

TECHNICAL DUE DILIGENCE FOR BUILDING SERVICES

Red flag report

Sample of a short report after the site inspection

SAMPLE

Sample with fictitious data. Building, values, findings and costs are entirely invented and bear no relation to a real property.

PROPERTY (FICTITIOUS)

Name	Office building "Beispielhaus Mainufer"
Location	Musterstadt
Use	Office, six tenants
Year built	1998, partial modernisation 2011
Size	12,400 m ² gross floor area, seven floors and one basement
Purpose	Acquisition review for an investor
Basis	One-day site inspection, review of the data room, interview with the facility manager

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Result at a glance

Overall assessment

The building services are operational overall but show a clear need for renewal. Three of the seven trades have issues that should be clarified before acquisition or reflected in the price. Cooling and ventilation are the most critical.

163 to 285

k€

Short term (0 to 12 months)

1,085 to 1,495

k€

Medium term (1 to 5 years)

500 to 750

k€

Long term (5 to 10 years)

1,748 to 2,530

k€, 141 to 204 €/m²

Total (per m² GFA)

Traffic light by trade

TRADE	RATING	KEY FINDING
Heating	● Yellow	Two gas condensing boilers (2011), distribution partly from 1998. No documented hydraulic balancing.
Ventilation and air conditioning	● Red	Two central air handling units from 1998. Hygiene inspection under VDI 6022 not verifiable, heat recovery outdated.
Cooling	● Red	Chiller using a phased-out refrigerant (R404A), 24 years old. Refilling is increasingly costly and uncertain.
Plumbing and drinking water	● Yellow	Test results below the action level. Several dead legs in the risers.
Electrical	● Yellow	Main low-voltage switchboard from 1998. Test intervals under DGUV V3 exceeded for two sub-distribution boards.
Building automation	● Yellow	Proprietary system, outdated software, maintenance contract expired.
Lifts	● Green	Three lifts, inspection records under BetrSichV up to date. Controls from 2008.

Red: significant need for action or liability risk. Yellow: action needed, plannable. Green: no issues.

Red flags

These points should be clarified before acquisition or reflected in the price.

RED FLAG 1 Cooling plant close to failure

Cooling

Finding and risk The chiller uses R404A. Under the F-Gas Regulation this refrigerant is becoming scarcer and more expensive. A failure in summer would leave the office space without secured cooling.

Recommendation Include replacement in the price assessment and request a leak-test record before signing.

Cost range for the trade 268 to 355 k€

RED FLAG 2 Hygiene records for the ventilation systems are missing

Ventilation and air conditioning

Finding and risk No hygiene inspection under VDI 6022 exists for the two air handling units. This is a liability issue for owner and operator and may lead to rent reductions.

Recommendation Agree the inspection as a condition before closing and reflect repair costs in the price.

Cost range for the trade 465 to 680 k€

RED FLAG 3 Electrical test records incomplete

Electrical

Finding and risk Test intervals under DGUV V3 are exceeded for two sub-distribution boards. Test records for parts of the fixed installation are missing.

Recommendation Have the inspection carried out promptly and request the results as an annex to the purchase agreement.

Cost range for the trade 235 to 350 k€

RED FLAG 4 Building automation without support

Building automation

Finding and risk The system is vendor-locked, the maintenance contract has expired and the software is outdated. Faults can therefore only be fixed with delay.

Recommendation Conclude a new maintenance contract before handover and plan the migration to an open system.

Cost range for the trade 170 to 265 k€

Investment needs (CAPEX)

Cost ranges by trade and time horizon, in thousand euros net. Values are based on benchmarks with an accuracy of about ± 30 percent. They are not a quotation.

TRADE	MEASURE	0 TO 12 MONTHS	1 TO 5 YEARS	5 TO 10 YEARS
Heating	Hydraulic balancing and control optimisation	35 to 60		
	Renewal of heat generation incl. concept		380 to 520	
Ventilation and air conditioning	Hygiene inspection VDI 6022 and repairs	45 to 80		
	Replacement of two air handling units		420 to 600	
Cooling	Leak testing and leak repair	8 to 15		
	Replacement of chiller incl. dry cooler		260 to 340	
Plumbing and drinking water	Removal of dead legs, flushing concept	25 to 40		
	Partial renewal of risers			110 to 170
Electrical	DGUV V3 inspection and defect rectification	30 to 55		
	Replacement of UPS batteries		25 to 35	
	Modernisation of the main low-voltage switchboard			180 to 260
Building automation	Software update and new maintenance contract	20 to 35		
	Migration to an open automation system			150 to 230
Lifts	Modernisation of lift controls			60 to 90
Total (k€)		163 to 285	1,085 to 1,495	500 to 750

Total: 1,748 to 2,530 k€, 141 to 204 €/m² (12,400 m²)

Operator duties, energy and basis

Operator duties at a glance

- Drinking water: testing obligations under the German Drinking Water Ordinance, hygiene under VDI 6023
- Ventilation: hygiene inspections under VDI 6022
- Electrical: recurring tests under DGUV Regulation 3
- Lifts and equipment subject to supervision: inspections under the Industrial Safety Ordinance
- Cooling: leak checks under the F-Gas Regulation

Energy and sustainability

Heat demand is currently met entirely by gas. For a reliable assessment of the decarbonisation pathway, the full report should include a comparison with industry targets and an assessment of plant renewal using renewable heat generation.

Approach and limits

This report is based on a site inspection, review of the documents provided and discussions with the operator. Measurements and intrusive investigation are not included. Fire protection, structure, hazardous materials and external works were not reviewed. The red flag report is followed by the full report with an inventory per trade, cost estimate and action plan.

Note: This report is a sample. All information is fictitious. Real reports are prepared on the basis of the actual property and the documents made available.