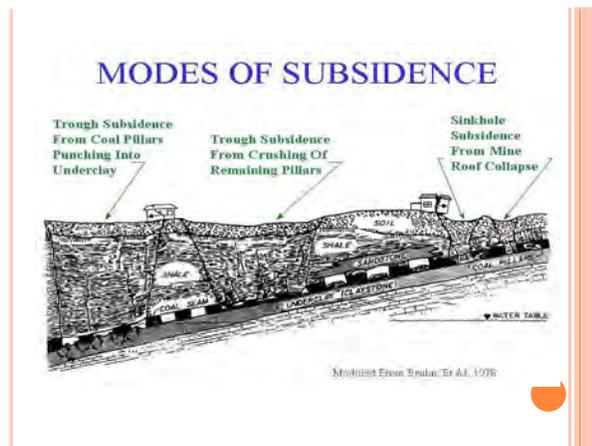
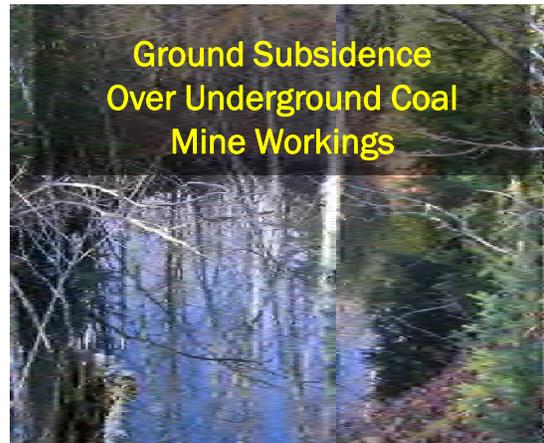
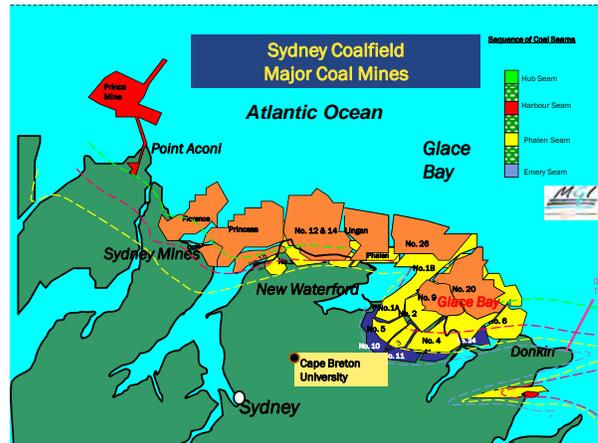


PROTOCOLS TO ASSIST IN THE REMEDIATION OF CBDC PROPERTIES IMPACTED BY MINE WORKINGS

Prepared for Public Works and Government Services Canada (PWGSC) & Cape Breton Development Corporation (CBDC)

By Conestoga-Rovers & Associates Ltd



LARGE HOLE opens near family lumberyard

Old mine workings blamed for 20-foot opening; Devo maintains it is not responsible

BY CHRIS MCNEIL

Residents of Sydney Mines fear this hole was caused by subsidence. When first noticed Wednesday night it was only about eight feet, it eventually grew to 22 feet after heavy rain.

The hole opens near the family lumberyard. Devo maintains it is not responsible.



Terrible Lesson To All

People of this area have long had reason to be aware of the deadly menace of methane gas in coal mines. The deaths of many miners have been avoided by taking precautions against it.

The calamity which brought sudden death to two little New Victoria boys 25 feet down the slope of the long abandoned No. 17 Colliery has starkly notified us of an instance in which proper precautions were not taken.

The news report of the tragedy said that although an "effort" apparently had been made to seal the entrance to No. 17 with a wall of earth, erosion and sinking over a period had created an entrance.

The "effort" was worthless. We have learned that it was possible for years to go down the slope as far as 100 feet. Several miners who have gone down the slope at times without difficulty have surmised that the sealing of No. 18 Colliery last winter resulted in gas accumulations being driven into old No. 17 and up its slope.

All this became dreadfully apparent when it was too late to avoid the calamity that overcame the small pair, cousins aged six and eight.

One sure thing is that no amount of calamity will halt succeeding generations of children from being adventurous and daring to play. It is instinctive of small boys, symptomatic of their admirable qualities, indicative that they will grow to be energetic and enterprising men if they survive the hazards of childhood.

This puts a stern obligation on adults to do everything possible to seal off effectively all pitfalls such as old wells and abandoned collieries, and to keep discarded refrigerators out of the reach of children, indeed to remove the doors of refrigerators no longer used.

Despite repeated news of youngsters in play crawling into refrigerators and shutting themselves in, smothering to death in such instances has occurred repeatedly.

If a magisterial inquiry is held into the new Victoria tragedy, it will point to the obvious, but will the terrible lesson actually be learned.

Deep concern

Paul Humphries

The Guardian, Wednesday 31 January 2001

The mass closure of Britain's pits left many bad legacies, but none worse than the gases seeping up from disused mines.

Christopher Noonan would still be alive if a local authority had done just that and put in place safety measures. Noonan, 22, suffocated as he went to the aid of his father, Stephen, who had collapsed in a trench filled with blackdamp while they were laying sewer pipes near Barnsley in 1998. Blackdamp is a heavy, suffocating mixture of nitrogen and carbon dioxide which may accumulate in abandoned mine workings. **Experts found it had seeped into the trench from a disused colliery nearby.** Workmates managed to haul Stephen out of the trench, but by that time Christopher had also collapsed and they were too late to save his life.

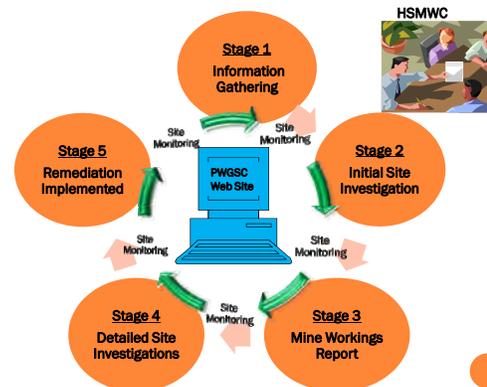


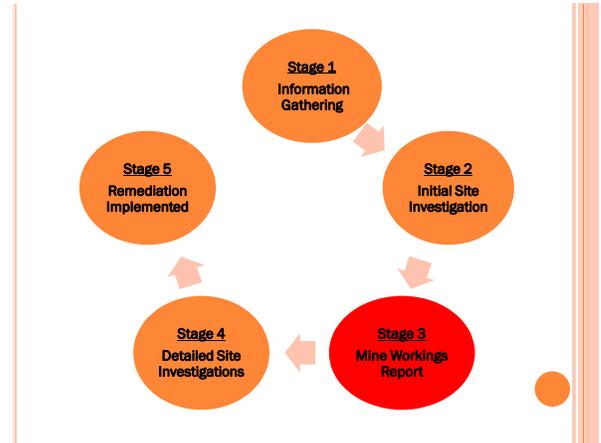
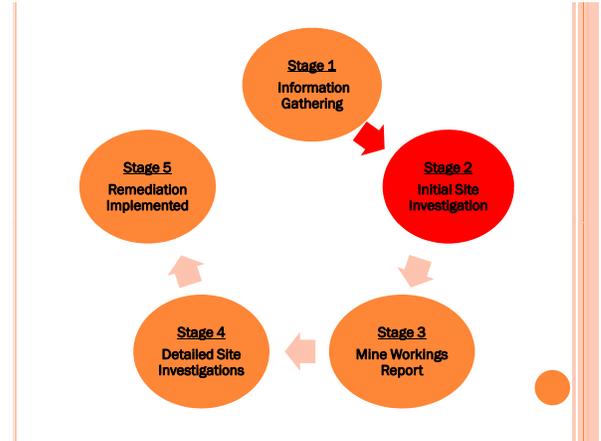
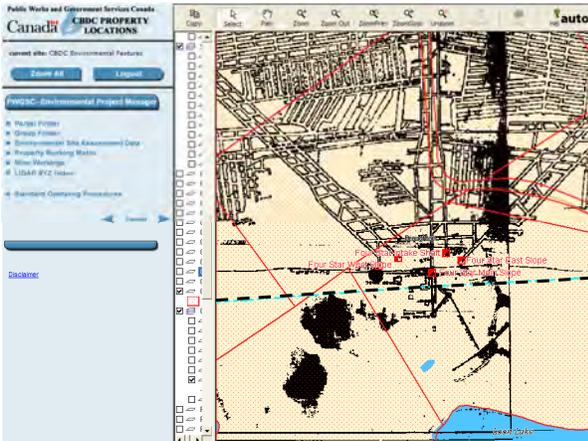
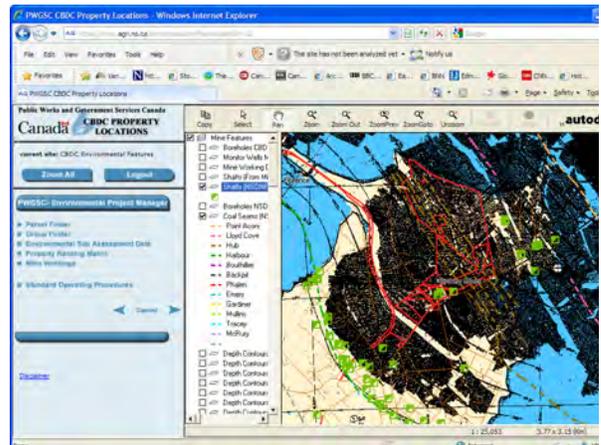
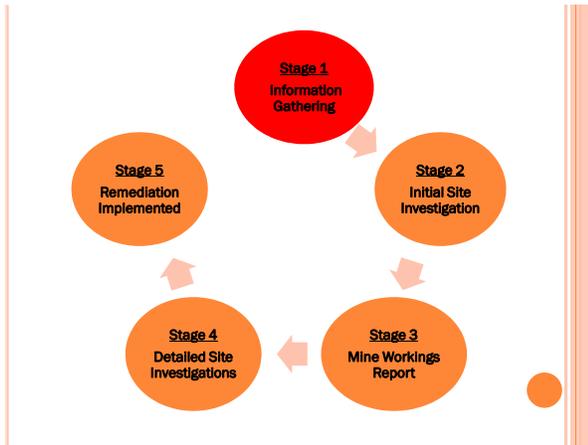
PURPOSE OF PROTOCOLS

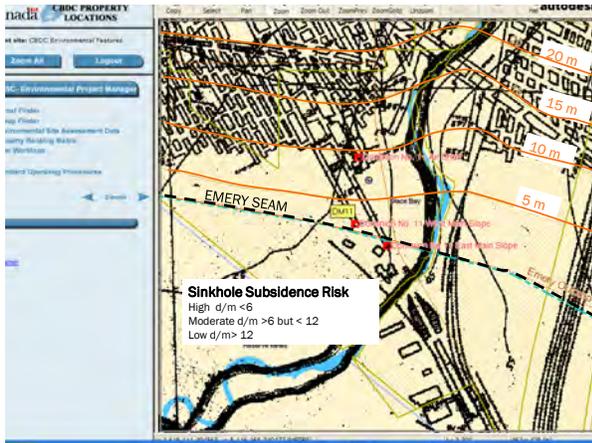
Foster *awareness* of the mining-related hazards associated with abandoned coal mine workings

GOAL OF PROTOCOLS

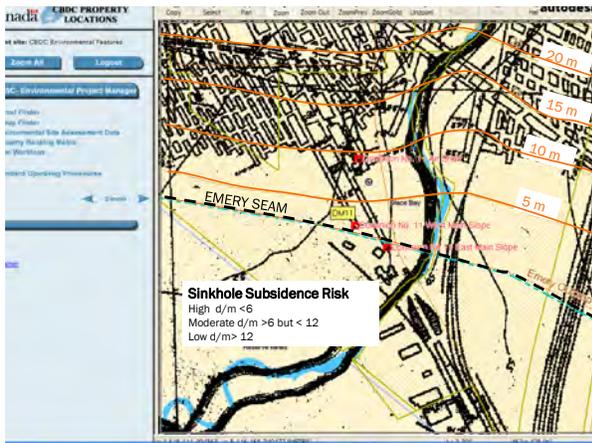
To help insure that site investigations and remediation are carried out effectively, efficiently, with due regard for worker and public safety and in an environmentally considerate manner







NSORR Shaft Details		
Shaft or Tunnel Name: Dominion No. 11 Air Shaft	Service Dates: 1899-1949	Depth or Length (metres): 7.8
Potential Overflow Elevation (metres): 17.8	Dimensions (metres): 3.3m Diameter	Mode of Construction: Castiron
Easting (metres): 0818143	Northing (metres): 0116333	Estimated Quality of Location Coordinates: ±1.5m
PID: 1543000	Located on CRBC Property: Yes	Is CRBC Responsible for Mine-Related Impacts at this Site: Yes
Most Recently Examined in Field (Examined by): S. Layzell April 17 2008	Site Photograph: Photographs 3 & 4	Field Trip Comments:
Observations: Water can be seen seeping from the area of the Airshaft and flowing into the surface.	CRBC Ranking: 157/200	Action Taken by CRBC: None
Current Subsidence Status: Subsidence not noted.	Potential Future Subsidence: Possible due to water issuing at surface.	Subsidence Issues:
Current Mine Water Discharge Site (T): 17	Potential Future Mine Water Discharge Site (Overflow elevation metres): 168 + 17.3m	Mine Gas Issues:
Current Mine Gas Discharge Site (T): 17	Potential Future Mine Gas Discharge Site (T):	Recommendations as of June 28, 2007: The air shaft needs to be assessed to evaluate the potential for subsidence caused by water seeping through fill material.
Sealing Documentation: None	Reference Drawings: None	



Mine Workings Discharge Details		
Mine Water Discharge Name: 11 Mine Water Discharge	Mine Name: Dominion No. 11 Colliery	Coal Seam: Emery
Community: Glass Bay	Site ID: DM13	PID: 15430002
Estimated Outfall Overflow Elevation (m): 17	Outfall Examined in Field: Yes	Located on CRBC Land: Yes
Field Trip Date/By: June 17, 2008 CDB	Field Trip Comments: Probably from former air shaft	Should Outfall be Sealed: No: possible subsidence and ground water impacts
Water Flow Rate (L/minute): 1512	Receiving Water Body: Rensick Brook	Water Currently Being Treated: No
Outfall Currently Being Sampled: Yes, on an irregular basis	Water Sampling Reports: Analyses currently available on CRBC web site CRBC SURFACE WATER, SEDIMENT AND GROUNDWATER SAMPLING PROGRAM VARIOUS CRBC PROPERTIES: March 31, 2008.pdf	
Comments:		

