GROUND

Soil, contamination, radon, ordnance

For context

What the maps show, and what only an authority says on application.

SOIL: "PSEUDOGLEY-PARABRAUNERDE"

Waterlogged soils hold rainwater; cellars and soakaways need planning. **What to do:** Plan a ground survey for any extension.

Source: Land soil map Nordrhein-Westfalen, read for the order of 16 November 2026

RADON POTENTIAL 19.2 (BFS CLASS 15–20)

The BfS map uses eleven classes from 1–5 to over 50; the value is modelled for a coarse grid, not measured in the house. The official NRW precaution-area designation is not verified here; confirm it with the responsible authority. **What to do:** If there is a cellar, have it measured once.

Source: BfS (Federal Office for Radiation Protection), radon potential (dl-de/by-2.0), read for the order of 16 November 2026

CONTAMINATED LAND: NO INFORMATION

The register of contaminated sites (Altlastenkataster) is not public. **What to do:** Apply in writing for information on the plot.

Source: Soil protection authority (Rhein-Erft-Kreis)

UNEXPLODED ORDNANCE: NO INFORMATION

This report holds no statement on the plot. This office can say how to get one. **What to do:** Before any earthworks, ask there for an ordnance statement.

Source: the Gemeinde's local public order office (Ordnungsbehörde)

GROUND MOVEMENT: 28 MEASURING POINTS, -0.2 MM A YEAR AT THE NEAREST POINT

No notable subsidence at the measuring points.

Source: BGR ground motion service (InSAR), read for the order of 16 November 2026

MINING: LAND SERVICE READ

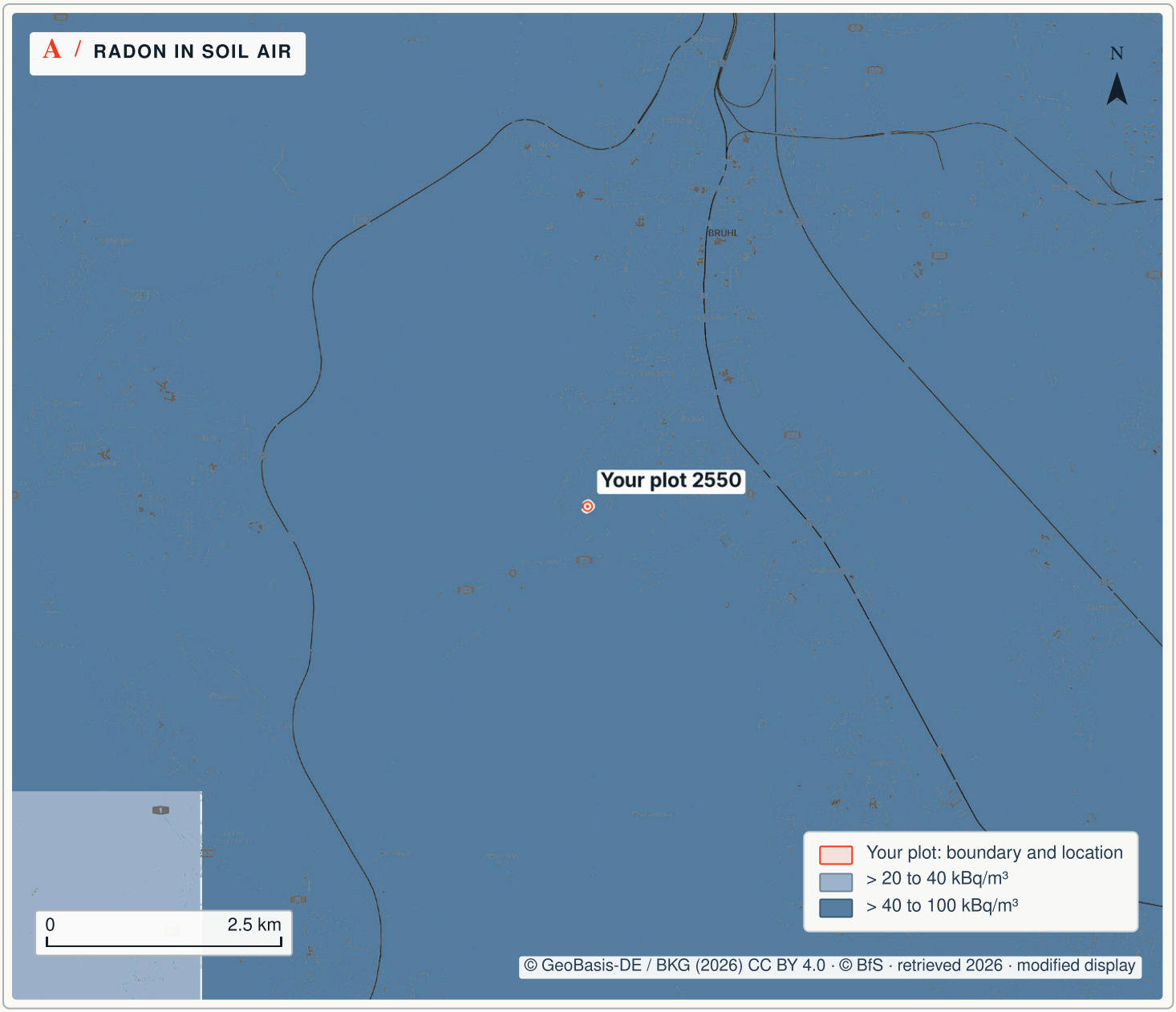
Mining field at the plot: Berggeist I. **What to do:** Before a cellar, geothermal heat or a deep borehole, ask: Bergbehörde in Nordrhein-Westfalen.

Source: Land map in this report

BGR; BfS (dl-de/by-2.0); data from the order of 16 November 2026

Radon in soil air

Radon in soil air at the marked plot.



- value at the plot location: **80.4**
- Read for this order: **16 Nov 2026**
- Frame width: **12 km**

WHAT IT MEANS FOR YOUR PLOT

- Predicted soil-air radon at the plot: 80.4 kBq/m³. Regional model value, not an indoor measurement.
- Soil-air concentration and geogenic radon potential are different model quantities: potential also accounts for gas permeability and is dimensionless. Neither predicts the indoor concentration.

BEFORE YOU BUY

- Measure radon over an extended period in the lowest occupied floor of the existing building; soil air and geogenic potential are not indoor measurements.

SOURCES AND LIMITS © BfS · retrieved 2026 · modified display · 16 Nov 2026 · scale: official; frame: 12 km; read: 16 Nov 2026

State geological map

Rock and loose material underground, finer than the national overview.



- Source scale: **1:100.000**
- Read for this order: **16 Nov 2026**
- Frame width: **3 km**

WHAT IT MEANS FOR YOUR PLOT

- Point query, not inferred from the map colour: Geological unit at the plot: Younger main river terrace (Jüngere Hauptterrasse). The map is an overview only; its colour at the plot does not confirm this point reading.
- Source: Geologischer Dienst NRW, scale 1:100,000. The federal map geological map of Germany (BGR) (1:250,000) says something different at the same spot.
- Different sources and scales give different rock descriptions; for this plot this Land map (1:100,000) is the more local one.

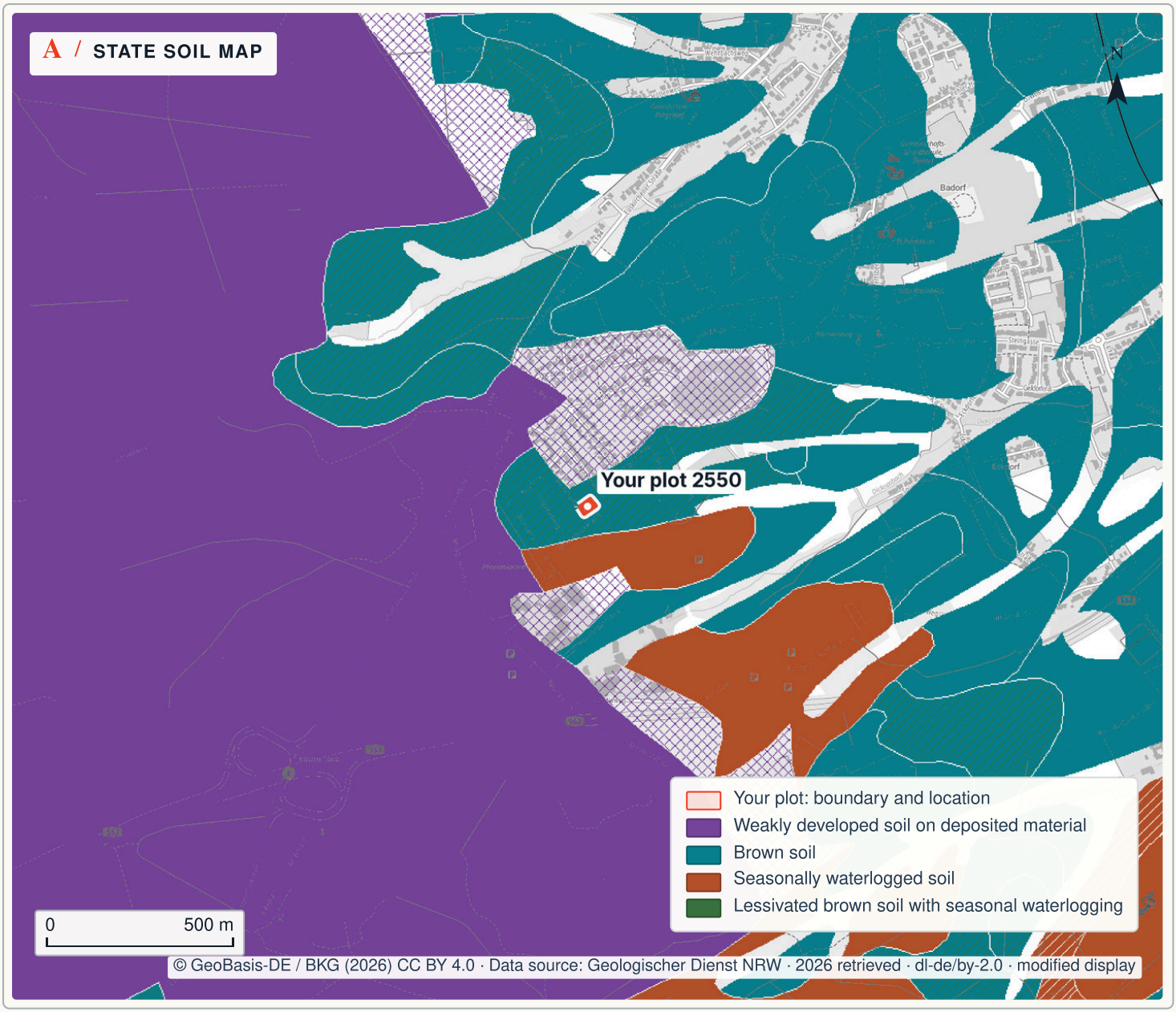
BEFORE YOU BUY

- For foundations, obtain an investigation at the proposed footprint; a geological unit establishes neither bearing capacity nor foundation depth.

SOURCES AND LIMITS Data source: Geologischer Dienst NRW · 2026 retrieved · dl-de/by-2.0 · modified display · 16 Nov 2026

State soil map

Soil units around the plot, finer than the national map.



- Source scale: **1:50.000**
- Read for this order: **16 Nov 2026**
- Frame width: **3 km**

WHAT IT MEANS FOR YOUR PLOT

- Point query, not inferred from the map colour: Soil at the plot: Lessivated brown soil with seasonal waterlogging (Pseudogley-Parabraunerde). The map is an overview only; its colour at the plot does not confirm this point reading.
- Source: Geologischer Dienst NRW, scale 1:50,000. The federal map soil map of Germany (BGR) (1:200,000) can say something different at the same spot.
- Different sources and scales give different soil types; for this plot this Land map (1:50,000) is the more local one.

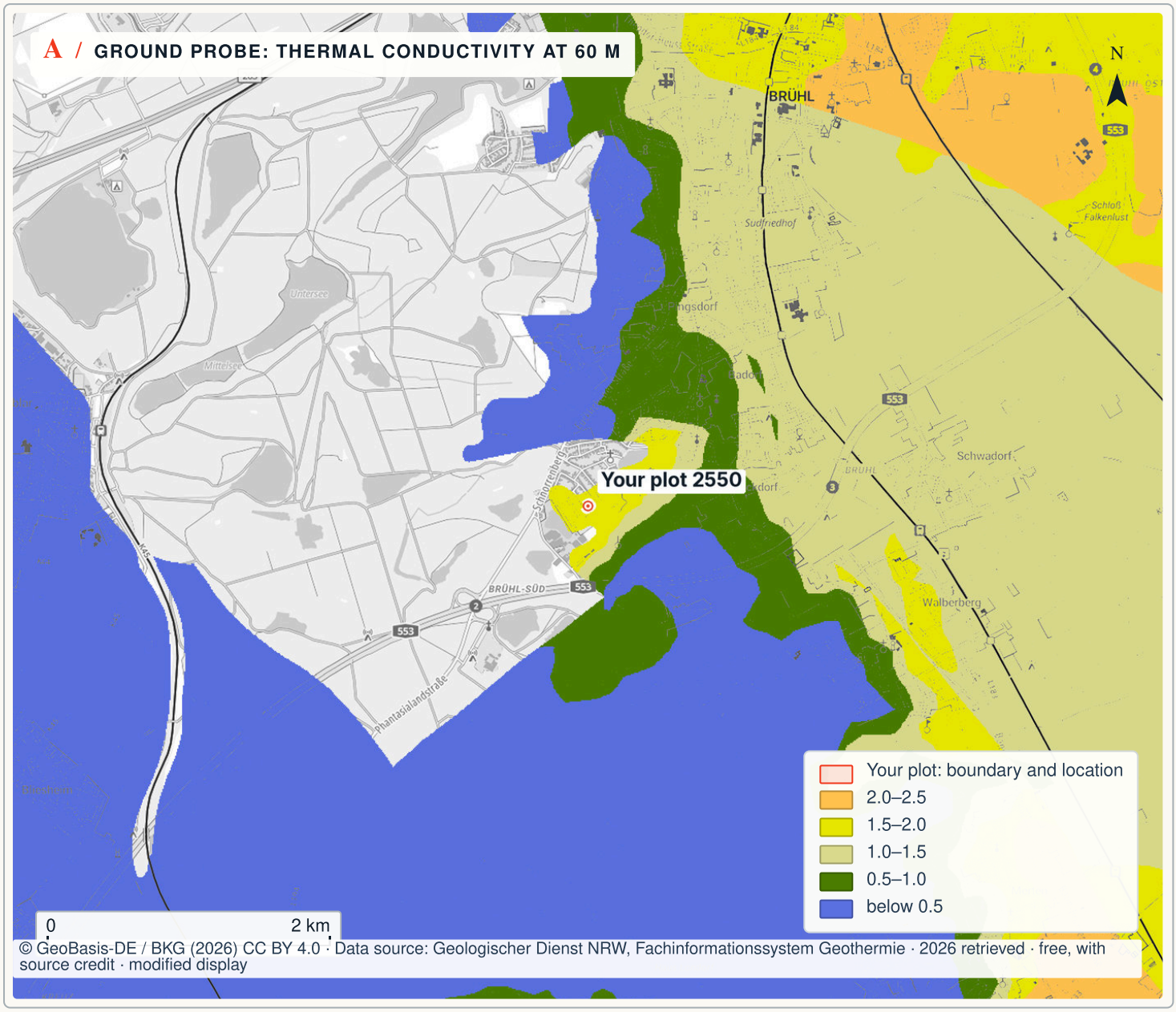
BEFORE YOU BUY

- Check the on-site layers when planning excavation or the garden; the soil class is not an infiltration test.

SOURCES AND LIMITS Data source: Geologischer Dienst NRW · 2026 retrieved · dl-de/by-2.0 · modified display · 16 Nov 2026

Ground probe: thermal conductivity at 60 m

Whether a geothermal probe makes sense here or is restricted.
This page makes no statement on collectors.



- Source scale: **state data**
- Read for this order: **16 Nov 2026**
- Frame width: **8 km**

WHAT IT MEANS FOR YOUR PLOT

- Thermal conductivity at the plot: 1.5–2.0 W/mK. The higher, the fewer metres the probe needs.

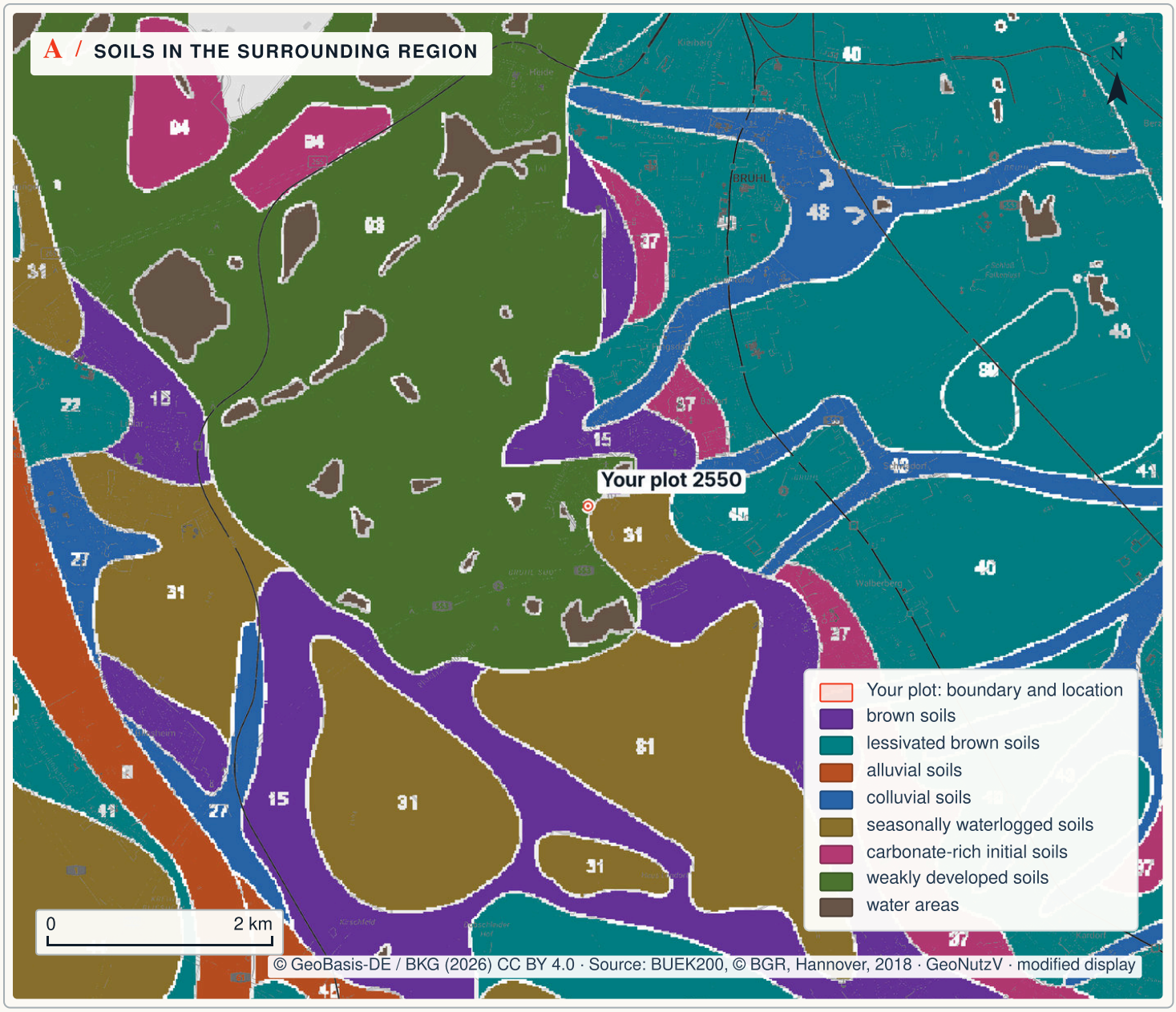
BEFORE YOU BUY

- Commission a probe borehole only after a site design and confirmation that water-law requirements allow it.

SOURCES AND LIMITS Data source: Geologischer Dienst NRW, Fachinformationssystem Geothermie · 2026 retrieved · free, with source credit · modified display · 16 Nov 2026

Soils in the surrounding region

Soil associations around the marked plot, from BUEK200.



- Source scale: **1:200,000**
- Read for this order: **16 Nov 2026**
- Frame width: **10 km**

WHAT IT MEANS FOR YOUR PLOT

- At the marked plot: weakly developed soils. Regional soil association, not a site-specific ground investigation. Source: BUEK200, scale 1:200,000. The Land map (1:50,000) can say something different at the same spot.
- Different sources and scales give different soil types; for this plot the Land map is the more local one.

BEFORE YOU BUY

- Check the on-site layers when planning excavation or the garden; the soil class is not an infiltration test.

SOURCES AND LIMITS Source: BUEK200, © BGR, Hannover, 2018 · GeoNutzV · modified display · 16 Nov 2026

Geology around the plot

Regional rock types at the marked location, from GUEK250.



- Source scale: **1:250,000**
- Read for this order: **16 Nov 2026**
- Frame width: **2 km**

WHAT IT MEANS FOR YOUR PLOT

- At the marked plot: Sandy deposits. Regional overview, not a site-specific ground investigation. Source: GUEK250 (WMS), scale 1:250,000. The Land map (1:100,000) says something different at the same spot.
- Different sources and scales give different rock descriptions; for this plot the Land map is the more local one.

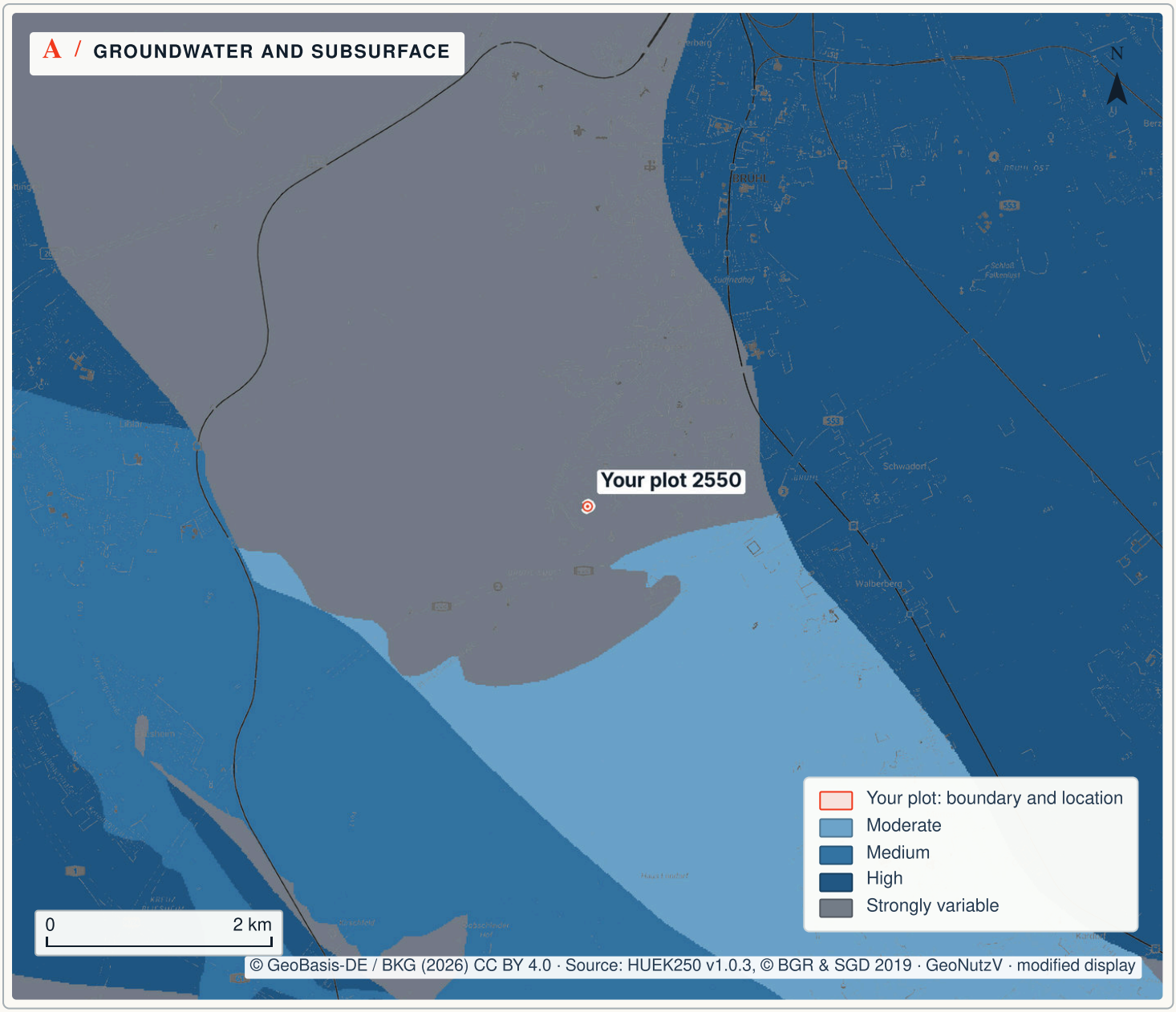
BEFORE YOU BUY

- For foundations, obtain an investigation at the proposed footprint; a geological unit establishes neither bearing capacity nor foundation depth.

SOURCES AND LIMITS Source: GUEK250 (WMS), © BGR, Hannover, 2019 · GeoNutzV · modified display · 16 Nov 2026

Groundwater and subsurface

Water-bearing rocks around the plot, from HUEK250.



- Source scale: **1:250,000**
- Read for this order: **16 Nov 2026**
- Frame width: **10 km**

WHAT IT MEANS FOR YOUR PLOT

- Regional hydraulic conductivity at the plot: Strongly variable. This is not a measured groundwater level or an infiltration test.

BEFORE YOU BUY

- For a cellar or an infiltration system, measure permeability and groundwater level within the proposed footprint.

SOURCES AND LIMITS Source: HUEK250 v1.0.3, © BGR & SGD 2019 · GeoNutzV · modified display · 16 Nov 2026

Measured ground movement

Satellite measurement points nearby; they do not establish ground stability across the plot.



- at the nearest measuring point: **-0.2**
- Read for this order: **16 Nov 2026**
- Frame width: **500 m**

WHAT IT MEANS FOR YOUR PLOT

- 28 measurement points in the frame; nearest visible point 22 m from the plot: -0.2 mm/year (2019–2023). Negative values indicate downward movement; measurements on observed objects do not establish ground stability across the plot.

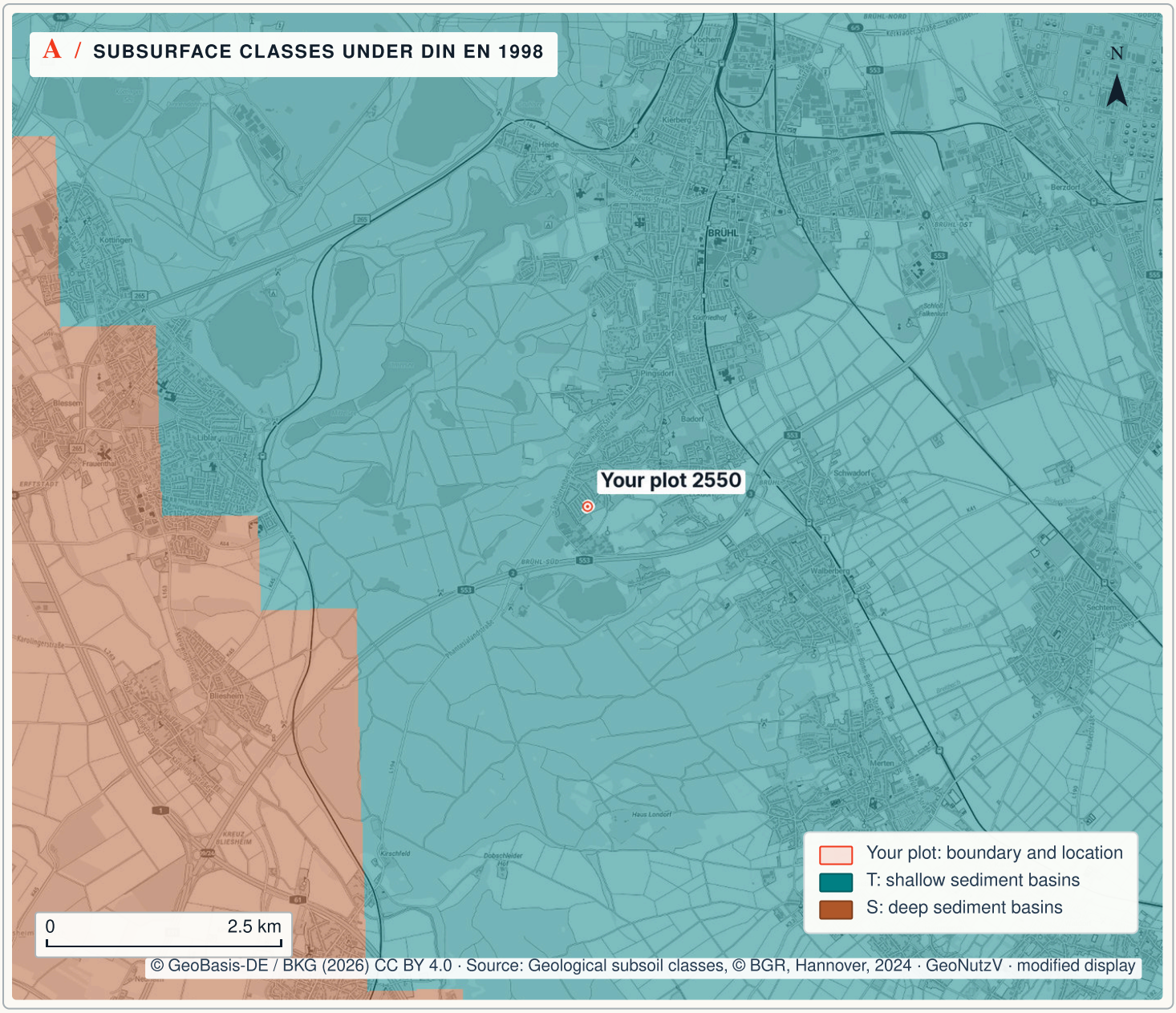
BEFORE YOU BUY

- Inspect suspicious cracks with a structural engineer; satellite points on observed objects do not replace a site-wide stability study.

SOURCES AND LIMITS © BGR 2025 · Contains modified Copernicus Sentinel data 2019-2023 · GeoNutzV · modified display · 16 Nov 2026 · Observation period: 2019–2023; frame: 500 m; read: 16 Nov 2026

Subsurface classes under DIN EN 1998

Regional subsurface classes for seismic design; this is not a seismic hazard zone map.



- Source grid: **1 km**
- Read for this order: **16 Nov 2026**
- Frame width: **12 km**

WHAT IT MEANS FOR YOUR PLOT

- At the marked plot: T: shallow sediment basins. This regional class excludes the upper 30 m of ground; it does not establish design seismic loads.

BEFORE YOU BUY

- For a new building, have the structural designer establish local seismic loads; the subsoil class alone does not supply a design.

SOURCES AND LIMITS Source: Geological subsoil classes, © BGR, Hannover, 2024 · GeoNutzV · modified display · 16 Nov 2026

SOIL, CONTAMINATION, RADON, ORDNANCE

Geogenic radon potential

For context

SUBJECT	RESULT / SOURCE
Geogenic radon potential	**result:** Geogenic radon potential at the plot: 19.2 (dimensionless). An indoor measurement establishes actual exposure. **source:** BfS
Arsenic in the regional soil model	**result:** Regional model class at the plot: 9.31 - 14.8 mg/kg. About one agricultural soil sample per 2,500 km²; this is not a sample from this parcel or a contaminated-land assessment. **source:** BGR
Cadmium in the regional soil model	**result:** Regional model class at the plot: > 0.596 mg/kg. About one agricultural soil sample per 2,500 km²; this is not a sample from this parcel or a contaminated-land assessment. **source:** BGR
Lead in the regional soil model	**result:** Regional model class at the plot: > 42.9 mg/kg. About one agricultural soil sample per 2,500 km²; this is not a sample from this parcel or a contaminated-land assessment. **source:** BGR

Regional resources and extraction sites

SUBJECT	RESULT / SOURCE
Regional resources and extraction sites	**result:** BSK1000 shows in the regional surroundings: Aggregates and industrial minerals, Energy resources, Mapped extraction sites. At 1:1 million, neither a parcel-specific deposit boundary nor a reliable distance in metres can be read. This BSK1000 map assesses neither active extraction nor mining rights. The separate Land mining-rights reading is reported independently. **source:** BGR / Staatliche Geologische Dienste · BSK1000
Regional terrain: elevation, slope and aspect	**result:** Ground near the plot (regional DGM200 model): 124.7 m · BKG model; slope 1.5°; aspect 71° clockwise from north. Aspect class: East. The 200 m grid describes surrounding terrain. Survey the plot gradient and drainage on site. **source:** GeoBasis-DE / BKG · DGM200, as of 2020

Read for this order · 16 Nov 2026