

Climate-adapted tree species selection ~ Stand and soil ~

Natural area classification and stand characteristics

Growth region:	Mitteldeutsches Trias-Berg- und Hügelland	Annual precipitation:	750 mm
Growth district:	Knüllgebirge	Vegetation period:	350 mm
Growth zone:	Obere Buchen-Mischwaldzone	Annual temperature:	8,7°C
Altitude:	~ 360 m above mean sea level	Vegetation period:	15,1°C

FoA Neukirchen, Abt. 515 C1 (Stand inventory data at excursion point, Sample area 0,16 ha)

Species	Age [y]	Square diameter dq100 [cm]	Height hq100 [m]	Mean square diameter mdq [cm]	Height hq [m]	Number of trees [N/ha]	Basal area [m²/ha]	Volume [m³/ha]	Yield class [-]	Basal area [%]	Stocking degree
European beech	90	40,2	31,7	24,8	25,8	550	26,5	362	0,8	81	
European larch	82	51,1	35,6	43,4	34,0	44	6,5	94	0,2	9	
European spruce	78	46,2	32,9	36,6	30,4	50	5,3	72	0,7	6	
Scots pine	78	36,6	30,3	32,3	29,3	31	2,6	32	-0,1	4	
Sum						675	40,8	561		100	1,2

„Local assessment“ - Review of the forest site mapping

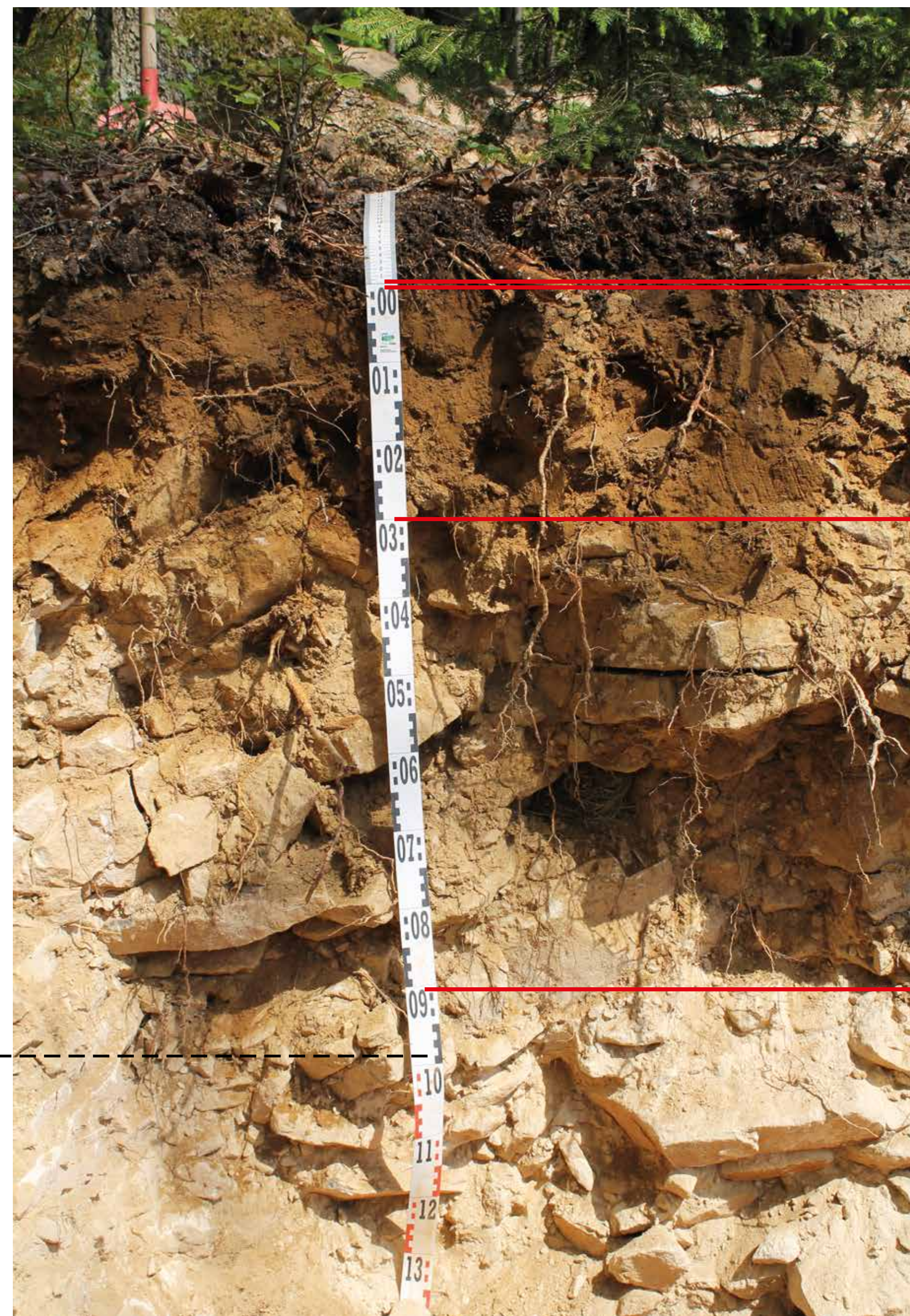
Geology: **Middle Buntsandstein (sm2)**

Soil type (WRB): **Cambisol (Skeletal)**

Evaluation of the forest site: **moderately fresh terrain water regime with moderate nutrient regime**

Calculated aWC for 1 meter soil thickness:
95 mm

Soil profile



Ah (0 – 1 cm)
silty-loamy sand, very low/low bulk density, strongly humic, slightly stony
I Holocene solifluctive loess + sm2

Bv (1 – 30 cm)
silty-loamy sand, low/medium bulk density, slightly humic, strongly stony
I Holocene solifluctive loess + sm2

Bv-Cv (30 – 90 cm)
silty sand, medium bulk density, very slightly humic, very strongly stony
II Pleistocene solifluctive layer + sm2

Cv (90 – 130+ cm)
silty sand, medium solid/solid bulk density, very slightly humic, large Stones
III Weathering layer of the middle Buntsandstein (sm2)

Evaluation of the water regime

- the terrain water regime class does not differ between the soil profile and the mapped data
- the calculated aWC differs from the modeled aWC by **30 mm** (aWC[Polygon] = 125 mm)
- however: the profile is located on the upper slope of the moderately fresh polygon → the soil thickness increases down slope → this results in a overall higher aWC
→ **the modeled aWC is correct for the mapped polygon**

Evaluation of the nutrient regime

- disharmonious condition of the humus form indicates that:
 - a) the mineralization has increased (nitrogen deposition) → Oh-layer
 - b) the decomposition of the litter has reduced (drought) → Of-layer
- silicate weathering occurs, pH values are only just within the silicate buffer range
- no podsolization evident
- since there are no chemical analysis => no evidence to rate the nutrient regime class lower than **moderate**