

# Coal and Petrochemical Soundscapes in North Bohemia: Some Personal Thoughts

Peter Cusack

For the last 100 years the part of Bohemia around Most in the Czech Republic has been one of the country's main energy hubs. Beginning with brown coal mining early in the 20<sup>th</sup> century, the petrochemical industry was introduced during the second World War. Oil, brought thousands of kilometers by pipeline, is refined here, too. The effect on the landscape has been dramatic. It is a beautiful area of wooded hills and much remains so today. But around the industries huge changes have taken place. Vast open cast pits are excavated to expose and extract the coal, valleys are filled with the soil removed to create hills that did not exist before, many villages and whole towns are demolished or buried to make way for the expanding mines, churches have been picked up and placed elsewhere, brand new lakes are created in the chasms after the coal has been used up. The whole area is being sculpted around the needs of the energy industry – a process that continues unabated today. However much of the rich history also remains, stunning ancient monasteries and castles stand on the edge of the brown coal pits, and paths of pilgrimage are re-routed to avoid the encroaching mines. Old villages and the people who live there have no choice but to adapt to the 24/7 drone of machinery. Children grow up with these sights and sounds as their personal legacy. For an outside visitor like myself, it can be fascinating, horrific, beautiful and depressing in quick succession.

As a sound artist and sound recordist with a long interest in environmental issues, I have travelled to this area twice to record, explore and to experience, as far as is possible in a few days, the sounds of the landscape, which is undergoing a slow, but relentless, transformation to satisfy the energy and petrochemical demands of economic policies made in distant capitals and populations far from the region itself. It is possible to think of our sound environment as a connected series of 'sonic places'. A sonic place is characterized by everything we can hear within range of our ears at any moment, the details of which are constantly changing. It is a relationship between sounds, ourselves, the physical and ecological landscape, and events, big and small, that occur in the place. One of the fascinations of North Bohemia is the amazing variety of its sonic places. They range from those in towns and villages through those of the countryside to those dominated by the region's industries. Here are a few of the sonic places discovered and recorded during my short visits. They, and more, can be heard at <http://favouritesounds.org/?projectId=48>.

## **The demolished village of Libkovice (Sept. 12, 2015)**

*a) Underwater sounds in the derelict fountain of Libkovice*

The village of Libkovice was cleared and demolished in the 1990s to make way for the

expanding Bílina mine. Only traces remain, like earthworks, outlines of houses and an orchard still bearing fruit. The village fountain still exists but is now smothered in trees and water plants. Dragonflies patrol up and down a shady patch of water. I use a hydrophone (underwater microphone) to listen below the surface. There are tiny bubbly and scraping sounds. I have no idea what makes them.



Libkovice, photo: Peter Cusack

*b) Sounds of opencast mining, Libkovice*

I sit recording amongst the rubble of one village building. Except for the machines in the mine near by and a small red plane that drones overhead, it is very quiet. Small birds and insects are occasionally audible. Every now and again the atmosphere is interrupted by empty trucks passing by, bumping and shuddering on the uneven dirt road, their engines grinding up a small hill en route to the mine. It is not really threatening, but I find this sound disturbing and can only relax again after it disappears into the distance. I wonder if the people living here, who must hear this everyday, are able to ignore the sound.



Bílina mine, photo: Peter Cusack

**On the edge of Bílina mine  
(Sept. 12, 2015)**

The Bílina open cast mine is huge. Standing on the edge one can only be impressed by the size of the area carved from the ground. Yellow earth is exposed into the distance and at its deepest, the dark brown coal seams are visible. There is always low-key activity. It is a 24/7 operation. The perpetual drone of conveyor belts carrying earth and rock from the digging machines for kilometers across the mine is a constant presence not only at the mine edge, but in the surrounding villages, too. A siren regularly sounds as machines stop and start. Distant trucks rumble. But there is wildlife, too. A kestrel hovers and small birds call. Two deer leap through crackly bushes. Whilst recording at dusk a magnificent wild boar makes its way from down below, up the cliff and away across the dry landscape. As night falls, twinkling white lights outline some of the machinery.



Záluží industrial park, foto Peter Cusack

### Beside Unipetrol Záluží u Litvínova (Sept. 13, 2015)

This place is just outside the Unipetrol petrochemical factory at Litvínov-Záluží. The landscape is crossed by lines of metal pipes, some rusty and broken, others still in use. At one point near the village of Kopisty a whole series of pipes end abruptly and gobs of hot (50°C), evil smelling, black water blast from them into an open concrete channel that runs down the hill for 100 meters before disappearing into another building of unknown purpose. This building creates deep drones and slight ripples. The polluted water is under pressure and the sound is powerful enough to make normal conversation difficult. Steam rises from the hot pipe and the smell is choking and sulphurous. This must be illegal.

We listened to the flow of the liquid inside the pipes using contact microphones. You hear the water jetting along, the sound resonant to the dimensions of the interior. It is scarily musical and I entitled the recording “Evil Liquid, Evil Sound”.

### The Sound Barrier outside the village of Mariánské Radčice (Sept. 12, 2015)

The historic village of Mariánské Radčice lies approximately a kilometer and a half from the current edge of the Bílina mine. Normal life continues even though it is potentially under threat if the mine boundaries are expanded. The beautiful baroque Cistercian monastery there has been renovated in recent years and we were very hospitably allowed to stay in its rooms for the days of our visit. The monastery is guarded by a number of dogs; one in particular took his job very seriously and barked loudly and often. He was pretty intimidating and his deep sound reverberated around the monastery corridors on every occasion.

Even though it is some distance, the constant drone of machinery from the mine is ever present in the village. With particular wind directions it can be quite loud. The mining company has attempted to protect the town from the noise by building a sound barrier just outside the village boundary. It is a bizarre construction; a giant piece of green painted scaffolding about 100 meters long and 20 meters high. The idea was that plants would grow thickly all over this frame and that the



Mariánské Radčice, Sound Barrier, photo: Peter Cusack



Radovesické údolí s elektrárnou Ledvice, foto Peter Cusack  
Radovesice valley with Ledvice power station,  
photo: Peter Cusack

vegetation would reduce the sound from the mine. In any event, the unusually hot summer meant that nothing grew and no sound was blocked. As a sound shield it is a spectacular failure but it takes its place as a curious addition to the already surreal landscape of the region.

### **Radovesické údolí (Sept. 11, 2015)**

In a photograph this place looks like a normal, natural grassy hillside overlooking the town of Bílina. But it is not. The whole area has been completely reconstructed and landscaped anew. Once it was a steep valley, now it is the opposite, a hill created from 40 years of soil and earth dug from the Bílina mine. Somewhere underneath is a buried village Radovesice with houses, a church, streets and a square. No visible trace remains. One now sees fields, a stony track lined by poplar trees, conifer plantations and a small fishing lake with reeds around the edge. From the top, the different coloured apartment blocks of Bílina appear and further in the distance, columns

of steam merge with clouds above the huge cooling towers of the power station Ledvice associated with Bílina mine.

The soundscape is quiet. Leaves flutter in the light wind and small birds call occasionally. Distant machines still creating this landscape can be heard, as can the voices of my friends as they climb the hill. My breathing and pounding heart become audible when I do the same. The atmosphere is strange and somewhat melancholic. I think about the buried village and its people forced to make lives elsewhere. Perhaps I am standing directly above it. One of my favourite pieces of music is *La Cathédral Engloutie* ('The Submerged Cathedral') by Claude Debussy. It depicts the mysterious underwater life of the sunken cathedral with its great bell that still tolls in stormy weather. It is impossible to imagine such ghostly events ever happening here with the church crushed under tons of soggy dirt and rubble.

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# Authors

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