Study

Following the closure of Thorseby Colliery, underground coal mining in the coalfield has come to an end. As part of the colliery closure, previous pumping requirements ceased and mine water was allowed to recover. Whilst mining was ongoing in the coalfield, the management of the mine water was undertaken by the mining companies. Although water management was not done by the CA, the Authority have had an ongoing knowledge of the mine water regime. More recently, the Authority have been involved in the abandonment of the coalfield and specifically in respect to future needs.

Although in recent years there have been a few water reports done for the coalfield (see list below), the CA require a modelling study and report for the coalfield. The study should be based on the following requirements:

- Provide a conceptual model based on:
 - Review of available mine water (and mine gas) data
 - Review of available historic documents, information, mine plans and reports (typically those held at the CA)
- Using data and information for the rising mine water section of the mining block to:
 - Assess the rate of mine water rebound
 - Determine the key risks of the rising mine water and the potential impact and location of any pollution
 - Determine any critical mine water levels (i.e. those at which pollution could occur)
 - Estimate potential timescales of the mine water recovery with respect to any risks
 - Highlight any requirements and provide recommendations for the long term strategy for mine water control
 - Recommended where there is a need for any new monitoring sites to fill any gaps in data

Table - Coal Authority monitoring sites in North Notts/Derbys Coalfield

Site No	Site Title	Sub Site Title	Key Parameter	Date Received	Mine Entry Ref	Easting	Northing	Elevation (mAOD)
5	Arkwright	No.1 Adit Large B/H	Mine gas	01-Oct-94		443048	370409	85
5	Arkwright	No.1 Adit Small B/H	Mine gas	01-Oct-94		443048	370409	86
9	Boiley Lane	2nd Waterloo B/H	Mine gas	01-Oct-94		445222	379823	85
30	North Junction No.1	Top Hard Borehole	Mine gas	01-Oct-94		442427	371545	102
71	Shirebrook	Jubilee Drift	Mine gas	01-Oct-94	452367-001	452854	367243	
73	Steetley	Shaft	Mine gas	01-Oct-94	455378-001	455200	378477	60
99	Bolsover	No.3 Shaft	Mine gas	01-Feb-95	446371-001	446046	371100	
102	Markham	No.2 Shaft	Water Level	01-Feb-95	444371-002	444921	371889	
102	Markham	No.3 Shaft / No.1 Vent		01-Feb-95	444371-001	444911	371918	
102	Markham	No.3 Shaft / No.2 Vent		01-Feb-95	444371-001	444911	371918	
102	Markham	No.3 Shaft / No.3 Vent		01-Feb-95	444371-001	444911	371918	
102	Markham	No.3 Shaft / No.4 Vent		01-Feb-95	444371-001	444911	371918	
105	Renishaw Park	No.1 Shaft	Mine gas	01-Apr-95	443377-010	443799	377405	
106	Eckington Hornthorpe	Borehole	Mine gas	01-Apr-95		442249	378685	
107	Eckington Barratt	Elbow B/H	Mine gas	01-Apr-95		442982	378806	
107	Eckington Barratt	Vent B/H	Mine gas	01-Apr-95		442982	378806	
108	Flatts Fan	Drift Borehole	Mine gas	01-Apr-95	443378-002	443860	378806	
109	Furnace Hill	Deep Soft B/H	Mine gas	01-Apr-95	442377-007 near	442835	377317	32
110	Campbell	Shaft	Mine gas	01-Apr-95	441375-027	441106	375867	75
111	Hollingwood	Shaft Cap Vent	Mine gas	01-Apr-95	441374-044	441506	374648	60
111	Hollingwood	Under Cap Vent	Mine gas	01-Apr-95	441374-044	441505	374648	60
119	Highmoor	Clowne Borehole	Mine gas	01-Nov-95		447206	379846	
162	Silverhill	No.1 Shaft	Mine gas	01-Oct-96	447361-015	447172	361664	
162	Silverhill	No.2 Shaft	Mine gas	01-Oct-96	447361-016	447133	361620	
162	Silverhill	Coopers Shaft	Mine gas	01-Oct-96	447361-014	447290	361744	
192	Clay Cross No.9	No.1 Shaft	Water Level	01-Apr-97	439367-001	439240	367943	94.6
192	Clay Cross No.9	No.2 Shaft	Water Level	01-Apr-97	439367-002	439264	367950	93.6
193	Old Avenue No.11	No.3 Shaft	Water Level	01-Apr-97	439367-003	439540	367745	91.6
193	Old Avenue No.11	No.4 Shaft	Water Level	01-Apr-97	439367-004	439565	367752	87.6
193	Old Avenue No.11	No.4 Shaft Drain	Water quality		439367-004 from	439585	367940	85
213	Duckmanton	Shaft	Water Level	01-May-97	442371-016	442960	371429	82.6
214	Oxcroft No.2	No.1 Shaft	Water Level	01-May-97	447373-010	447348	373319	104
214	Oxcroft No.2	No.2 Shaft	Water Level	01-May-97	447373-007	447327	373285	103.79
246	Blacks	Pumping Shaft	Water Level	01-Nov-97	444378-001	444517	378099	59.5
301	Moor Top	Tupton Borehole	Mine gas	01-Oct-98		441832	370805	133
336	Calow Drifts	No.2 North Drift B/H	Mine gas	10-Jan-94		441879	369902	135
336	Calow Drifts	No.1 South Drift B/H	Mine gas	10-Jan-94		441879	369902	135
337	Sutton Springwood	Deep Soft Borehole	Mine gas	01-Oct-94		442826	369306	121
351	North Junction No.2	1st Waterloo Borehole	Mine gas	01-Oct-94		442443	371548	96
352	Embankment	Top Hard Borehole	Mine gas	01-Oct-94		442437	371488	97
353	Rock Lane	2Nd Water Loo Borehole	Mine gas	01-Oct-94		443610	368842	123
354	Hall Farm	Top Hard Borehole	Mine gas	01-Oct-94		443900	368955	138
424	Hartington	Pumping Shaft	Water level	16-Feb-00	443375-002	443399	375377	57.5
428	Whitwell	No.1 Shaft (North)	Mine gas	21-Jan-00	453375-001	453439	375788	
428	Whitwell	No.2 Shaft (South)	Mine gas	21-Jan-00	453375-002	453411	375765	
484	Williamthorpe	No. 1 Shaft (West)	Water level	06-Feb-01	442366-006	442738	366611	125
484	Williamthorpe	No. 2 Shaft (East)	Water level	06-Feb-01	442366-007	442771	366635	136.55
663	Clarke's	Blackshale B/H	Mine gas	10-May-04		441385	371314	120
664	Arkwright Top Hard	No.1 B/H	Mine gas	10-May-04		442733	370662	104
664	Arkwright Top Hard	No.2 B/H	Mine gas	10-May-04		442733	370662	104
664	Arkwright Top Hard	No.3 B/H	Mine gas	10-May-04		442733	370662	104
664	Arkwright Top Hard	No.4 B/H	Mine gas	10-May-04		442733	370662	104
755	Creswell	No1 Pumping Shaft	Mine gas	04-Jan-10	452373-001	452312	373626	90.71
761	Langwith	No1 Pumping Shaft	Mine gas	04-Jan-10	452370-001	452915	370692	68.18