#### A warm Welcome to IBL

Ingenieurbüro Lang has been actively supporting private and municipal clients since March 2015.

What began as a part-time job developed into full-time employment one year later.

Based in contemplative Potsdam in the southwest of Berlin, IBL is working on highly ambitious projects in a wide range of speciality. Even when sometimes we encounter obstacles there are quickly overcome but so far we have been successful in leading all project participants to a successful project - regardless of whether municipal or private. It is our priority that this should not change in the future.

Another major concern of IBL is a sustainable, resource-efficient way of working - starting with the use of paper, which is sometimes required in huge quantities, and ending with the optimization of working time assignments. Ultimately, this not only benefits our valued customers, but also our environment. That is not to say details are disregarded.





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The conversion of resources, especially in engineering activities, is an important factor in the effective way of working. It is not enough to tackle extensive areas of responsibility alone - that's why IBL engineering office also works with a pool of engineers and architects, planners and suppliers of diverse specialist areas. It is impossible for a single person to be a specialist in all of the fields of the construction sector or building pollutants / contaminated waste.

In addition, varied and modern equipment consisting of well-maintained tools, measuring instruments and generators are available for activities in various fields. And we are not afraid to get our fingers dirty:)

IBL works transparently! This does not mean that sensitive information or data is made available to the public. Much more, all expenses that might occur along the way can be disclosed at any time.

Scope of Services / Specialist Fields IBL:

- Object supervision / object support (phases 8 and 9 according to HOAI)
  for primarily construction projects in civil engineering including personnel planning, cost control, forecasting of cost developments, adjusted
  cost calculation
- Creating building pollutant reports on the following parameters:
  - o div. subspecies of asbestos
  - synthetic vitreous fiber (SVS)
  - o polycyclic aromatic hydrocarbons (PAH's)
  - polychlorinated biphenyl (PCB)
  - Wood preservatives (lindane, pentachlorophenol PCP, dichlorodiphenyltrichloroethane DDT, PCB und PAH's)
  - o heavy metals
  - wood decay
  - adsorbable organic halides (AOX)
  - o petroleum hydrocarbons
- Development of soil and groundwater surveys, taking into account the effects of the Federal Soil Protection and Contamination Ordinance – the 'Bundes- Bodenschutz- und Altlastenverordnung', or BBodSchV
  - Soil → Groundwater
  - o Soil → Crop
  - Soil → Human
- Development of concepts for (militarily used) old properties
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- Draft planning (basic research / preliminary planning work phases 1 and 2 according to the fee structure for architects and engineers – the 'Honorarordnung für Architekten und Ingenieure', or HOAI) for primarily construction projects in civil engineering
- Developing invitations to tender (phases 6 and 7 according to HOAI) for primarily construction projects in civil engineering
- Development of (new) license applications for installations that are to be approved or modified in accordance with the Federal Control of Pollution Act – the Bundesimmissionsschutzgesetz ', or BImSchG
- DEKRA- Expert for trade-specific building damage assessment in civil engineering

#### References:

- Intecus Potsdam GmbH (various pollutant, soil and groundwater assessments, approval of plants according to the Federal Control of Pollution Act the Bundesimmissionsschutzgesetz', or BImSchG)
- Intecus Dresden GmbH (pollutant investigation of 507 residential buildings, 307 special buildings as well as 38.3 km of asphalt driving surfaces and 64.5 km of concrete driving surfaces of the JHQ Rheindahlen, conceptional support)
- Winzler GmbH (approval of immission control systems according to the Federal Control of Pollution Act – the Bundesimmissionsschutzgesetz ', or BlmSchG)
- State agency for the Environment Brandenburg (approval of immission control installations according to the Federal Control of Pollution Act the Bundesimmissionsschutzgesetz', or BImSchG)
- Brochier Rohrleitungsbau Nürnberg GmbH (support of construction projects according to service phases 6 to 9 of the fee structure for architects and engineers the 'Honorarordnung für Architekten und Ingenieure', or HOAI in piping and plant manufacturing)
- Lindner Isoliertechnik & Industrieservice GmbH Saabrücken (phases 8 and 9 according to HOAI for Armaflex insulation work, new construction of infrastructure for the central refrigeration device of Daimler plant 54 Rastatt)
- Fact GmbH Böblingen (client representative for new infrastructure of a central refrigeration device in combined piping and plant manufacturing Daimler plant 54 Rastatt)
- Daimler AG Plant 54 Rastatt (customer for new infrastructure of a central refrigeration device in combined piping and plant manufacturing Daimler plant 54 Rastatt)
- Mercedes Benz Global Logistics Center Hatten, France (phases 8 and 9 according to HOAI for infrastructure adjustments to the existing supply system)
- Weiss GmbH Tief- und Straßenbau (civil engineering services for new infrastructure of a central refrigeration device Daimler plant 54 Rastatt)
- beton & rohrbau 2.0 GmbH (Supervision of construction projects according to service phases 8 and 9 of HOAI for trenchless sewer rehabilitation processes, construction of rainwater retention basins, road construction, new infrastructure development)

- IGW Industrie-, Gewerbe- und Wohnbau Schwarzenberg (supervision of construction projects according to service phases 8 and 9 for new buildings as well as the renovation)
- Federal Agency for Real Estate Bundesanstalt für Immobilienaufgaben Düsseldorf (pollutant investigation of 507 residential buildings, 307 special buildings and 38.3 km of asphalt driving surfaces and 64.5 km of concrete driving surfaces of the JHQ Rheindahlen)
- Partnerschaft Deutschland GmbH (main contractor representation for pollutant investigation of 507 residential buildings, 307 special buildings as well as 38.3 km of asphalt driving surfaces and 64.5 km of concrete driving surfaces of the JHQ Rheindahlen, conceptional accompaniment)
- IWARU Institut für Wasser · Ressourcen · Umwelt (accompanying representation of the University of Applied Sciences Münster for pollutant investigation of 507 residential buildings of the JHQ Rheindahlen, conceptional support)
- Berlin Senate (creating various building pollution registers for school buildings)
- GESA Gesellschaft zur Entwicklung und Sanierung von Altstandorten mbH (preparation of soil surveys regarding pollutant content)
- hochC Landschaftsarchitekten (development of a concept for the total area of the army test center Kummersdorf Gut and the former airfield Sperenberg - focus on UXO clearance)
- dentist Mayerhofer Djordjevic (creating an asbestos cadastre)
- mags Mönchengladbacher Abfall-, Grün- and Straßenbetriebe AöR preparing an expert opinion on the risk assessment of stored fire waste after a large fire in the city of Mönchengladbach)

## Reference projects:

### Investigation of the Joint Headquarters Rheindahlen (JHQ)

The JHQ Rheindahlen was the headquarter of various British Army forces and NATO until December 31, 2013. At peak (of the Cold War), up to 13,000 international employees lived and worked on the grounds of the HQ. Mostly, British, Dutch and Belgian task forces did their work here. Accordingly, the HQ Rheindahlen was an own city independent in their whole supply (self-sufficient). In addition to typical military facilities such as staff buildings, bunkers, facilities for the maintenance of military technology or the "Big House" the approximately 4 km² large area accommodates also various types of housing, schools, kindergardens, sports facilities including a swimming pool, churches, shops for daily needs, boiler houses and also a waterworks. However, use of the JHQ was largely administrative with the collection and processing of often highly sensitive information.

The establishing of buildings and infrastructure started in 1952 and was based on British models. Following the abandonment of the JHQ Rheindahlen site, IBL was commissioned to draw up a deconstruction or re-use concept with detailed calculations of material flows. In addition to intensive historical research, detailed pollutant investigations were carried out in all existing special buildings. In addition, all standard buildings were examined in detail for possible harmful substances. In order to determine mineral residual masses, each development was completely surveyed, categorized and included in layout plans, since most construction plans are not available due to restrictions. Even building inventory was recorded completely. In order to digitally reconstruct the area, an image documentation was also prepared with stored GPS data for each individual building found. Altogether, IBL has examined 507 individual residential buildings (standard buildings), 307 special buildings (such as schools, various sports facilities, waterworks, swimming pools, churches, supermarkets, cinemas, medical facilities such as hospitals and dentists, gym's, hotels, boiler houses incl. their infrastructure systems, waste incineration plants, military facilities of various kinds, radio and TV broadcasting stations of the British Forces Broadcasting Service, various Officer Messes / Civil Messes, tower systems up to 76.60 m height for radio transmission, police stations, bunkers, ammunition storages, shooting ranges ...) as well as 38.3 km of asphalt driving surfaces and 64.5 km of concrete driving surfaces. In addition to obtaining detailed results, IBL pays an extra attention to investigation procedure in which component destruction is reduced to a minimum. The scope of the investigation is to be described as unprecedented in this project. Proudly, IBL has delivered results despite the immense scope of the order, which all participants have voted to full satisfaction or even have exceeded expectations regarding the attention to details.



# • New construction of a **central refrigeration device including infrastructure for Daimler plant 54 Rastatt**

Another not everyday project is the construction supervision of a new central refrigeration device at the Daimler plant 54 in Rastatt. IBL was allowed to take over the construction management for all services of the contractor, the company Brochier Rohrleitungsbau Nürnberg GmbH. In addition to a clearing of construction site and the associated relocation of supply media such as heating water, drinking water, industrial water, sprinkler pipe and compressed air pipes, the construction project completed the relocation of 2,800 m steel cold water pipe as preinsulated pipes DN 450, 100 m preinsulated pipes DN 300 and 450 m in preinsulated pipes DN 200 (completely underground). In the new refrigeration plant, in a connecting structure as well as in a total of 5 new shaft structures, the technically demanding plant construction (DN 15 - DN 450 steel pipeline) ensured that the cold water inside the pipes reaches the factory premises where it had to go. In order to minimize losses, all non-buried pipes are isolated in "Armaflex" with a sheet steel shell. Even if in between some obstacles have occured, the final result could convince all involved companies and clients.







