Hunter Lakes Corporation

THE HUNTER WATER BANK

Photo: Lusatia, Germany – Completed coal mine rehabilitation

Lakes of possibility: From scarred landscape to water security, environmental renewal and economic prosperity

Mining has long offered an economic lifeblood for many regions in Australia. Entire communities owe their prosperity to local mines, where generations of families have toiled at the coalface. But once the machines grow quiet and the miners move on, the indelible marks on the landscape remain and enormous voids are left where the miners once worked.

Lusatia and The Ruhr lakes districts in Germany offer inspiration for an exciting **new future for the Hunter Region of New South Wales**: the creation of artificial lakes to dramatically transform the physical landscape and secure the water supply through the localised storage of enormous amounts of water to sustain existing agriculture and urban water supplies.

The new industries of renewable energy, forestry, aquaculture and tourism will be created boosting the local and wider economies.

The issue

The Hunter region is proud of its mining history – and rightly so. The resources extracted at these sites have made an important contribution to the local and national economy, and helped to power our nation. But after years of this mining activity, the region's landscape bears the inevitable impacts of a generation of mining activity.

The remaining empty mine voids can be repurposed to provide a dramatically improved environment for the benefit of future generations. In particular, these voids can be utilised for water storage on a significant scale, providing water security for the Hunter Region as well as the Central Coast, Northern and Inner West Regions. The Hunter region's water storage levels at the start of 2020 were the lowest they had been since 1981. (Hunter Water)

South-eastern Australia has endured eight severe droughts since 1860

(Australian Bureau of Statistics)

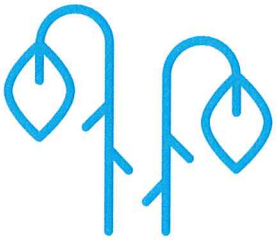
The solution

The Hunter Lakes Corporation has a bold vision for the Hunter region of NSW. Inspired by the incredible success of Lusatia and The Ruhr lakes districts in Germany, the Hunter Lakes Corporation seeks to develop a similar network of artificial lakes stretching from Muswellbrook to Broke (south west of Singleton). This network will address the unfinished industrial legacy of mining, by restoring and improving the local environment, generating local jobs and boosting the local economy.

Benefits

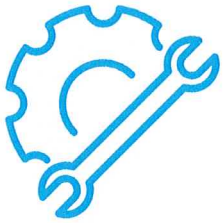
Beyond the vastly improved environmental outcomes, The Hunter Lakes Scheme offers additional benefits for the local community and beyond:

Water security



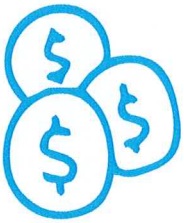
Drought proofing

Irrigation

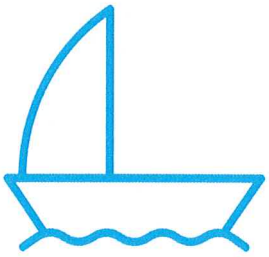


Construction jobs

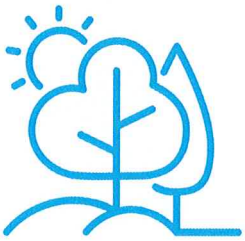
Local jobs



Economics



Tourism



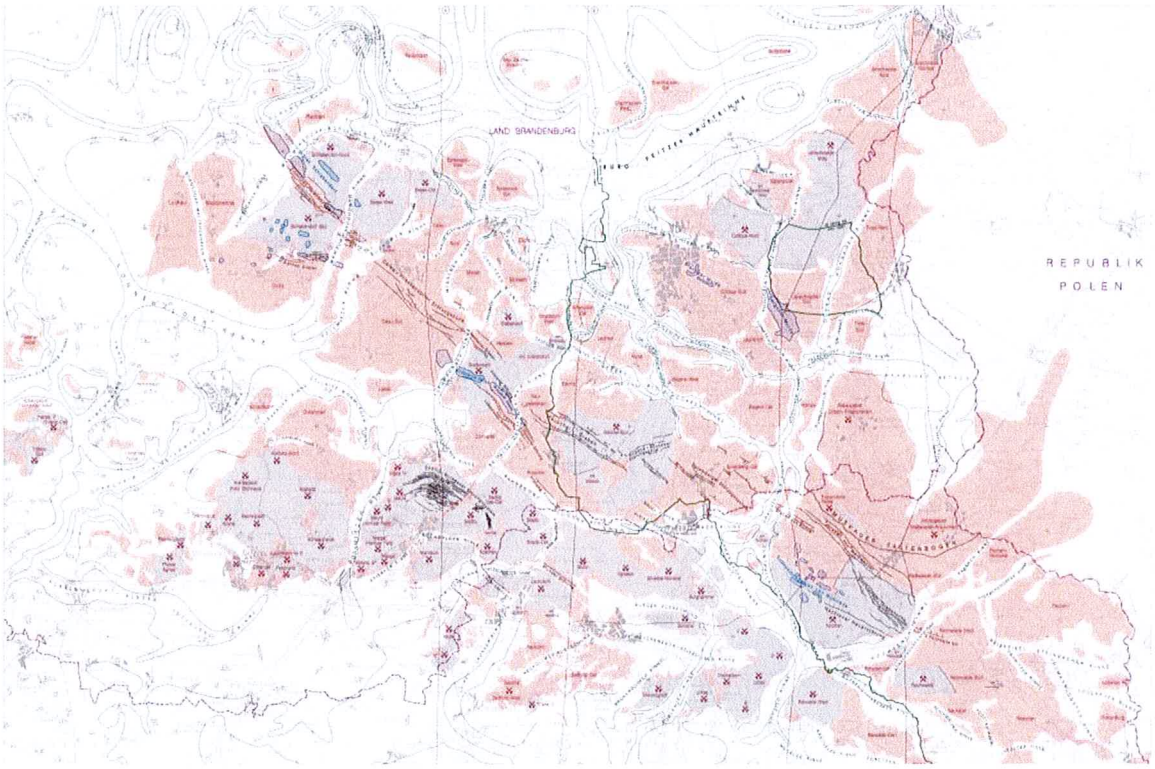
Renewable energy and environmental transformation

Beyond its obvious environmental and aesthetic benefits, The Hunter Lakes Scheme offers tangible economic rewards for the people of the Hunter region. In particular, it will generate significant numbers of construction jobs, as well as ongoing positions in management and small business opportunities in the tourism sector.

Lessons learnt in 35 years on the way from Europe's largest opencast coal region to the Lusatia lakes land

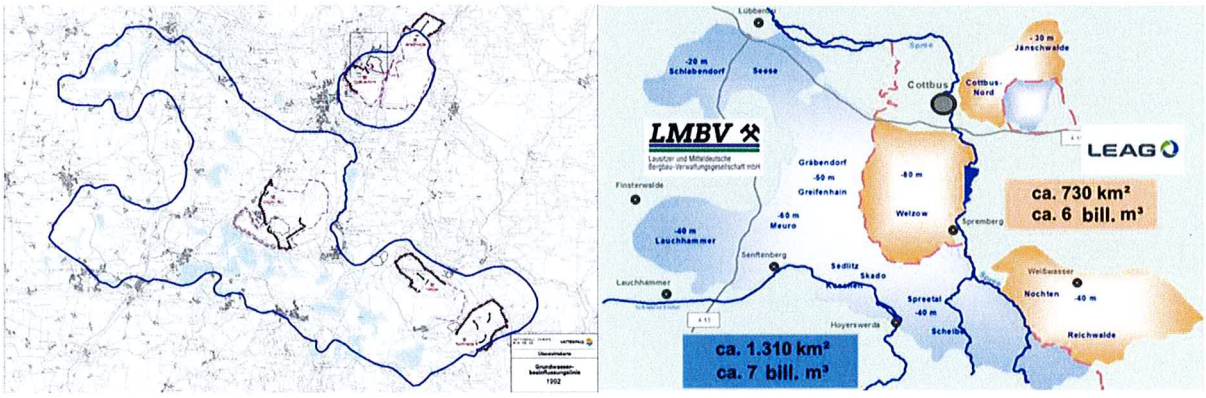
Where we came from (1989)

- 195 million tons of raw lignite in 17 mines
- 900 million m³ of overburden removal



Map of coal resources and mines in 1994

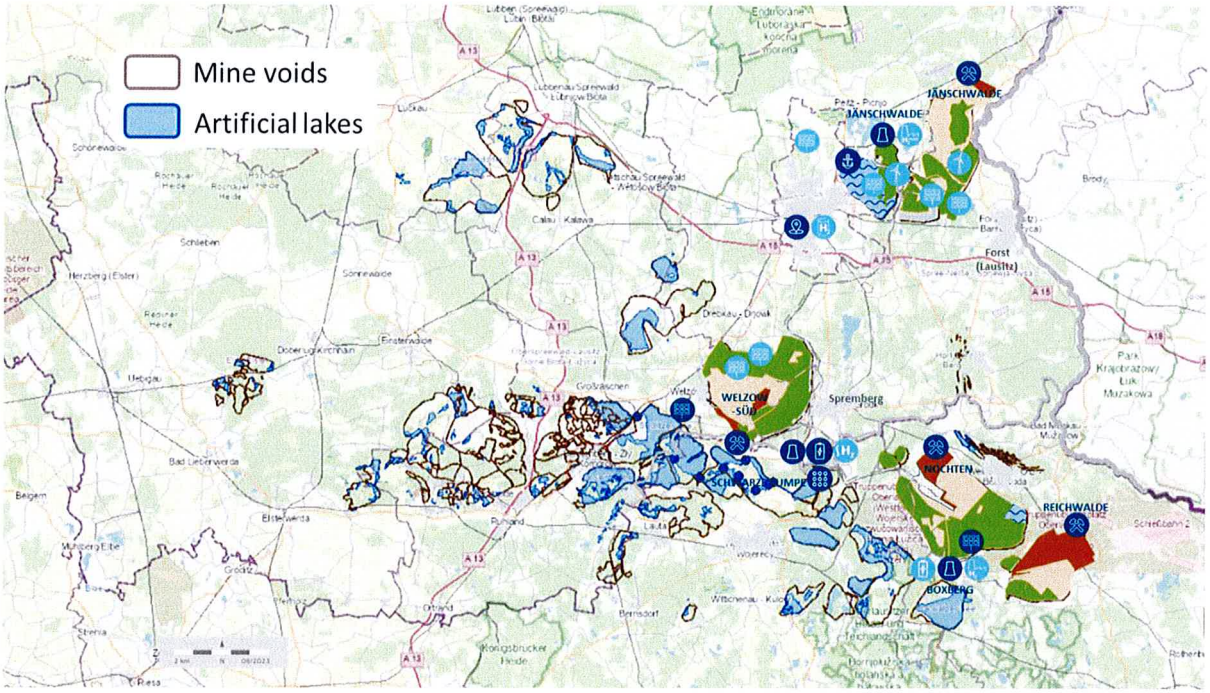
- 630 million m³ groundwater pumped
- water deficit approx. 13 billion m³, thereof 9 billion m³ groundwater deficit



map of groundwater impact in 1992

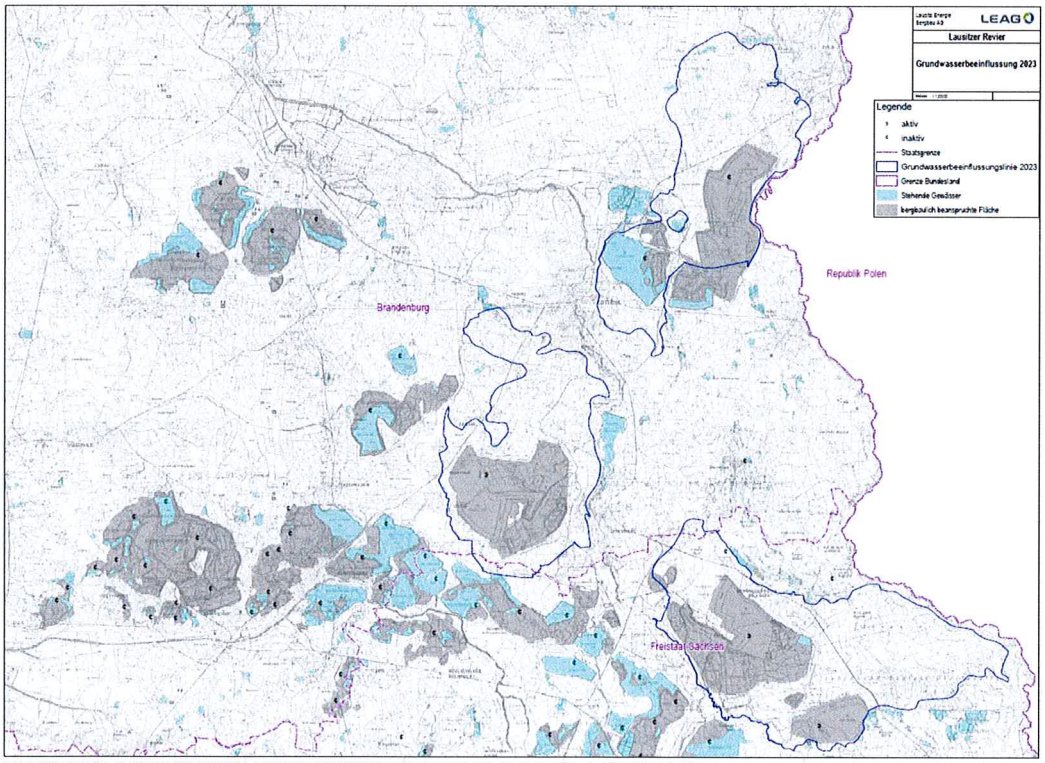
Where we are (2024)

- current production level 40 million tons of raw lignite in 4 active LEAG mines
- 21 artificial lakes in mine voids.



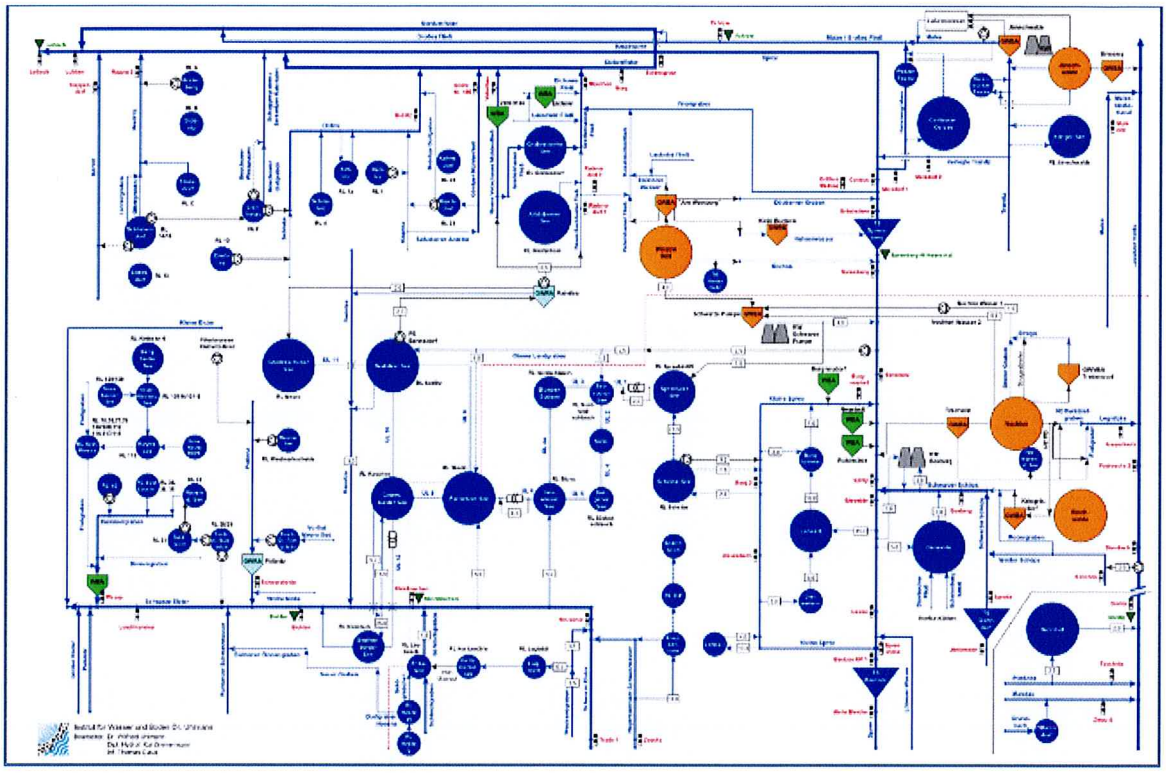
Lusatia mining area 2024

- groundwater deficit reduced to 7 billion m³ mostly around the active LEAG mines



Map of groundwater impact 2023

- active water management in place managing the rivers Spree, Neisse and Schwarze Elster based on water demand of priority users
  1. Ensuring water supply requirements (except for shipping and flooding/aftercare) and the required minimum discharges, taking water quality into account
  2. Refilling the dams and storages to ensure their operational readiness
  3. Feeding the apex of the Oder-Spree Canal from the Spree area
  4. Flooding and aftercare of post-mining lakes



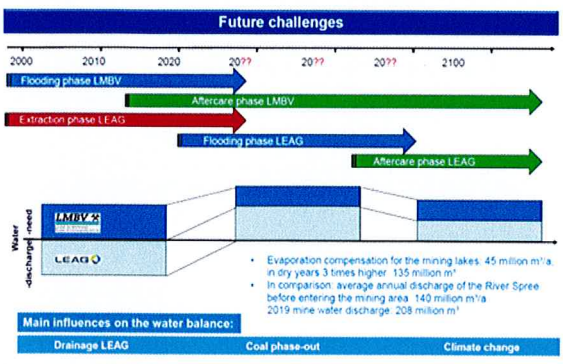
Network of surface water bodies in the Lusatia lignite region

Lessons learned

1. rehabilitation of mine voids is a very longtime process (50+ years) and needs strategic planning and management
2. It is important to know the available and expected water balance (surface and groundwater) before developing a water management plan
3. Effective water management needs coordinated engagement of governmental and commercial stakeholders
4. groundwater table will restore nearly to pre-mining levels
   - this process shall be managed
   - active management of the water quality is required and possible
5. the mine voids will be filled up to long-term post-mining groundwater level
   - this process needs active management and control to avoid soil stability problems and to actively control water quality in the new lakes
6. restoration of the groundwater table can have unexpected effects even in areas not affected by mining due to change from long-lasting dry conditions to natural wet situation.
   - safety of all postmining landscape must be calculated based on final groundwater table

land subsidence in the former Seese-West mine area (left 2010, right 2011 after subsidence)
Source: LMBV

7. water is a limited resource
   - active water management is required based on priority list
   - active water management will create conditions for use of river water for flooding in periods of excess water (spring, autumn, heavy rainfall periods)
8. former mine voids can play an active role in river management
   - dampen flood waves
   - stabilizing the river in low water periods
   - active mines are supplying groundwater to the river, this volume will not be available in future

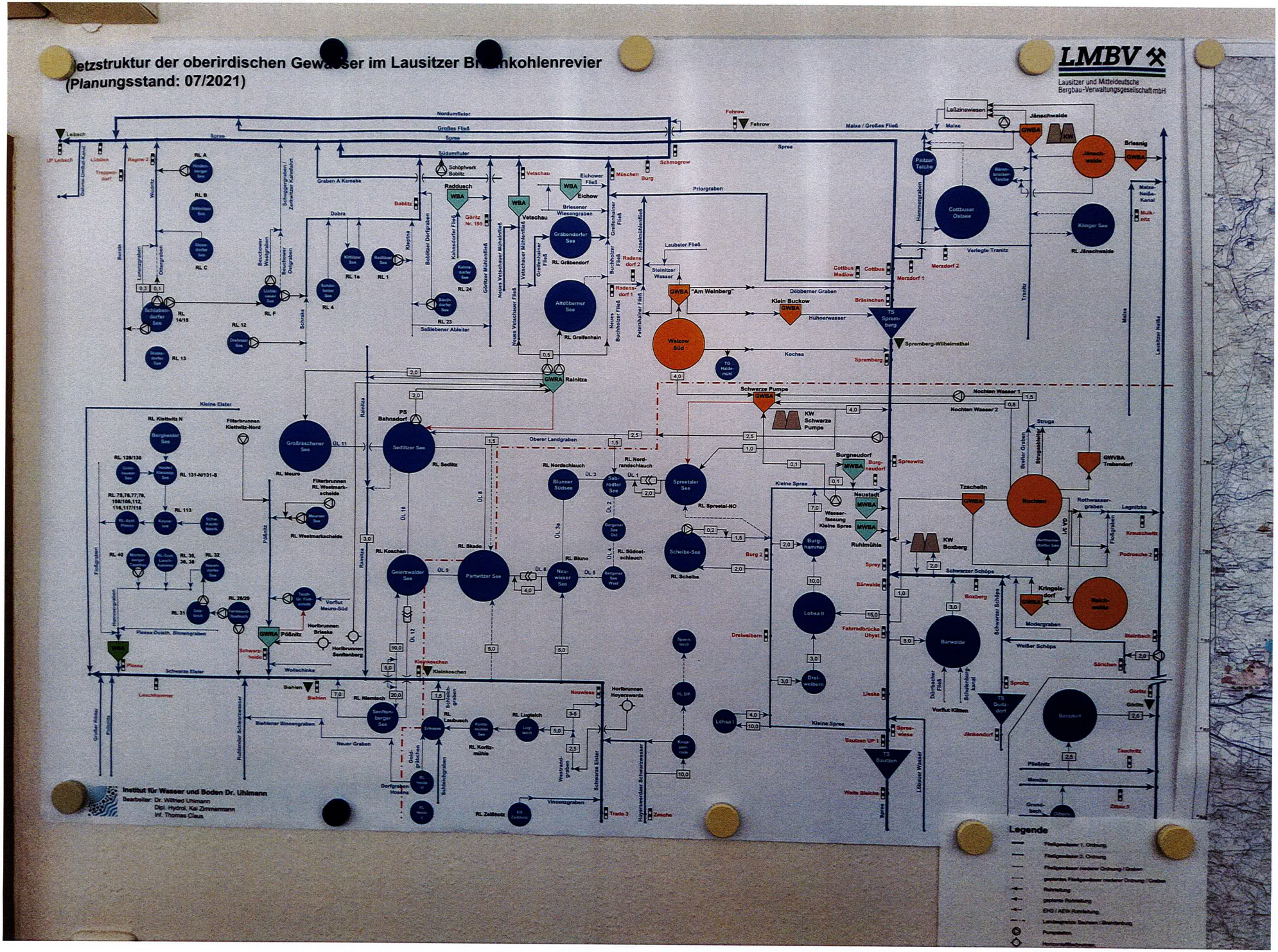


(source LMBV)


LEAG
Auf Ostsee-Tour
Die Cottbuser Seerunde
Liebe Besucher, Radler und Wanderfreunde,
die „Cottbuser Seerunde" führt Sie zu markanten Aussichtspunkten entlang der Uferlinie des künftigen Cottbuser Ostsees.
Wie das Gewässer ist auch der Rundweg um den Cottbuser Ostsee noch im Entstehen.
Bitte stellen Sie sich darauf ein, dass die Cottbuser Seerunde teilweise unbefestigtes Gelände quert und zum gegenwärtigen Zeitpunkt noch nicht als Rundtour befahrbar ist. Abschnittsweise finden je nach Bauplanung in unmittelbarer Nähe des Radweges Erdbauarbeiten statt. Bitte achten Sie zu Ihrer eigenen Sicherheit auf die Hinweisschilder entlang der Strecke – damit aus Ihrer Entdeckertour am Cottbuser Ostsee auch ein unfallfreies Erlebnis wird.
Ein Tipp: Die Cottbuser Seerunde ist mit den gut ausgebauten Radwegen der Region verknüpft, auf denen Sie weitere attraktive Ziele des Lausitzer Reviers entdecken können.
Peitz
Peitzer Teichgebiet
Maust
Spreeaue
Kiessee Maust
Auslaufbauwerk
Nordblick
Alte Poststraße
Bärenbrücker Bucht
Lakoma
Zuleiter/Einlaufbauwerk
Willmersdorfer Seegraben
Boot Mia
Turm Merzdorf
Schutzdamm Schlichow
Schlichow
Anbindung Landgraben
Südkap
Klinger See
Cottbus
Branitzer Park
Stand 01/2015
Ihr Standort
Bestehendes Radwegenetz
Entstehender Rundweg Cottbuser Ostsee
Fürst-Pückler-Kutschweg
Aussichtspunkt
Gasthaus
Hafen (geplant)
Aussichtsturm

Netzstruktur der oberirdischen Gewässer im Lausitzer Braunkohlenrevier
(Planungsstand: 07/2021)

LMBV
Lausitzer und Mitteldeutsche Bergbau-Verwaltungsgesellschaft mbH



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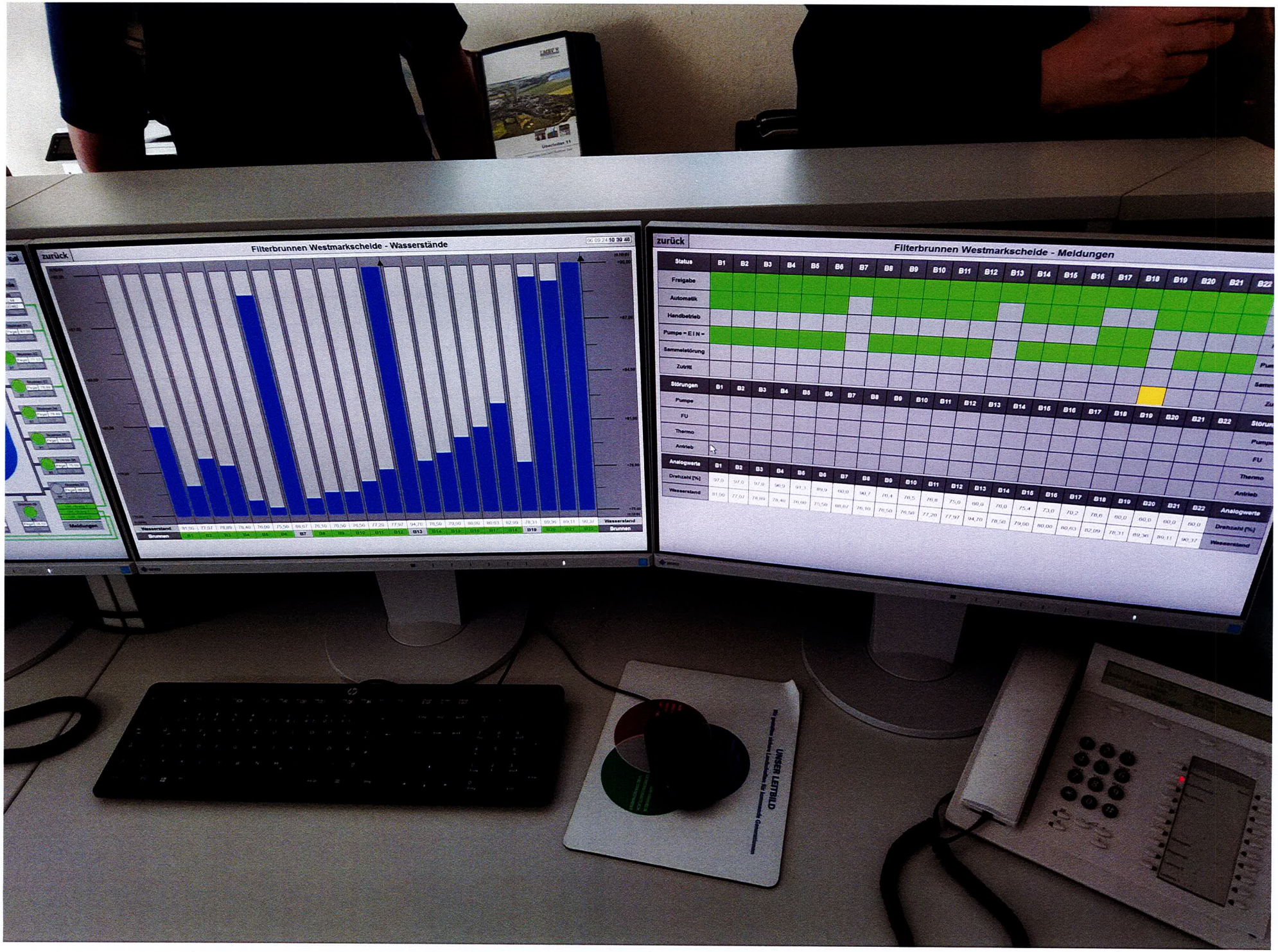
zurück
Filterbrunnen Westmarkscheide - Wasserstände
zurück
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Status
Freigabe
Automatik
Handbetrieb
Pumpe = E I N =
Sammelstörung
Zutritt
Störungen
Pumpe
FU
Thermo
Antrieb
Analogwerte
Drehzahl [%]
Wasserstand
Brunnen
UNSER LEITBILD


INFO


HAFEN