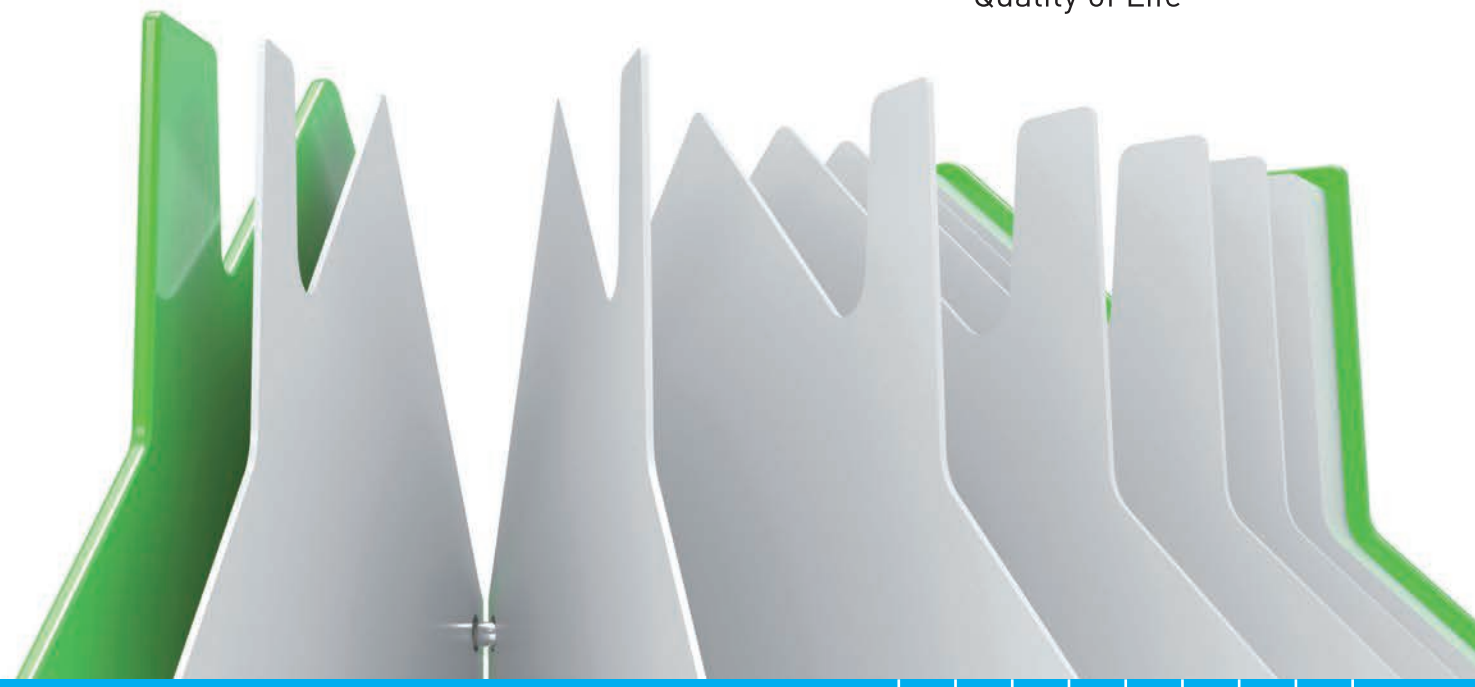
WESSLING
Quality of Life



Real Estate – Environment and Energy
Planning and Consulting

Safe, healthy, sustainable and economical

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Special Know-how and Expertise for Successful Projects

- Increase the value of facilities by means of an energy check and moisture analysis, testing the emissions of construction products, pollutants and indoor air pollution, fire protection and inventory exercise, advice on sustainability labels and HSC by cadastre, expert reports, and plans.

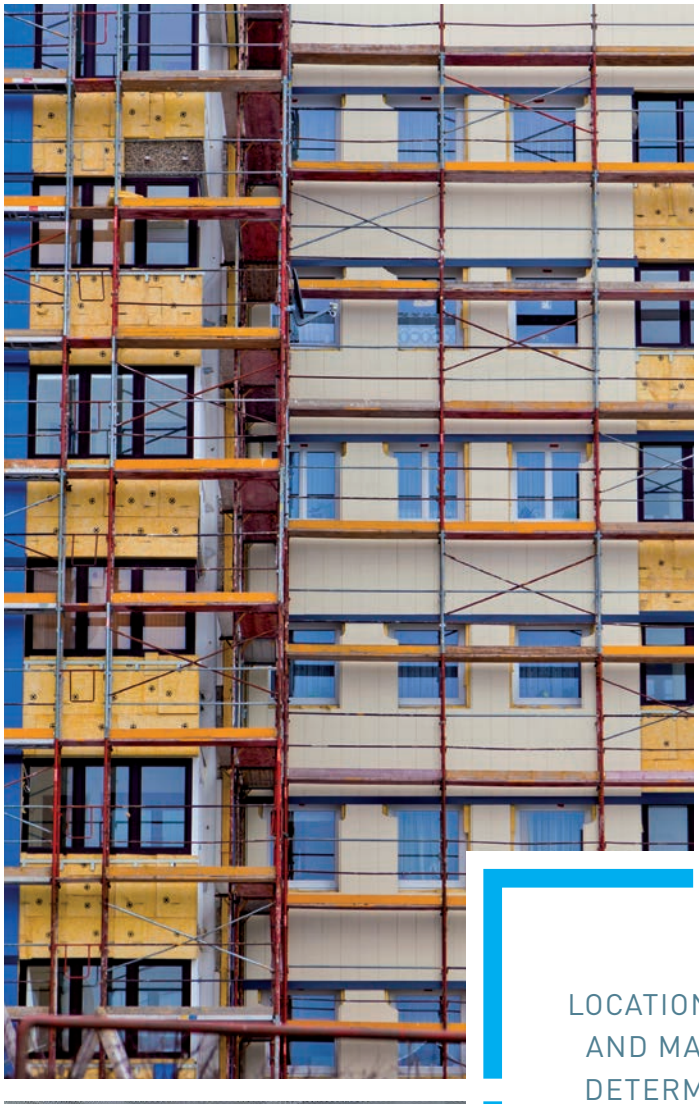
- We will consolidate the value of your portfolios by due diligence carried out in accordance with international standards from a single source for individual properties, commercial estates or large international portfolios-covering building structures, building services, fire protection and environmental risks. Our work is coordinated centrally, with flexible local teams.

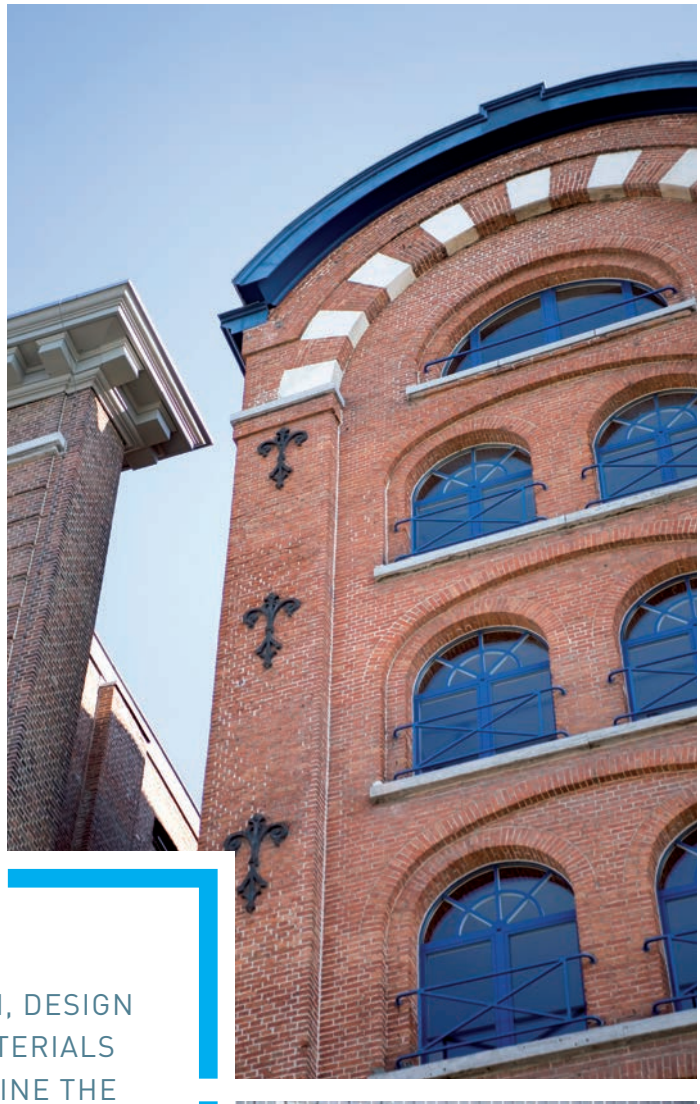
- We will provide you with planning reliability for reactivation of brownfields, building on former sites and for existing buildings, thanks to our long standing project experience and state-of-the-art procedures.

- We offer evaluation and control of technical processes and process engineering for water supply and sanitation, drinking water control and compliance with drinking water regulations, wastewater analysis and establishing compliance in all water processes.

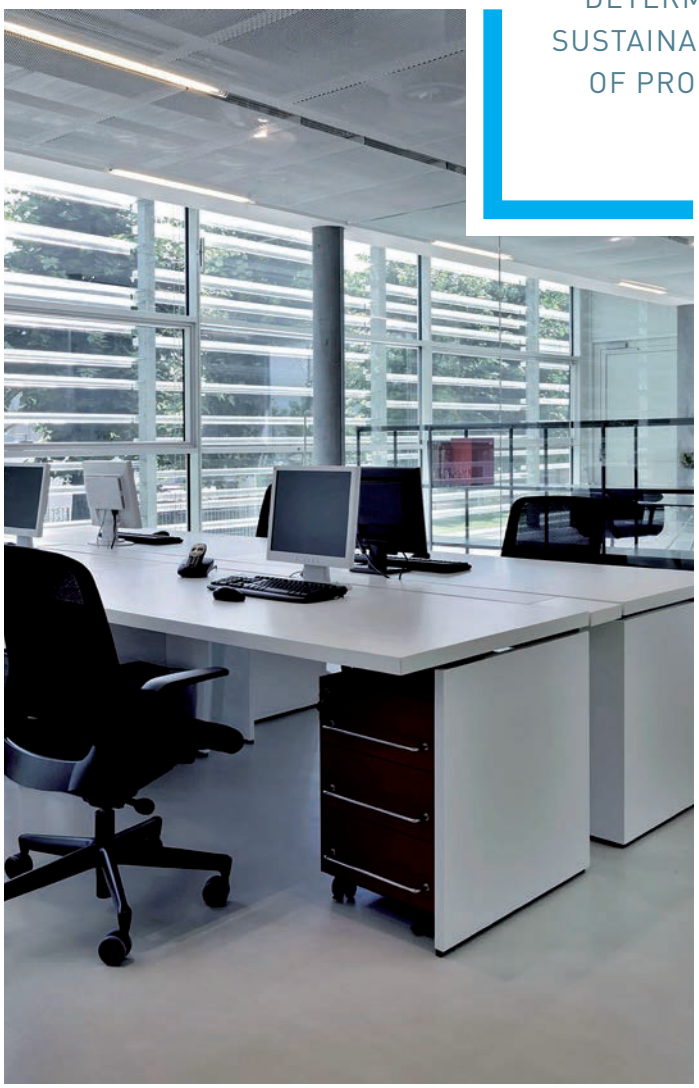
- We can demonstrate energy savings by means of alternative technologies, energy use concepts, wind, solar or geothermal power, and biogas plants or CHP. We provide testing of analysers and process technologies, power engineering and construction technology from a single source.

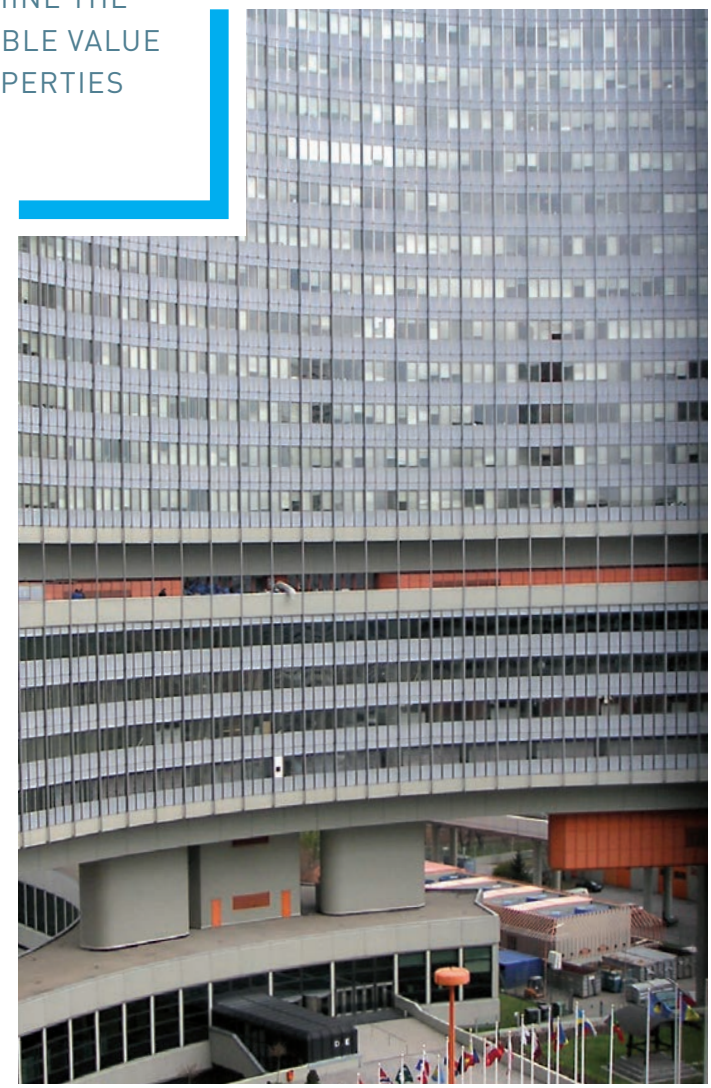
EXPERTS,
SPECIALIST
ENGINEERS,
TECHNICIANS
AND SCIENTISTS





LOCATION, DESIGN AND MATERIALS DETERMINE THE SUSTAINABLE VALUE OF PROPERTIES





Planning Real Estate

Investments in facilities, locations and real estate are made with a long-term perspective in mind. Today, measures focusing on sustainability result in economic advantages. Global environmental changes require flexible reactions.
Our customised solutions can also be of economic interest to you.

Our specialists' know-how and interdisciplinary work put our customers ahead. WESSLING forms its project teams from professionals in the various relevant fields and bundles existing capacities to provide the optimal solution for your individual requirements. In this way we can detect numerous areas of development potential of your properties and projects.

The high level of production and products in our economy, the highly developed stock of buildings and land along with the intensive use of our resources are acquiring a new significance for the future. Quality means sustainability, so there are many new opportunities for objects, urban quarters and even entire cities.

Buildings: Revitalising and Increasing Value

The importance of buiding redevelopment has replaced building on greenfield sites. Existing buildings will either be renovated, refurbished, or demolished and rebuilt. These revitalized new objects will be used differently and have a higher added value. Their use, the planning of their renovation or demolition, construction site safety, and sustainability of investments are the issues by which we secure and amplify the performance of your projects.

Inside rooms are where we spend most of our time and therefore influence our well-being. They may contain a great number of substances in old and new products affecting us just as much as the use of the building itself. Also the design and layout, the ventilation and any technical additions or possibly safety technology can influence the quality of a building. We will evaluate the state of existing buildings, the construction process and the new building. Our experts are familiar with construction materials and procedures with regard to substances, plus safety-related and sustainability aspects. Due to our experience in large-scale projects, we are able to realise strategies that are of economic interest to you.

Due Diligence
Resilience through Knowledge and Experience

When buying or selling, due diligence is an important issue. The examination of commercial documents also entails a technical and environmental due diligence audit. In the case of real estate, land and existing buildings, the condition of the building as well as any contamination are the basis of the property inventory for a risk assessment. For production sites, operating licenses and process risks will also be assessed.

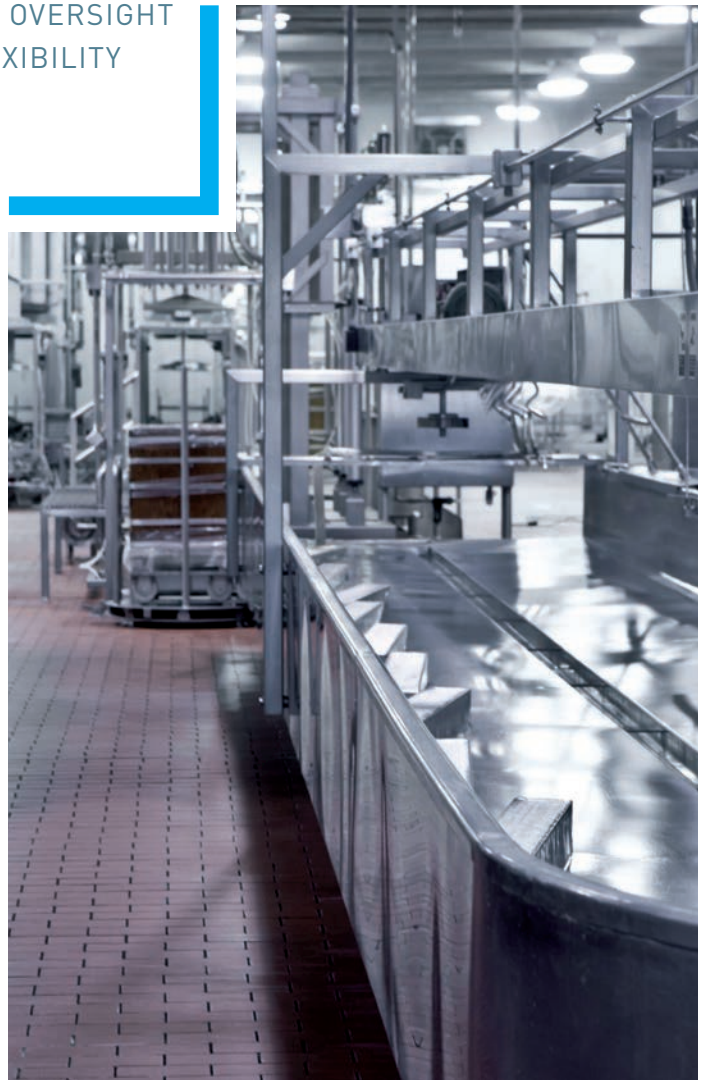
The purchase or sale of real estate and production sites are the most common reasons for a DD but also operational evaluation, investment expansion or inheritance may be a cause.

Here, a consultant's skill is especially required. Expertise in construction, building services and fire protection has to be combined with expert knowledge of construction materials and contaminated sites, hazardous substance emissions, operational procedures and permits. It is important to have teams consisting of various professionals, who inspect the data and objects in a fast manner. Quite often very large portfolios must be worked on within a very short time, so several teams work simultaneously. As the transactions and decisions that are to follow require a secure basis, the reliability provided by expert knowledge and experience in due diligence is important.

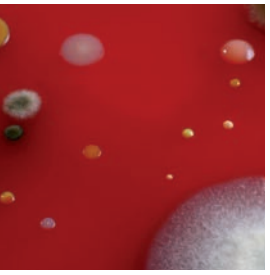
WESSLING's teams are operating internationally.
We will provide you with:

- Experts in asbestos, PCB, wood preservatives, hygiene, etc. and for contaminated sites
- Experts in operations, production materials, emissions and management systems that identify the risks in relation to permits and regulations (compliance check)
- Structural engineering, plant engineering and fire safety inspections with current state analysis, and determination of maintenance status
- Centrally organised and documented activities with decentralised teams
- Experience in due diligence and references from essential market sectors

DUE DILIGENCE
REQUIRES ACCURACY
AND SPEED, OVERSIGHT
AND FLEXIBILITY



Pollutant-Related Building Renovation



Our experts are able to identify contamination from numerous pollutants. They also plan the renovations, such as for asbestos and man-made mineral fibres. Our know-how is also in demand for heavy metals and their organic compounds, be it TBT, mercury or lead. In our projects we deal with chlorine-organic biocides, such as PCP, lindane, DDT and dioxins. We regularly test for volatile organic compounds (VOC), which were used as solvents, and for volatile compounds, such as formaldehyde, or semi-volatile ones like phthalates or PAH from tar products. Our teams are experienced in the remediation of PCB contamination in grouts and from other sources in high-rise buildings and schools as well as the targeted treatment of damage caused by mould in buildings, dry rot, and fine dust or pest infestation. As experts we work in compliance with the guidelines for targeted treatment of hazardous substances in buildings.

Thanks to our involvement in guideline development we are able to advise you pro-actively. Our practical expertise ranges from the highest mountains to seaports, from nuclear power plants to skyscrapers, and determines our standard of consistently high quality and being close to our customers.

- Collection and evaluation of contaminants in buildings
- Planning and monitoring of remediation

Experts in Fire Protection

The aim of fire protection is to fulfill in an efficient way the extensive legal requirements with regard to the buildings. Our fire protection engineers create goal-oriented fire protection concepts where individual measures are optimally coordinated. By means of fire protection, along with consideration of environmental protection, owners of buildings provide for the safety of people as well as property and assets. For companies, fire protection safeguards maintenance their production and delivery. Detailed information means a favourable pricing for fire insurance premiums.

- Assessment and planning of technical, structural and organisational fire protection
- Renovation planning and construction management
- Digitalisation of blueprints to CAD files for fire protection plans, emergency and escape route plans, and fire brigade plans

Hygiene Inspection and Legionella Testing

Legionellae are naturally occuring bacteria that can develop in every kind of fresh water, hence also in drinking water pipes, drinking water heating-systems, air conditions with spray humidification and spa baths.

Starting 2012 the first European regulation dictates an annual legionellae inspection for largescale installations of drinking water heating-systems. The execution of the inspection is monitored by the public health departments.

In case an overstepping of the technical measure value of legionellae is detected, it is necessary to exclude any danger of health through optimisation of operation and, where it is required, through a rehabilitation of the system.

We offer:

- Consultancy for the setting of the sampling point
- Acredited WESSLING sampling collector on location
- Microbiological examination in compliance with the requirements of the German Drinking Water Ordinance (TrinkwV)
- Serotyping of legionellae
- Expert evaluation of examination results
- Organisation and planning of large-scale projects

Energy Refurbishment

The majority of today's building stock was built according to the specifications of former years. Since then, requirements for a building's energy efficiency have been constantly increasing. Experts estimate that potential savings for old buildings are at about 60 percent. As qualified energy consultants, we can identify effective alternatives. A weak point analysis helps us to identify the areas where you need to save energy. This includes insulating and refurbishing measures for the building envelope as well as improvements to the heating and cooling systems and process optimisation.

Our solutions for energy refurbishment are sustainable, meaning they are cost-efficient over the entire life-cycle of the property. The advantages are a better marketability and rentability. We advise you in how to make your building operations ecologically compatible and with economical sense. An energy concept based on the current legal framework, provides you with an individual solution for your property. The energy balance provides the basis for appropriate modernisation measures and their economic assessment.

- Building energy survey with weak point analysis
- Demonstration of energy saving measures (heat recovery, process change)
- Advice on funding
- Certification for important labels and issuing energy certificates
- Energy management

THE „SECOND RENT“ DETERMINES THE MARKET PRICES. SUSTAINABLE BUILDINGS HELP YOU TO PREPARE TODAY FOR THE COSTS OF TOMORROW.

Sustainable Properties

"Sustainability by Economy" – economic benefit is the key success factor of sustainability. An important sign of success apart from reduced energy consumption is the maintenance of value through aesthetics, material quality, flexible changes of use, and last but not least recycling. Sustainable planning is not only visible in the long run, but also in the short-term during construction.

We say what is required and appropriate. We provide:

- Testing for the German quality label 'Blauer Engel', the German Committee for Health-Related Evaluation of Building Products (AgBB), construction supervision, GEV Emicode, the 'Golden M' (RAL-GZ 430) or French product testing in accordance with Afsset or 'Decrets sur le COV', as well as for private labels.
- Emission chamber tests according to DIN EN ISO 16000-9 or DIN EN 717-1 (formaldehyde from wooden composites) for wall and floor coverings and their installation materials, furniture, temperature-intensive electrical devices, candles or air fresheners
- Tests according to DIN EN ISO 16000-23 and -24 (pollutant degradation), DIN EN ISO 11 890 (Deco Paint guidelines)
- Odour testing, safety tests, mechanical quality controls and consumption tests
- Ecological assessments, life-cycle assessments, Carbon Footprint, EPD for construction materials, equipment, or for example, the Swedish BASTA
- Planning, operational controls with acceptance tests and audits for sustainability labels (DGNB, LEED, Green Building)

Sustainable Energy

Energy efficiency is in many cases decisive for the success of a production site and has become indispensable in the building sector. Managing energy consumption now, becoming energy self-sufficient in the short term, and making instant, effective and sustainable economic decisions are major targets. Being independent of supplier interests, we are able to identify the potential of locations, possibilities of funding, as well as technical realisation:

- Energy independent local authorities, zero-energy locations, zero-emission districts
- Alternative, regenerative energy from biomass, solar, or geothermal sources with secure technical feasibility
- Composite solutions to energy surplus and energy needs with load balancing
- Economic evaluation of policies, identification of saving potentials and planning of re-use
- Consultations on energy supply contracts independent of supplier interests
- Planning of innovative technical facilities, monitoring of processes, e.g. in biogas plants, or sewage treatment plants, with special analyses and efficiency tests

Demolition: Generating Profit

The length of time before the use of a commercial property is changed has fallen from an average of seventy years to just over twenty years. Changes of use usually require a conversion, or often a demolition of the building.

What used to be done by the wrecking ball is nowadays carried out in a controlled way where the construction materials used will be largely separated. Controlled demolition hedges against economic loss and often generates new profit.

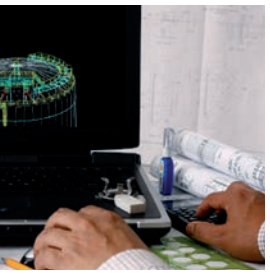
Pollutants are detected in advance and separated from uncontaminated materials. This reduces disposal costs, which otherwise would increase due to undetected contamination. At the same time, risks to health and the environment as well as unnecessary construction delays can be avoided.

Uncontaminated construction materials, however, can be largely recycled. Ideally, old buildings and sites can even serve as a supply of raw materials, providing substantial profits from recovery and recycling.

We offer:

- Demolition concepts
- Planning of demolition and disposal
- Preparation of service schedule
- Construction management
- Occupational safety on construction sites
- On-site logistics

Land Areas and Land Recycling: Identifying the Chances, Exploiting the Potential



Uninhabited land areas are worthy of protection, and yet becoming an increasingly scarce resource. Many hectars of green areas vanish each day. There are politicians worldwide who set goals to minimize the expenditure. This opens up new possibilities for existing brownfields. The utilization of derelict areas, i.e. land recycling, has been one of our focal points for more than 25 years.

Each brownfield has a history of its own, which has left different traces. These are apparent in existing buildings, soil and groundwater. A closer look at the facts reveals the opportunities for brownfield sites.

We have the tools to demonstrate the potential for land recycling. Our precise data collection, expert assessment with economic considerations of re-use, technical process strategies plus our project management will result in solutions in line with costs and deadlines.

We work as technical experts, specialised or general planners. We have an overview of the industry for companies suitable for the technical execution and for selecting the best and most cost-effective tenderers in a fair competition.

We make use of technologies to remediate existing buildings and contaminated sites in a cost-efficient manner. During concept development and realisation, we will point out potential savings and use them for your benefit.

BROWNFIELD SITES: RECOGNISING AND EXPLOITING OPPORTUNITIES

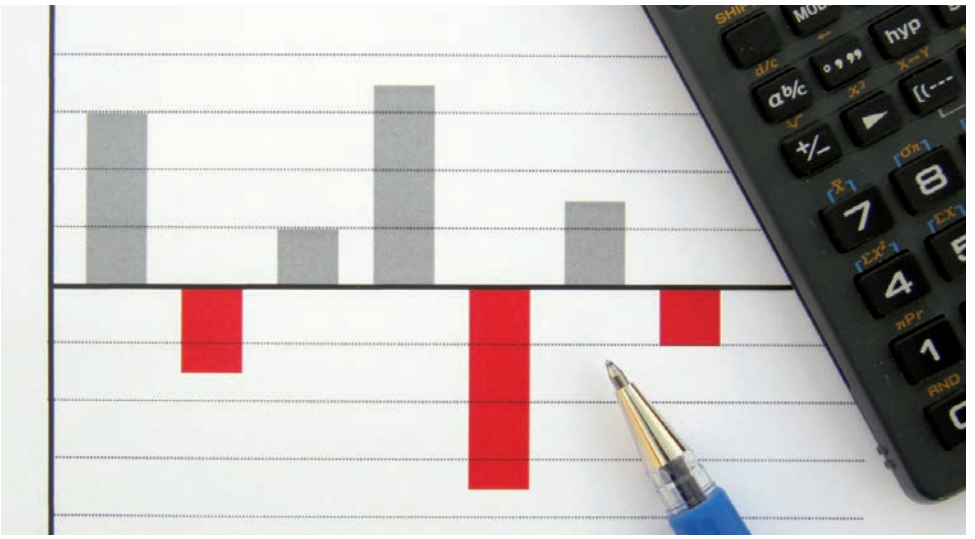
Profitability Analysis: Attractive Utilisation Concepts

The motor for brownfield redevelopment is primarily the economic perspective. This is why WESSLING works on this significant asset with its own specialists in economics with expertise in this area. They are familiar with both the technical issues and the tools necessary for an economic analysis providing therefore the highest level of security possible for your investment.

Profitability analyses have now become a mandatory prerequisite for budgeting local government land development projects and of course for private investors.

We point out the economic opportunities arising from site-related, attractive utilisation concepts, while always keeping a balance between the cost-reduction and customised re-use. These are the elements of our profitability analysis:

- Technical brownfield assessment
- Development of options for use
- In-depth assessment of costs
- Profitability analysis of alternatives with costs and revenues
- Yields, capital values and amortisation periods



Remediation: Minimising Costs By Means of Customised Solutions

The original idea of contaminated sites being remediated completely is too limited with regard to brownfield development. Apart from hazard prevention, it is about the customised handling of sub-soil contamination. If this target has been identified in the context of the future use and relevant natural resources, we will select an appropriate remediation procedure. It is quite possible that no actions are required for an individual project; a safety concept may be sufficient, or soil remediation is possible without any intervention.

Our experts have a wide range of tools on hand. Active as well as passive measures, such as observing and promoting natural degradation processes (natural attenuation) or structural engineering safeguards can lead to great success without moving the soil.

Our remediation strategy takes into account all on-site media and their aspects: existing buildings, groundwater, soil, soil atmosphere and plants, load diagrams and exposure pathways as well as the current or future use.

We regularly participate in research projects where we gain our know-how in innovative remediation techniques. Geologists, process engineers and professionals from other disciplines work at WESSLING in the following fields:

- Historical research and multi-temporal analysis of aerial photographs
- Risk assessments
- Remediation investigations
- Remediation concepts
- Feasibility studies
- Tenders and awards
- Remediation monitoring

Land Management: Minimising Costs Intelligently

Particularly on industrial and commercial sites with a long history of use there is often a patchwork of uncontaminated, and slightly or heavily contaminated soils and landfills. Intelligent land management can help to minimise the costs for external site disposal of soil masses in civil engineering projects.

Soil analysis data are coordinated with the plans for re-use. Consideration of soil protection regulations enables recycling within a site. The more soil material can be recycled internally, the larger the cost savings.

This is why WESSLING provides:

- Data preparation
- Classification of soil and fill materials
- Recycling management
- Mass balances with digital terrain model
- Planning, construction management and documentation

The A-Z of our Real Estate Services

- Advisory services
- Areal photography
- Bidding and placing
- Building
- Building material pollutants
- Building stock coverage
- Certification und seal (e.g. DGNB, LEED, Green Building)
- Demolition planning and guidance
- Drinking water audit
- Economic Studies
- Energetically building inspection
- Energy concepts
- Energy pass
- Energy saving measures
- Engineering services
- Exploration
- Feasibility studies
- Fire protection
- Green Building
- Historical research
- Hygiene Inspection
- Inquiry of building pollutants

Sub-soils

The sufficient carrying capacity of the soil is a prerequisite for the technically flawless execution of earthworks and civil engineering processes and a sustainable, proper use of the building. Therefore it is important to examine the geotechnical characteristics of the subsoil prior to construction work.

This includes geotechnical field investigations to determine the soil layers together with a determination of the bulk density of the soil. As a result of the mechanical and physical standard parameters of the soil derived from this investigation, as well as the subsequent geostatic calculations we will advise you on the foundations required, aligned with your individual project and with regard to economic aspects.

The services provided by WESSLING in this context are the basis for further planning by, for example, a structural engineer or architect.

Our range of services includes:

- Planning and performance of geotechnical examinations on sub-soil
- Geotechnical calculations
- Dimensioning of drainage measures
- Assessment of sub-soil and advice on foundations
- Analysis of infiltration capacity

- Land recycling
- Project management and control
- Remediation concepts (soil management and groundwater remediation)
- Remediation of building pollutants
- Safety
- Site management
- Soil management
- Soil status report
- Testing of building materials
- Urban mining
- Valuation Due Diligence
- Wastewater technology

Diverse international know-how – from a single source.

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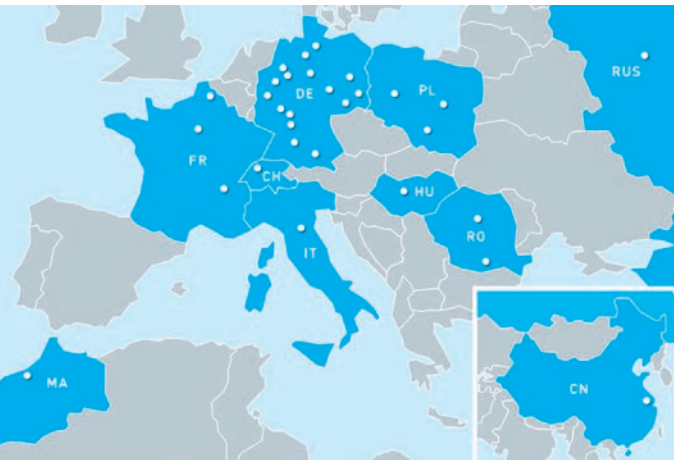

WESSLING offers a complete spectrum of expertise and services in the fields of consulting, analysis and planning. The family-owned company has been enjoying an excellent reputation among national and international customers since 1983. 1,200 employees work in Europe, Morocco and China towards the continuous improvement of quality, safety, health and the environment (QSHE). Close to you in more than 30 locations.

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