

■ ERASMUS+ BIP (Blended Intensive Programme)

■ Organiser: Blaž Repe

University of Ljubljana, Faculty of Arts, Geography Department

■ Participating institutions:

- Nicolaus Copernicus University, Toruń, Poland (Marcin Świtoniak),
- Estonian University of Life Sciences, Tartu, Estonia (Endla Reintam),
- Latvia University of Life Sciences and Technologies, Jelgava, Latvia (Ieva Erdberga),
- Poznań University of Live Sciences, Poland (Łukasz Mendyk),
- Technical University, Braunschweig, Germany (Magdalena Sut-Lohmann),
- Martin Luther University, Halle-Wittenberg, Germany (Holger Lohse).

LOCATIONS

1. Ljubljana Basin, Rožnik

- 4 profiles

2. Bloke, Velike Bloke

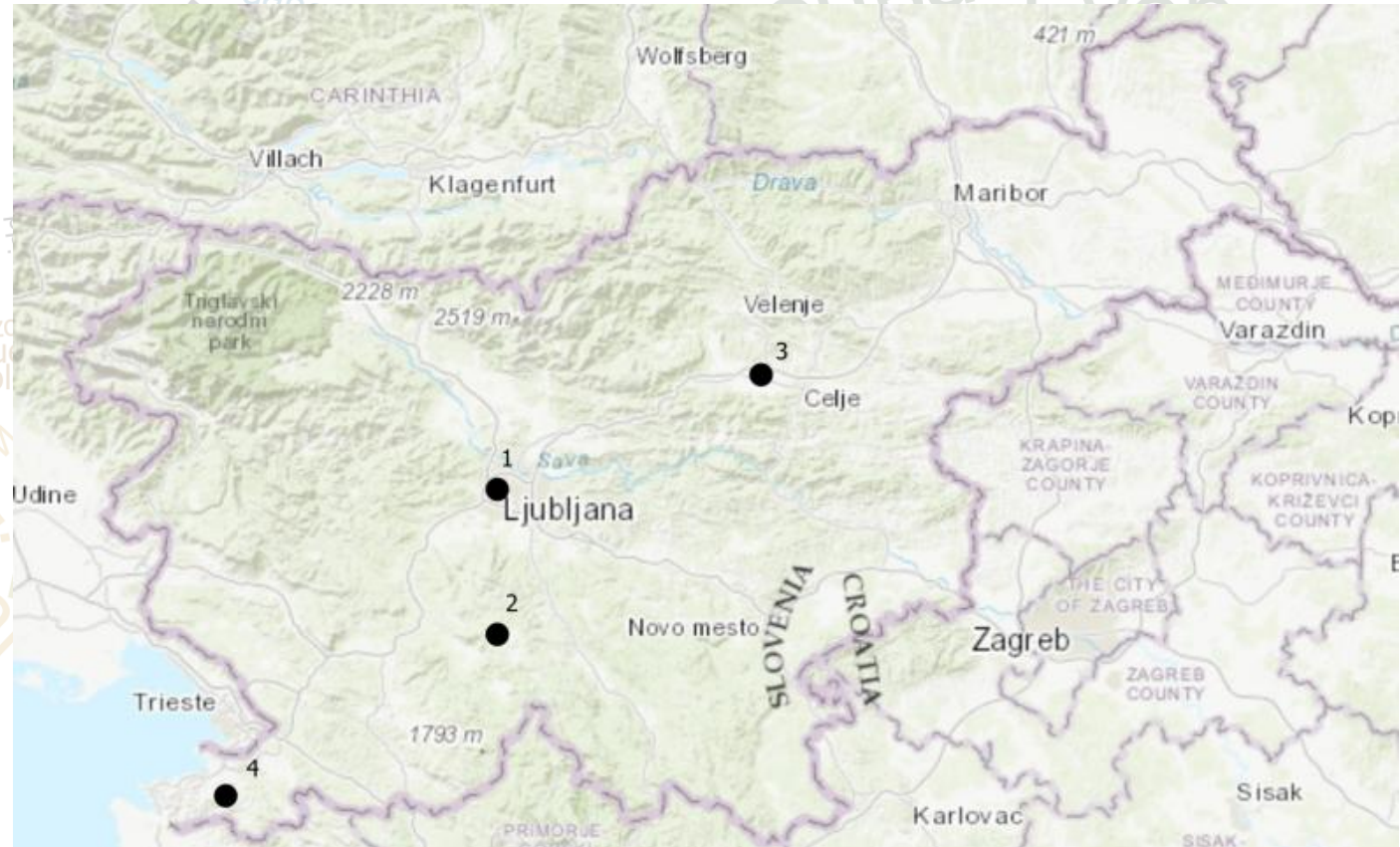
- 4 profiles

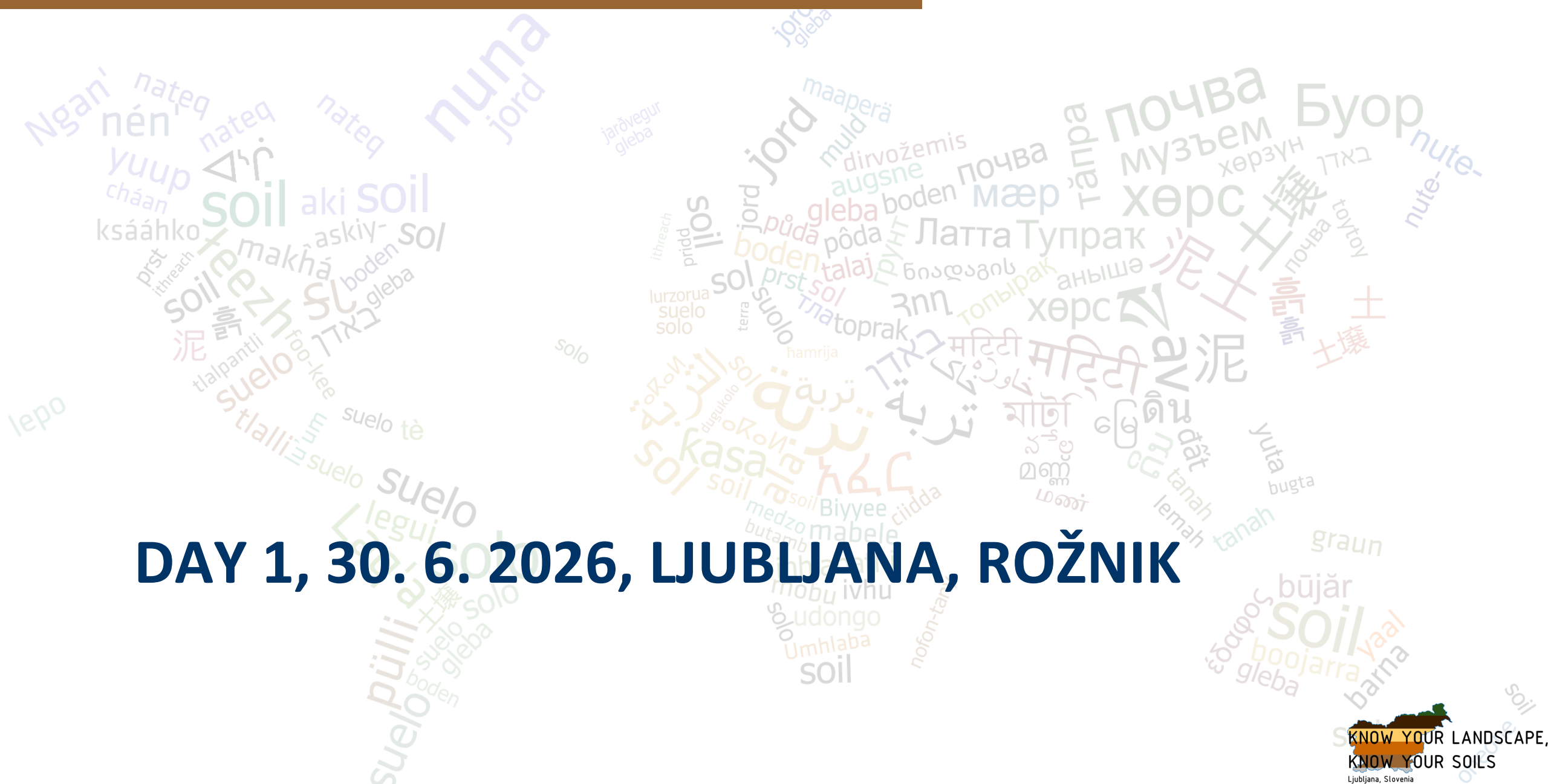
3. Celje Basin, Žalec

- 4 profiles

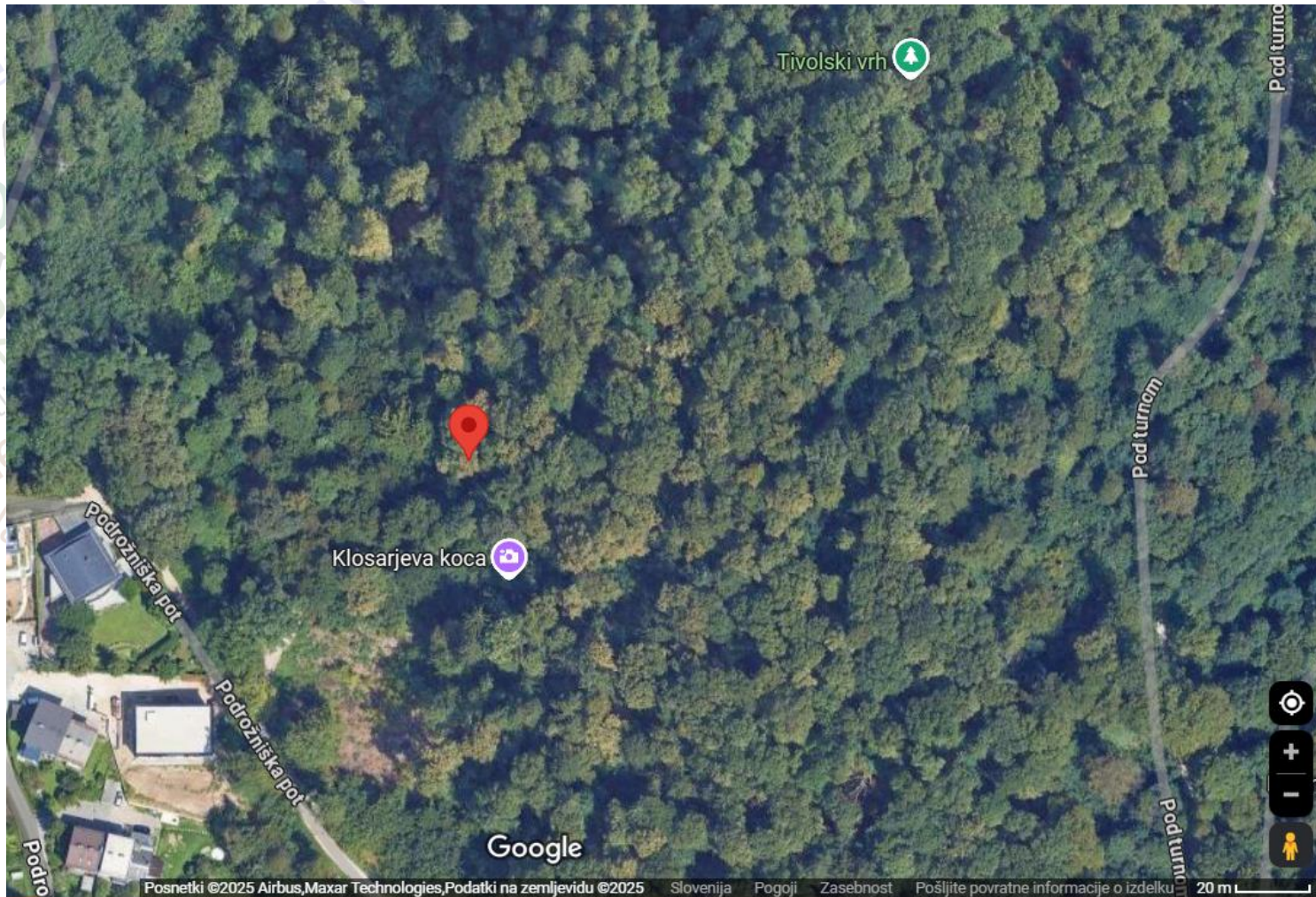
4. Hills of Koper, Marezige

- 2 profiles





DAY 1, 30. 6. 2026, LJUBLJANA, ROŽNIK



Profile 1 - Rožnik park - 46°03'19.2"N 14°29'17.5"E



Profile 1 - Rožnik park

Land use: Forest

Potential vegetation: deciduous forest (beech forest)

Vegetation/crops: *Carpinus betulus*, *Fagus sylvatica*

Landform: medium-gradient hill, middle of the slope

Microtopography : low hummocks



Profile 1 - Rožnik park

O - 1 - 0 cm, really thin

Ah - 0 - 2 cm, silty loam texture, colour - moist (10YR 2/2) very dark brown, weak angular blocky fine structure, pH 5;

ABw - 2 - 14 cm, silty loam texture, colour - moist (10 YR 3/4) dark yellowish brown, weak subangular fine structure, pH 5, cambic horizon;

Bw - 14 - 70 cm, silty loam texture, colour - moist (10 YR 4/6) dark yellowish brown, weak to medium subangular blocky fine to medium structure, pH 5, cambic horizon;

Bc - 70 - (110) cm, silty loam texture, colour - moist (10 YR 4/6) dark yellowish brown, weak to medium subangular blocky fine to medium structure, pH 5;

Eutric CAMBISOL (Siltic, Ohric, Raptic)



Profile 2 - Rožnik

Land use: natural forest

Potential vegetation: forest

Vegetation/crops: forest

Landform: small plateau

Microtopography: medium hummocks

Profile 2 - Rožnik



Ah - 0 - 18 cm, loamy texture, colour - moist (5Y 2,5/1) Black, strong, Subangular blocky, Coarse, pH 4.5, hard plastic artefacts

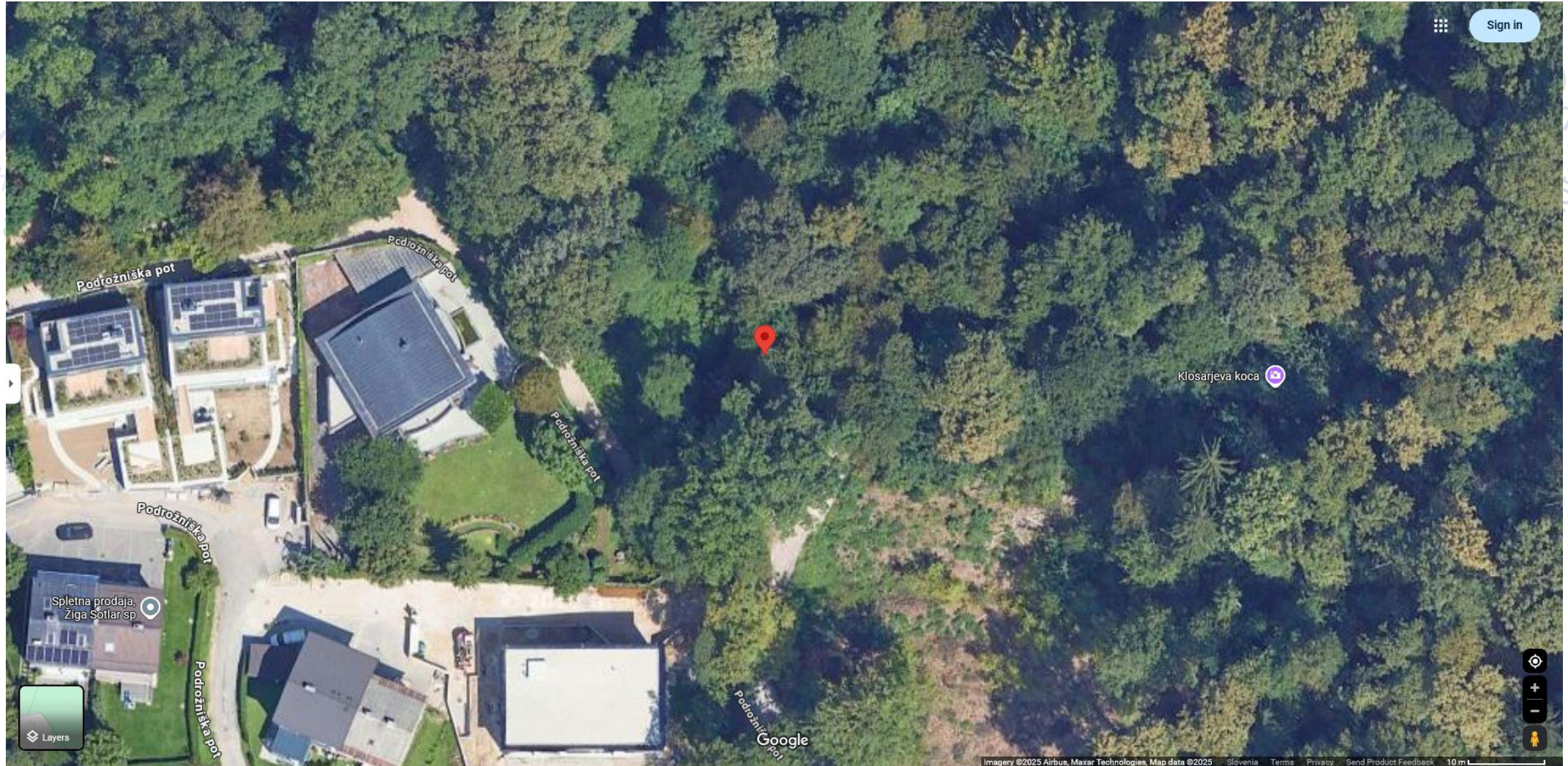
Bw - 18 - 50 cm, silt texture, colour - moist (10YR 5/8) Yellowish brown, strong, angular blocky, Coarse, pH 4.5, Cambic horizon.

Bwg - 50 - 75: Silty loam texture, colour - moist (10YR 5/3) brown, strong, angular blocky, pH 4,0

Cg - 75 - 100: clay texture, colour - moist (2,5Y 5/4) light olive brown, pH 4,5 strong, angular blocky, gleyic

CG - 100 - 110+: clay texture, colour - moist (2,5Y 6/4), pH 5,2, structure

Dystric CAMBISOL
(Anosiltc, Ochic, Bathyglyeyic)



Profile 3 - Park Tivoli - $46^{\circ}3'18.27''N$ $14^{\circ}29'14.89''E$



Profile 3 - Park Tivoli

Land use: planted forest

Vegetation: deciduous forest (beech forest)

Landform: medium slope

Profile position: lower slope

Profile 3 - Park Tivoli



O - 3 - 0 cm, organic horizon

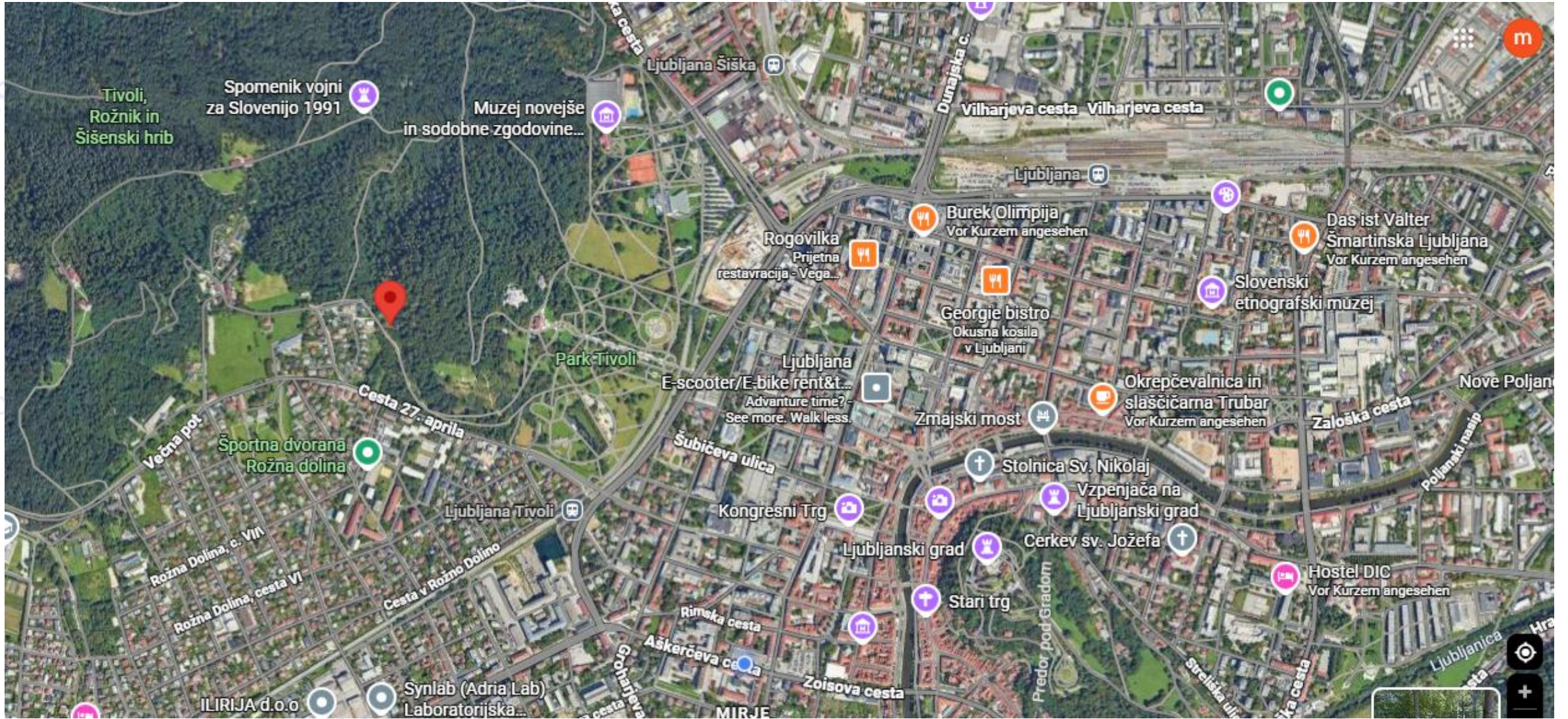
A - 0 - 10 cm, silt loam texture, colour - moist (2.5 Y 4/2) dark grayish brown colour, moderate granular structure, pH 6;

B - 10 - 35 cm, silty clay texture, colour - moist (2.5 Y 5/3) light olive brown colour, moderate blocky subangular structure, common oximorphic features, pH 6;

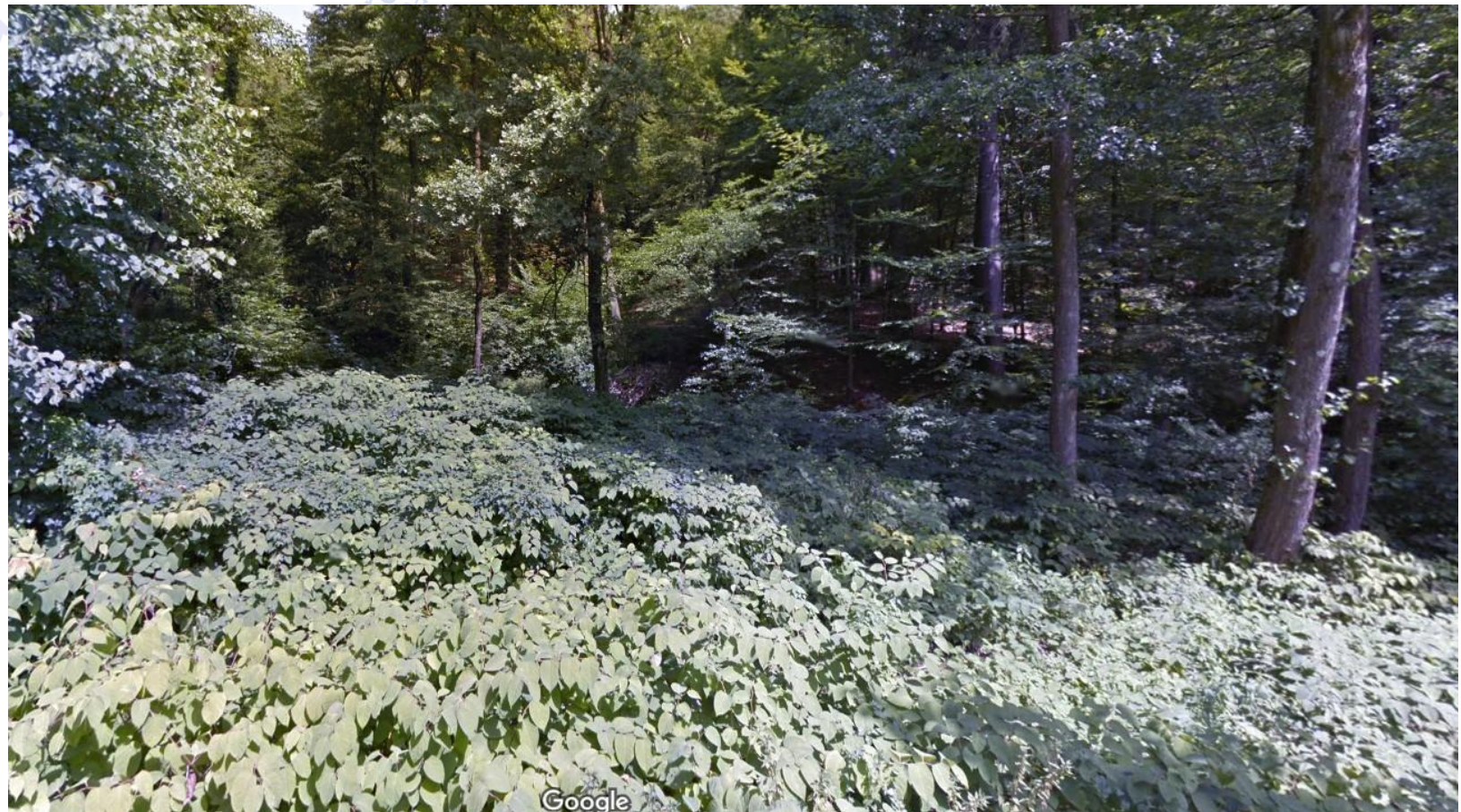
BC - 35 - 70 cm, silty clay texture, colour - moist (2.5 Y 4/2) dark grayish brown colour, moderate blocky subangular structure, few oximorphic features, pH 6;

C - 70 - (100) cm, silty clay texture, colour - moist (5 Y 6/2) light olive gray colour, moderate blocky subangular structure, common oximorphic features, pH 6.5;

Eutric GLEYSOL (Katoclayic, Ochric, Solimovic, Inclinic)



Profile 4 - Ljubljana Tivoli-Park - 46° 03'17.0"N 14° 29'16.0"E



Profile 4 - Ljubljana Tivoli Park

Land use: deciduous forest

Potential vegetation: deciduous forest (beech forest)

Vegetation/crops: *Alnus Glutinosa*, *Frangula alnus*, etc.;

Landform: medium-gradient hill

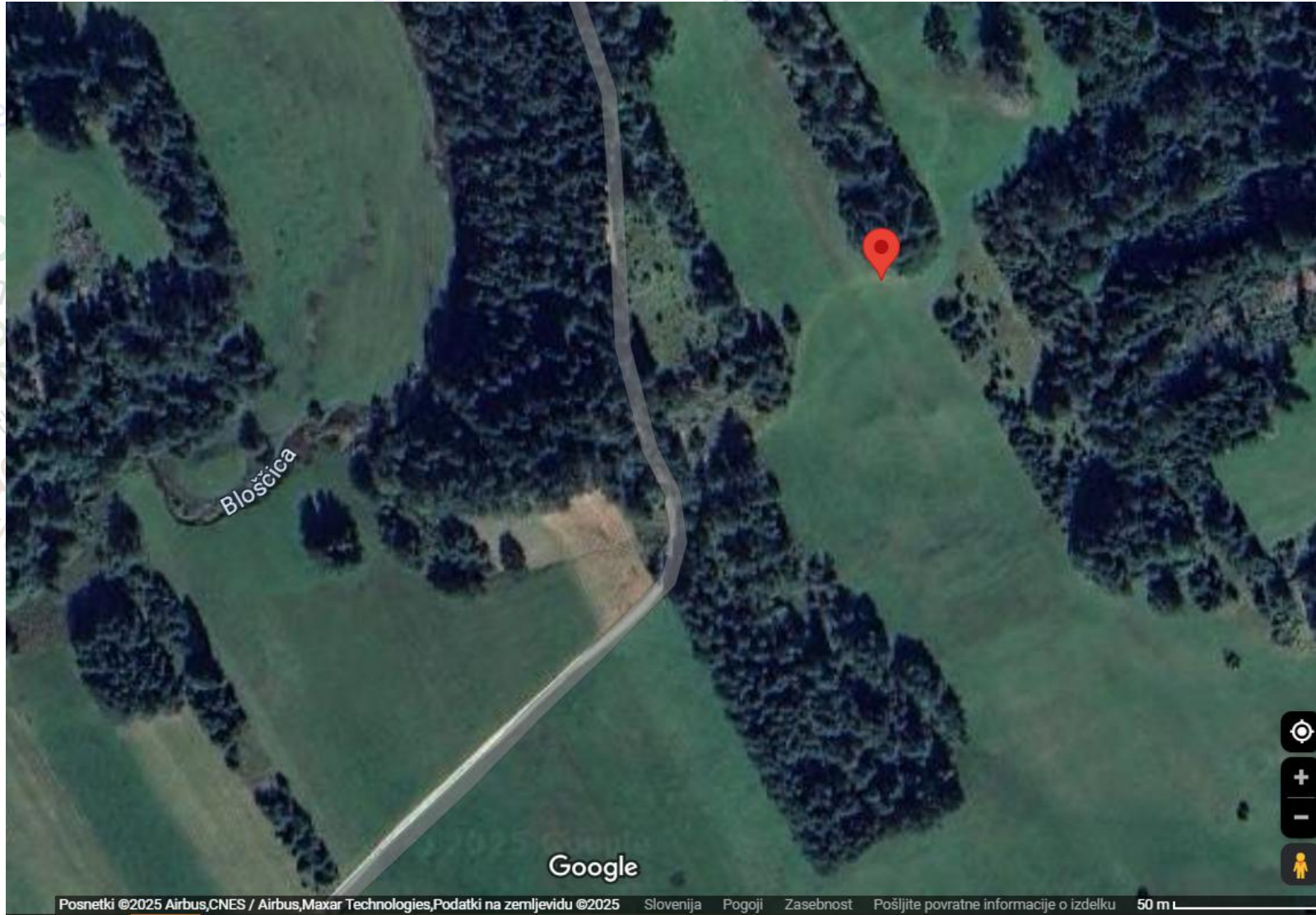
Microtopography : Low hummocks



Profile 4 - Ljubljana Tivoli Park

- He - 0 - 6 cm: **organic material**, Peat decomposition: D3-D5.1, colour - moist (10 YR 2/1) black, common roots, pH 5.5;
- Ah - 6 - 31 cm: **mineral material**, silty clay loam texture, colour - moist (10 YR 3/2) very dark greyish-brown, Porous massive + subangular blocky structure, common roots, pH 6.5;
- C₁₁ - 31 - 47 cm: silty clay loam texture, **gleyic properties**, Redox mottling, massive + angular blocky structure, no roots, pH 6.5;
- C₁₂ - 47- (60) cm: silty clay loam texture, **gleyic properties**, Redox mottling, angular blocky structure, pH 7;

Eutric GLEYSOL (Loamic, Humic, Inclinic)



Profile 5 - Bloke plateau - 45° 47'54.8"N 14° 28'57.5"E



Profile 5 - Bloke plateau

Land use: deciduous forest

Potential vegetation: deciduous forest (beech forest)

Vegetation/crops: *Betula pendula*, *Pinus sylvestris*, *Corylus avellana*

Landform: plateau

Microtopography : level - surface almost flat



Profile 5 - Bloke plateau

O - 2 - 0 cm,

Ah - 0 - 16 cm, silty loam texture, colour - moist (10 YR 2/2) very dark brown, medium subangular blocky fine to medium structure, pH 5, mollic horizon;

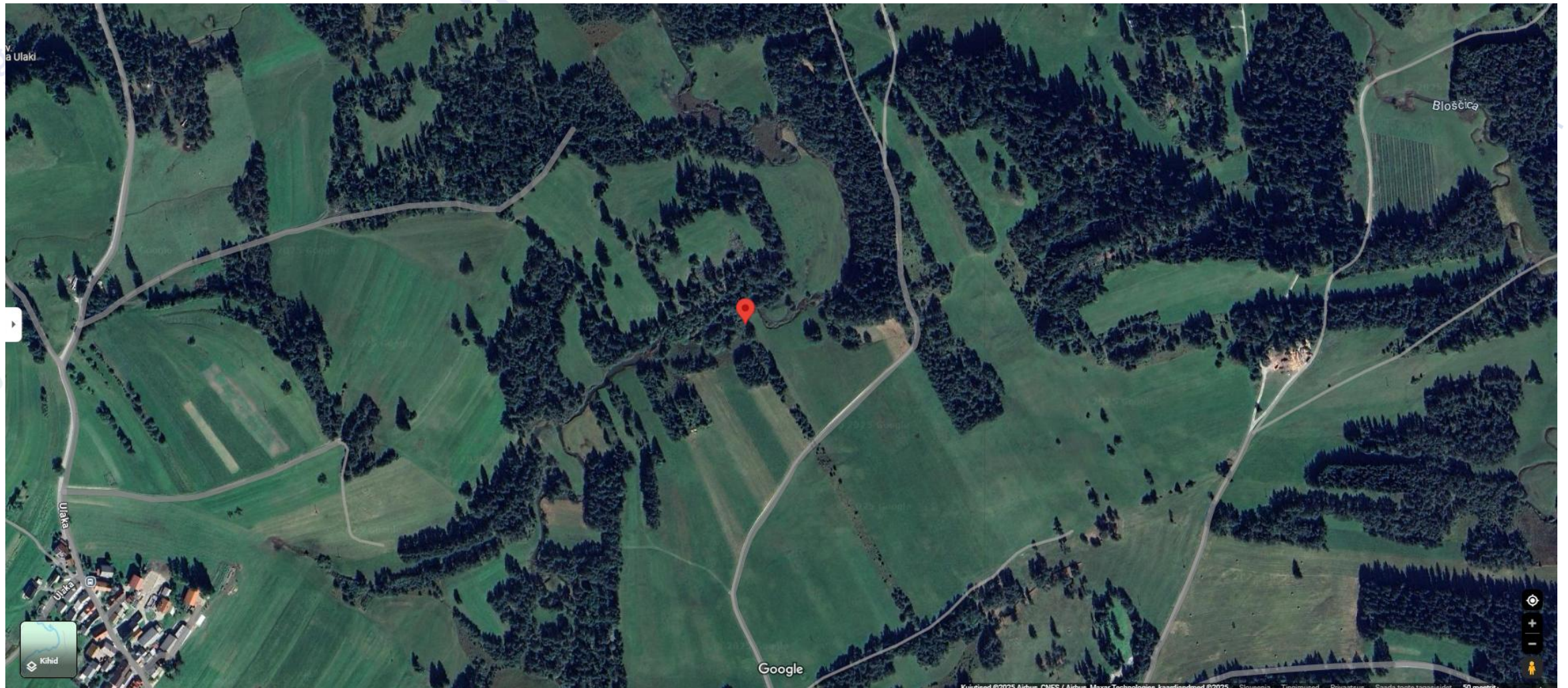
A - 16 - 24, silty loam texture, colour - moist (7.5 YR 3/2) dark brown, medium to strong angular blocky coarse to medium structure, pH 6, mollic horizon;

A2 - 24 - 35, silty clay loam texture, colour - moist (10 YR 3/2) very dark grayish brown, strong angular blocky coarse to medium structure, pH 6, mollic horizon;

E - 35 - 55, silty loam texture, colour - moist (10 YR 4/4) dark yellowish brown, strong angular blocky coarse to medium structure, pH 6;

Bt - 55 - (170), silty clay loam texture, colour - moist (10YR 5/6) yellowish brown, strong angular blocky coarse to medium structure, pH 6, argic horizon

Luvic PHAEOZEM (Polysiltic, Endoloamic, Humic)



Profile 7- Bloke plateau - 45° 47'52"N 14° 28'45"E



Profile 7 - Bloke plateau, south of Ljubljana

Land use: Permanent grassland

Potential vegetation: reed bed

Vegetation/crops: pine, reed, grass, spruce, great burnet

Landform: plateau

Microtopography : flat



Profile 7 - Bloke plateau

Ah - 0 - 10 cm, sandy loam texture, colour - moist (7.5 Y 2.5/2) dark reddish yellow, weak single grain thin structure, a lot of roots, pH 7.

A1 - 10 - 25 cm, sandy loam texture, colour - moist (7.5 Y 4/2) relatively dark, yellowish/red colour, moderate granular medium fine to coarse structure, a lot of roots, pH 7, moderately calcareous, dolomite fragments.

A2 - 25 - 50 cm, clay loam texture, colour - moist (7.5 Y 4/2) relatively dark, yellowish/red colour, moderate massive fine to coarse structure, few roots, pH 7.5, moderately calcareous, dolomite fragments.

C - 50 - ..cm, clay loam texture, colour - moist (2.5 Y 3/1) very dark gray colour, yellowish brown, strong massive fine to coarse structure, pH 7.5, moderately calcareous, dolomite and limestone fragments, shells.

Dolomitic Fluvic Mollic GLEYSOL (Loamic)



Profile 8 - Ljubljana Tivoli-Park - $45^{\circ} 47'45.3''N$ $14^{\circ} 28'37.3''E$



Profile 8 - Velike Bloke

Land use: Natural forest

Potential vegetation: Coniferous forest

Vegetation/crops: *Picea sp.*, *Pinus sylvestris*

Landform: Plateau

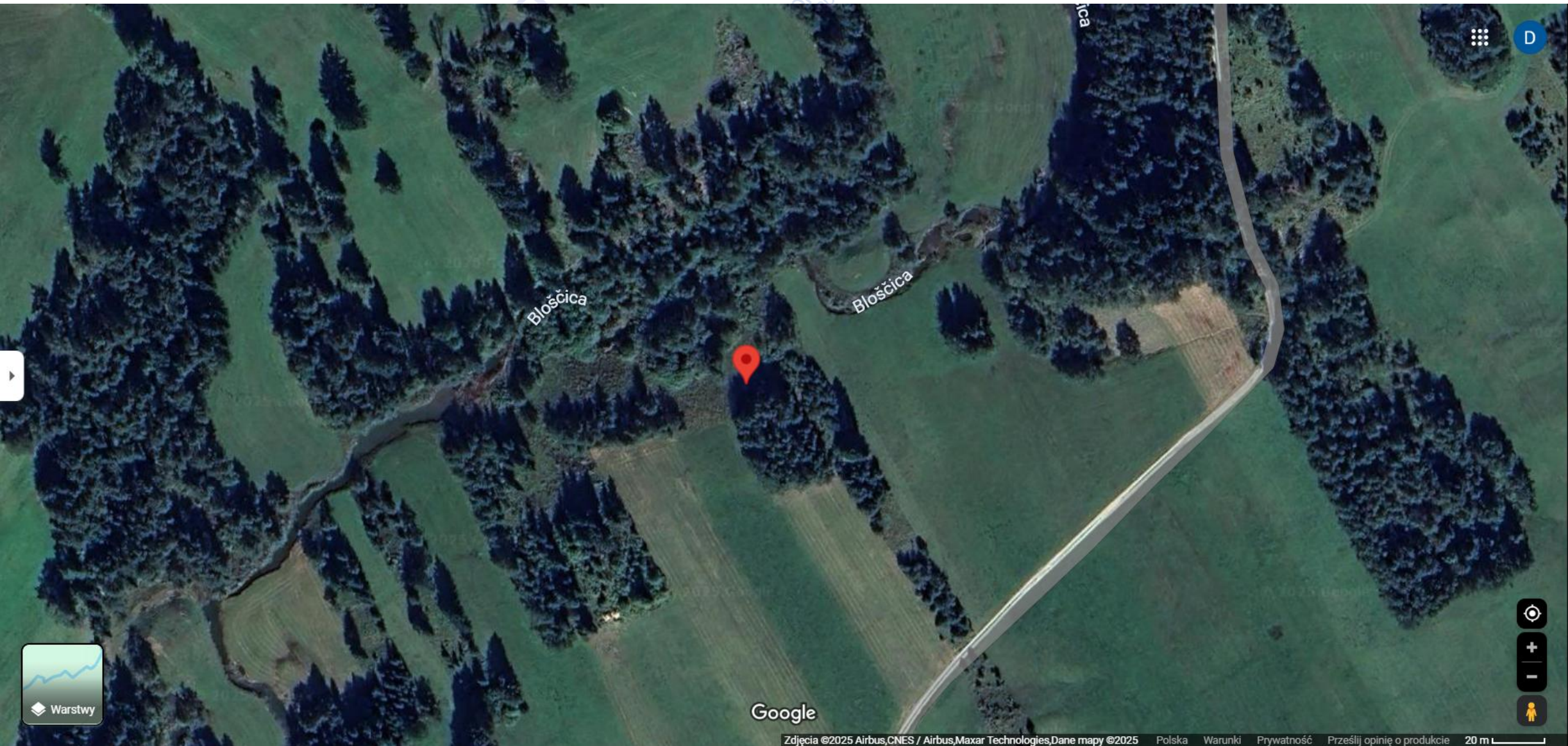
Microtopography : flat



Profile 8 - Velike Bloke

- Oi -5 - 0 cm:** organic material, slightly decomposed, colour - moist (2.5 Y 3/1) very dark grey;
- A1 - 0 - 10 cm:** silty clay texture , colour - moist (2.5 Y 3/1) very dark grey, subangular blocky + granular structure, common roots, pH 6.5;
- A2 - 10 - 42 cm:** silty clay texture , colour - moist (2.5 Y 3/1) very dark grey, subangular blocky structure, few roots, pH 6.5;
- Btl - 42- 65 cm:** gleyic properties, silty clay texture , Redox mottling, angular blocky structure, few roots, pH 6.0;
- Cr - 65 - 95 cm:** gleyic properties, reducing conditions, heavy clay texture , color - moist (5 Y 4/1) dark grey, angular blocky structure, very few roots, pH 6.5;
- Hab -95 - 105 cm:** organic material, Peat, strongly decomposed, pH 6.5;
- 2Ca - > 105 cm:** dolomitic material, lithic discontinuity, sandy loam texture, massive structure, dominant coarse fragments, pH 6.5;

**Pantoeutric Dolomitic GLEYSOL
(Anoclayic, Luvic, Humic)**





Profile 6 - Bloščica flood plain - fossil riverbed

Land use: nature protection

Potential vegetation: fen, forest

Vegetation/crops:

Landform: depression

Microtopography: medium hummocks



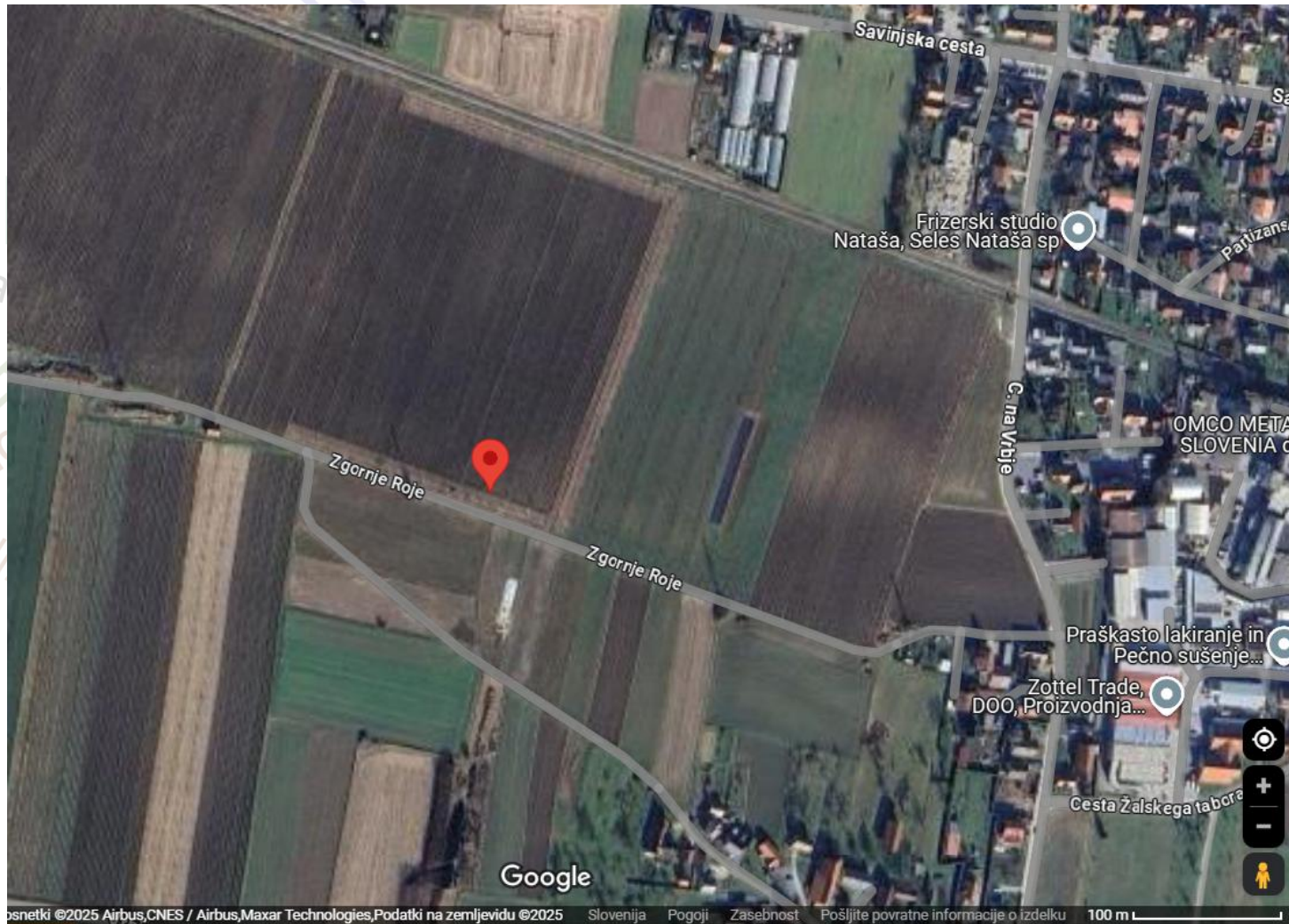
Profile 6 - Bloščica flood plain - fossil riverbed

Ah 0 - 35: loamy texture, colour - moist (10YR 3/2) brown, pH 7,5, very friable consistence, mollic horizon

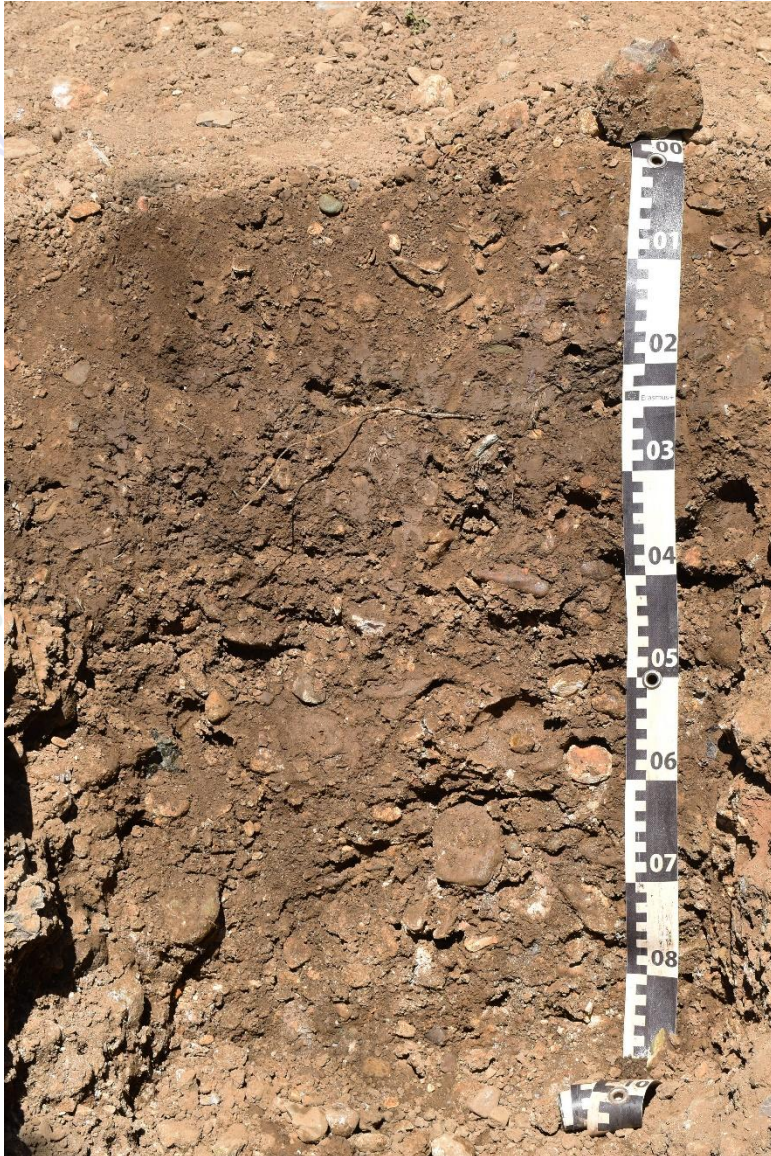
Al 35 - 55: loamy texture, colour - moist (10YR 5/2) grayish brown, very friable consistence, pH 7,5 mollic horizon, reducing conditions

Cl 55 - 70+: loamy sand, dominant, coarse gravel, subrounded, fresh or slighty weathered, colour - moist (Gley 1 7/10Y) pH 7,5 extremely calcareous, dolomite fragments, very friable, gleyic properties, lithic discontinuity, dolomitic material

Eutric Endodolomitic Mollic Amphireductic, GLEYSOL (Anoloamic, Endoarenic, Humic, Endoraptic, Endosceletic)



Profile 10 - Žalec- $46^{\circ}15'01.7''N$ $15^{\circ}08'56.3''E$



Profile 10 - Žalec

Land use: hop plantation

Potential vegetation: deciduous forest

Vegetation/crops: hops

Landform: plain

Microtopography : medium hummocks



Profile 10 - Žalec

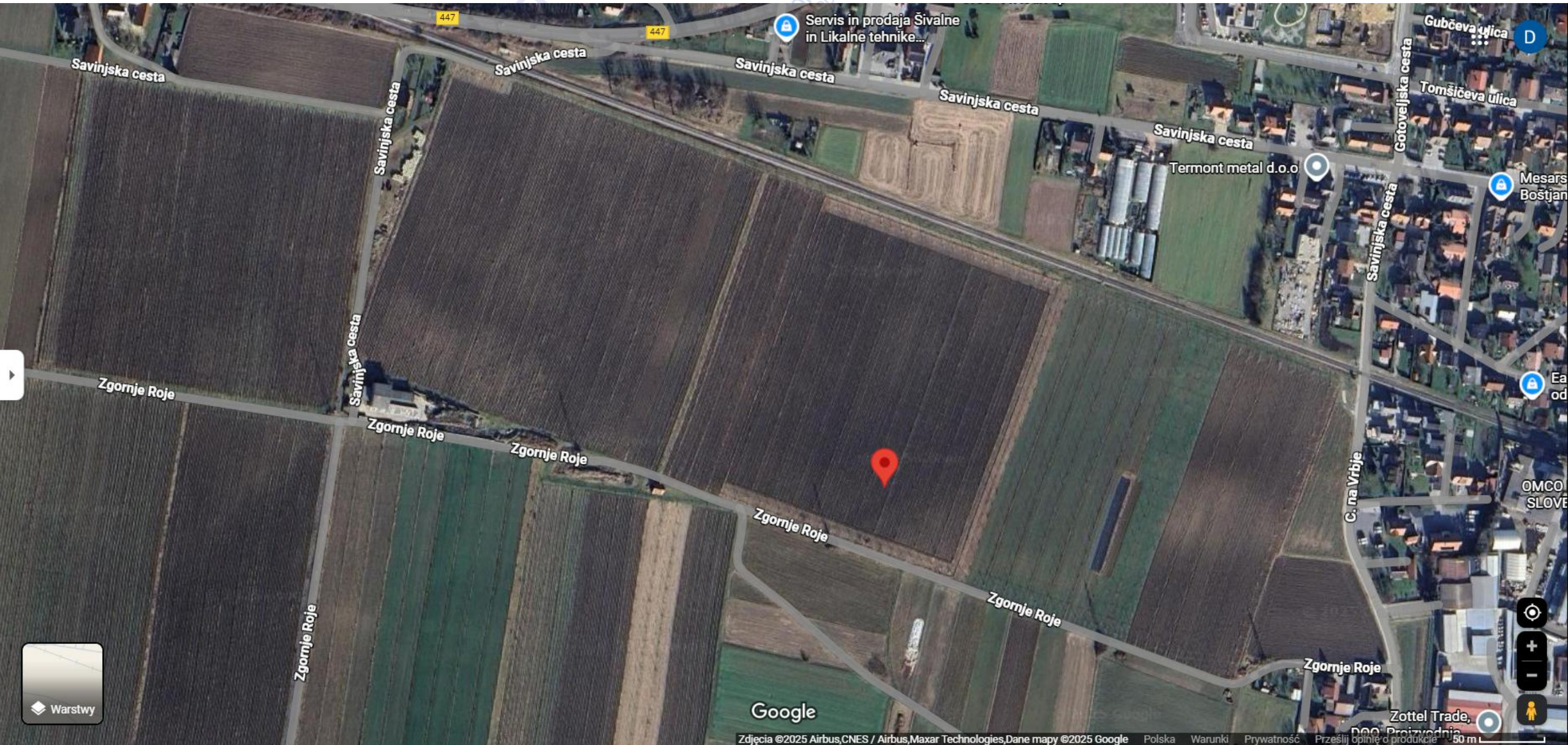
Ap - 0 - 10 cm, silty loam texture, colour - moist (10 YR 3/3) dark brown, medium angular blocky coarse structure, pH 7, mollic horizon, 10 % of coarse fragments;

A₁ - 10 - 33 cm, silty loam texture, colour - moist (10 YR 3/2) very dark grayish brown, medium angular blocky medium structure, pH 6,5, mollic horizon, 25 % of coarse fragments;

A₂ - 33 - 70 cm, silty loam texture, colour - moist (10 YR 4/3) brown colour, medium angular blocky medium structure, pH 7, 50 % of coarse fragments;

A₃ - 70 - 80 cm, silty loam texture, colour - moist (10 YR 4/3) brown colour, medium angular blocky medium structure, pH 7,5, 60-70 % of coarse fragments;

Dolomitic Katoskeletal Rendzic PHAEOZEM (Loamic, Aric, Humic)





Profile 9 - Celje basin Hopsfield

Land use: Orchards plantation (Hop)

Potential vegetation: forest

Vegetation/crops: Hop

Landform: valley form

Microtopography: medium hummocks



Profile 9 - Celje basin Hopsfield

Ap 0 - 20: silty clay, colour - moist (2,5Y 3/3) dark olive brown, slighty calcareous, Limestone fragments, pH 6,5, crumbly structure, mollic horizon

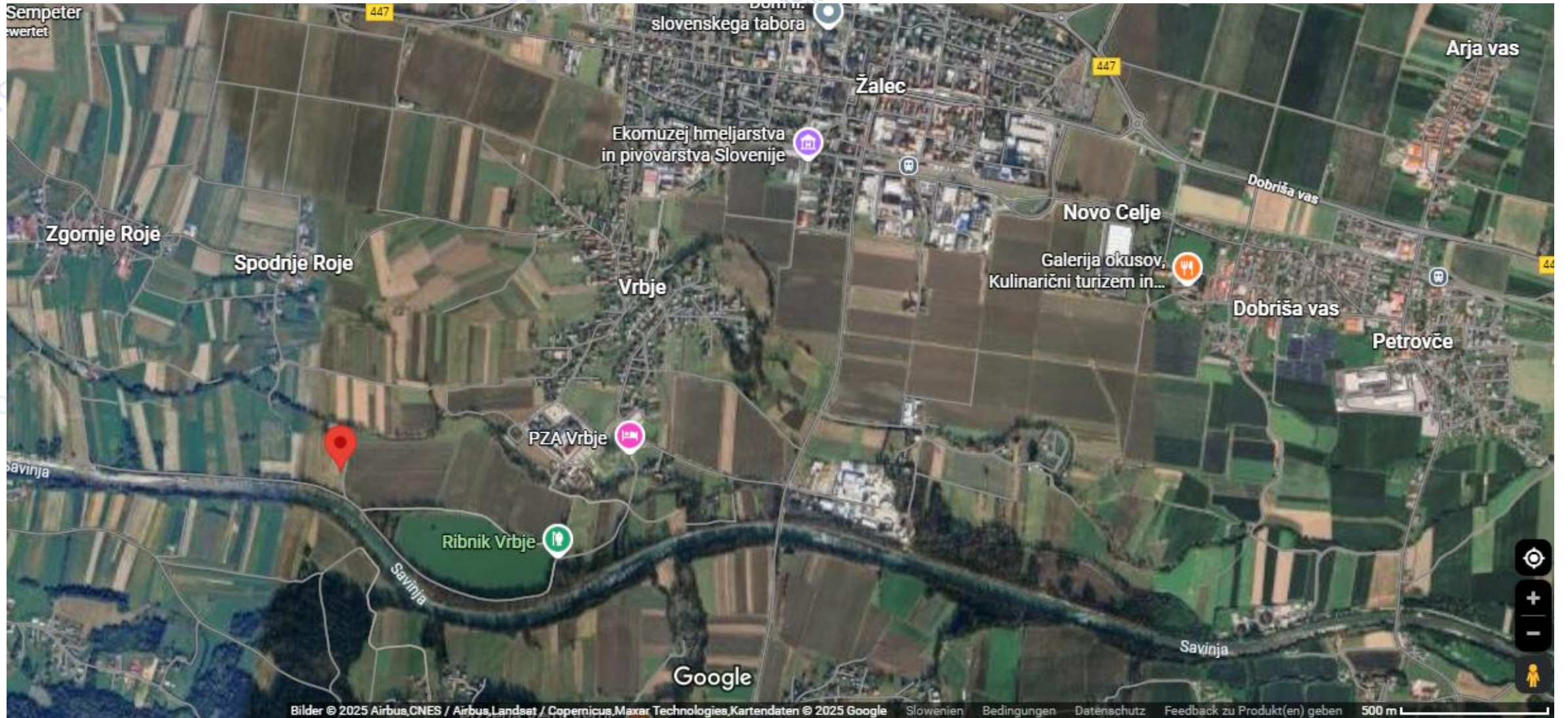
Ap2 20 - 38: silty clay loam, colour - moist (2,5Y 3/3) dark olive brown, slighty calcareous, Limestone fragments, pH 6,5, crumbly structure, mollic horizon

Bt 38 - 70: silty clay, colour - moist (10Y 3/3) darkish greenish gray, moderately calcareous, Limestone fragments, pH 7, subangular and angular blocky, archic horizon

Bt2 70 - 105: silty clay, colour - moist (10YR 4/1) dark gray, pH 7,5, subangular blocky

C 105+: colour - moist (10YR 4/2) dark grayish brown, pH 7,0 moderately calcareous, limestone fragmets, lumpy, dolomitic material

Dolomitic Luvic PHAEOZEM (Polyclayic, Aric, Humic)



Profile 11 - Žalec - 46° 14'24.7"N 15° 08'27.7"E



Profile 11 - Žalec

Land use: Arable land

Potential vegetation: Riparian forest

Vegetation/crops: *Barley*

Landform: Plain, Valley floor

Microtopography : flat

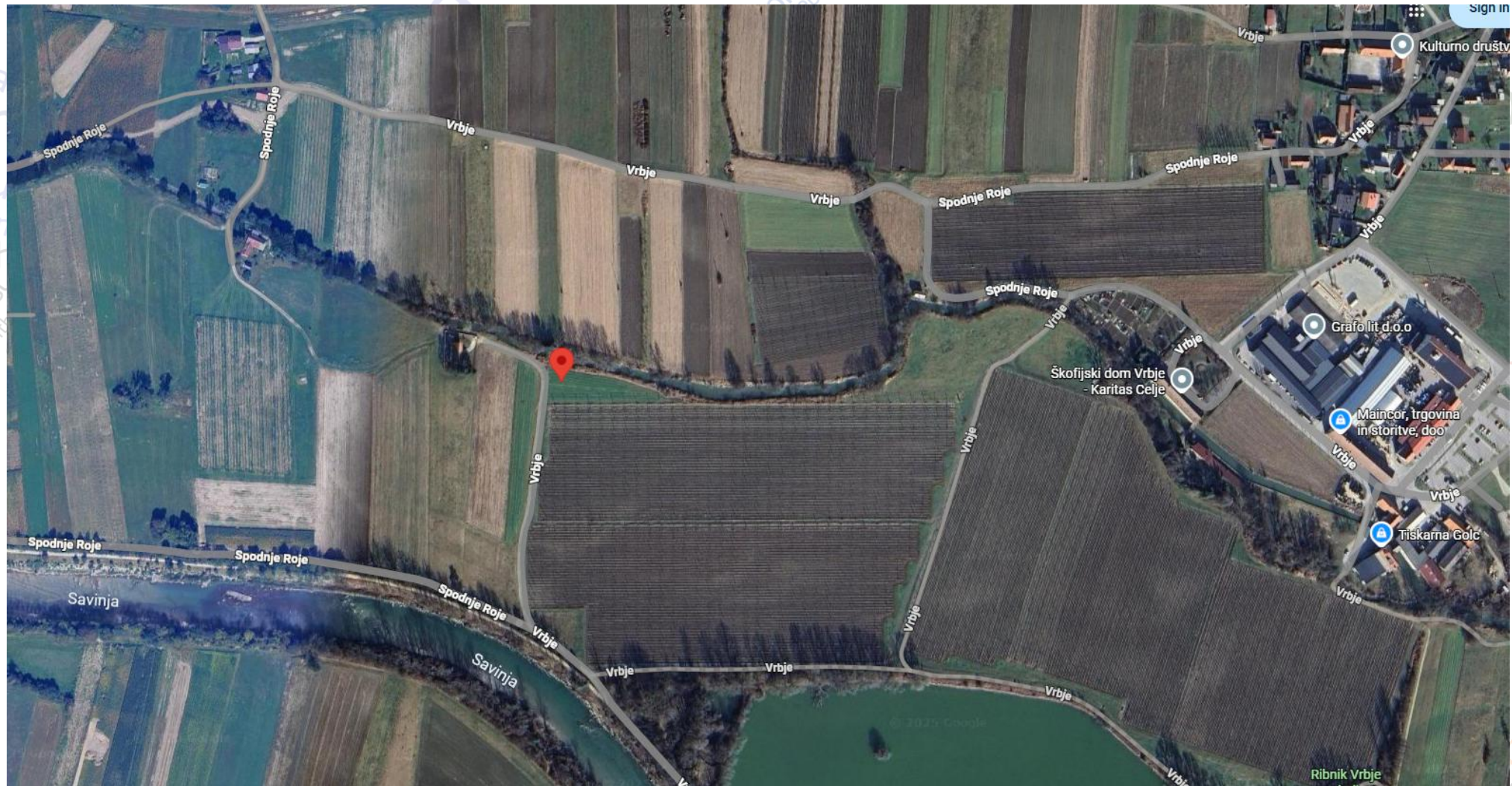




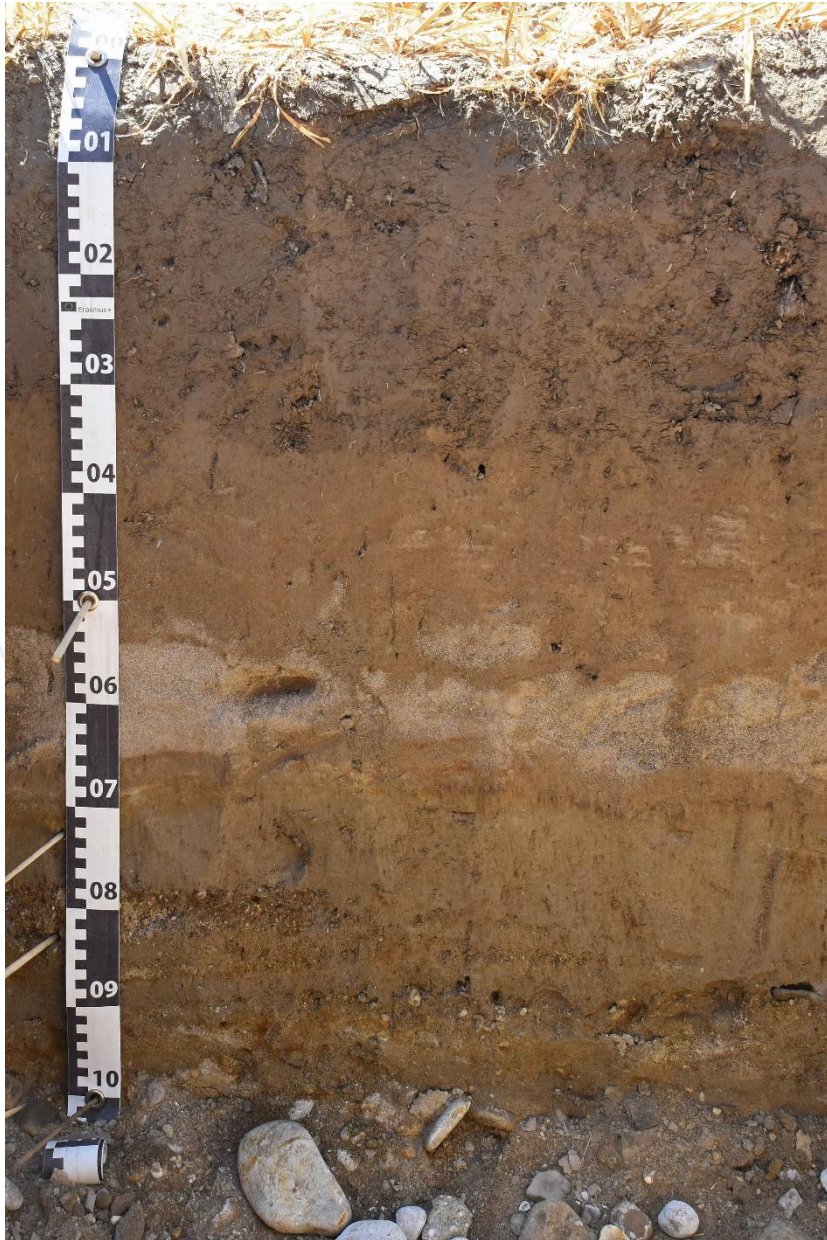
Profile 11 - Žalec

- Ap - 0 - 32 cm:** Mollic horizon, calcaric material, fluvic material, sandy loam texture, colour- moist (7.5 YR 3/2) dark brown, fine\coarse subangular blocky structure, pH 7;
- Bw1 - 32 - 60 cm:** Cambic horizon, calcaric material, fluvic material, loamy sand texture, colour - moist (10 YR 4/3) brown, pH 8;
- Bw2 - 60 - 80 cm:** Calcaric material, fluvic material, silty loam texture, colour - moist (10 YR 4/3) brown, pH 8;
- Bw3 - 80 - 110 cm:** Calcaric material, fluvic material, loamy sand texture, colour - moist (10 YR 4/3) brown, pH 8;
- C - >110 cm:** Calcaric material, fluvic material, unsorted sand texture, pH 7.5;

Calcaric Cambic Fluvic PHAEOZEM
(Epiloamic, Amphiarenic, Aric)



Profile 12 - Žalec - 46°14'28.3"N 15°08'29.8"E



Profile 12 - Žalec

Land use: arable farming

Vegetation/crops: barley, hops, corn, reed

Landform: level land plain

Microtopography : level - surface almost flat

Profile 12 - Žalec



Ap - 0 - 34 cm, silty loam texture, colour - moist (10 YR 4/3) brown colour, strong subangular blocky structure, few roots, pH 7, fluvic, calcaric material;

C₁ - 34 - 55 cm, loamy sand texture, colour - moist (5 Y 4/4) olive colour, moderate subangular blocky structure, very few oximorphic features, pH 7, fluvic, calcaric material;

Cg₁ - 55 - 67 cm, medium and coarse sand texture, colour - moist (2.5 YR 6/2) pale red colour, single grain structure, pH 7, albic horizon, stagnic properties;

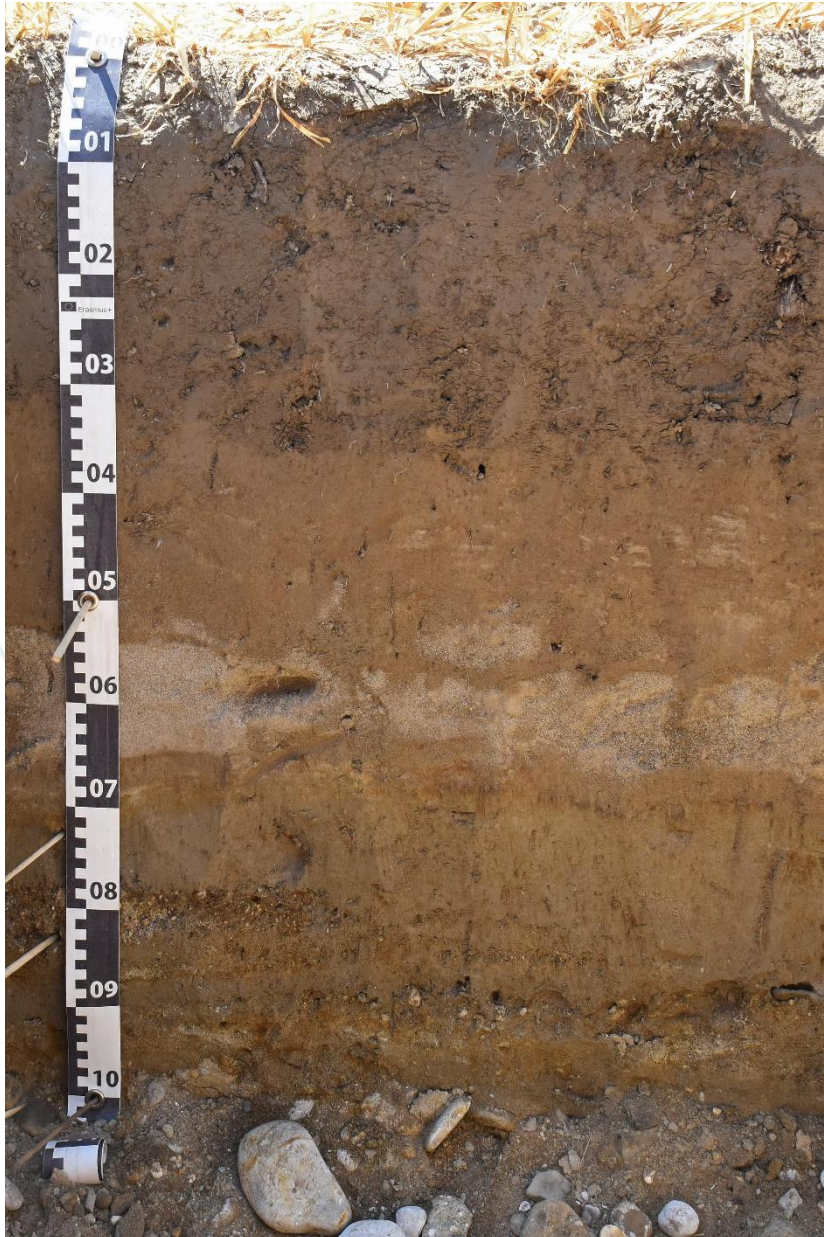
Cg₂ - 67 - 70 cm, silty loam texture, colour - moist (2.5 YR 4/4) olive colour, moderate subangular blocky structure, abrupt oximorphic features, pH 7, fluvic, calcaric material, stagnic properties;

Cg₃ - 70 - 80 cm, silty loam texture, colour - moist (2.5 YR 5/2) weak red colour, strong subangular blocky structure, common oximorphic features, pH 7, fluvic, calcaric material, stagnic properties;

Cg₄ - 80 - 83 cm, interrupted horizon, coarse sand texture, colour - moist (10 Y 5/4) colour, single grain structure, abundant rounded fine gravel coarse structure, pH 7, fluvic, calcaric material;

Calcaric Stagnic Pantofluvic FLUVISOL (Aric, Humic, Polyarenic, Polyloamic)

Profile 12 - Žalec



Cg₅ - 83 - 90 cm, silty loam texture, colour - moist (10 YR 4/3) brown colour, strong subangular blocky structure, few oximorphic features, pH 7, fluvic, calcaric material, stagnic properties;

Cg₆ - 90 - 95 cm, interrupted horizon, loamy sand texture, colour - moist (2.5 Y 4/3) olive brown colour, single grain structure, common subrounded medium gravel coarse structure, common oximorphic features, pH 7, fluvic, calcaric material;

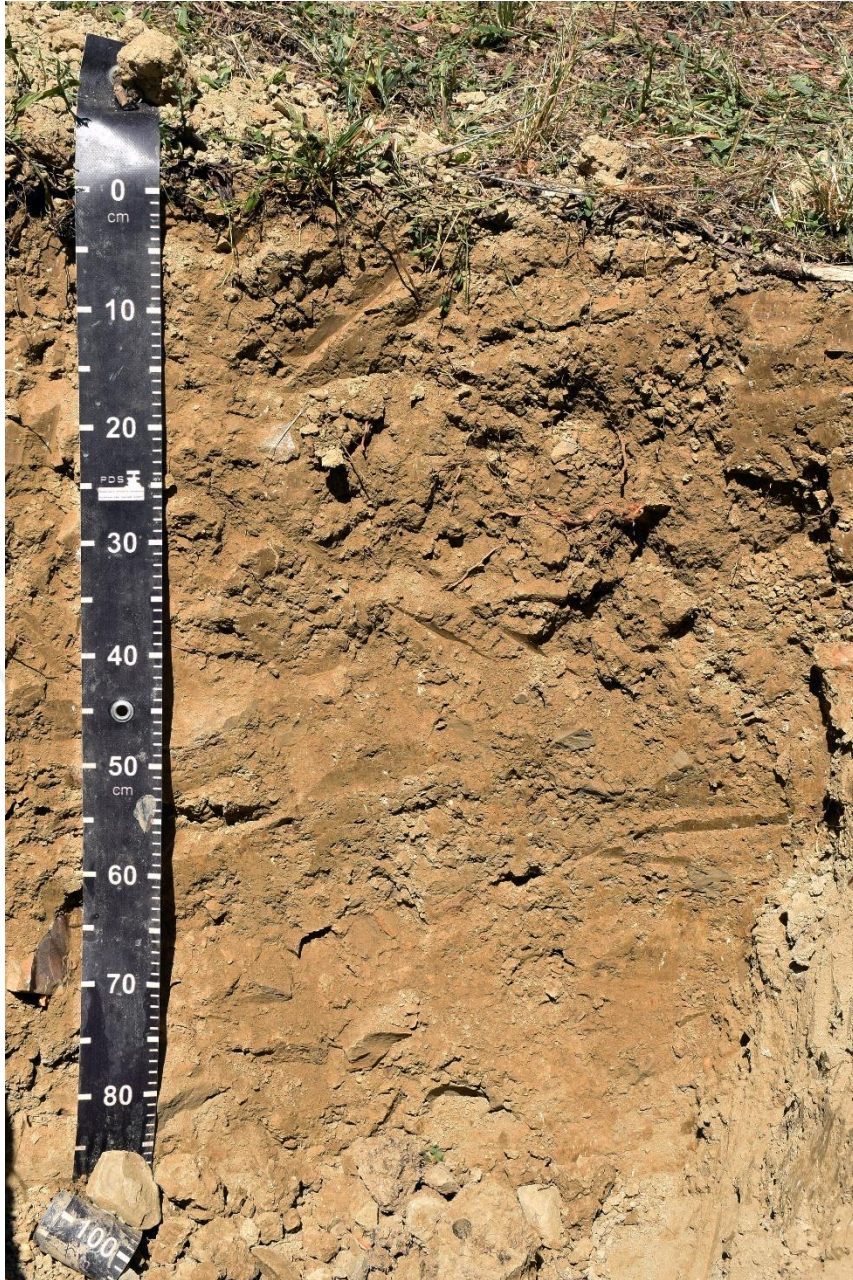
Cg₇ - 95 - 100 cm, silty loam texture, colour - moist (10 YR 4/3) brown colour, strong subangular blocky structure structure, few subrounded medium gravel coarse structure, common oximorphic features, pH 7, fluvic, calcaric material;

2C - 100 - (110) cm, loamy sand texture, single grain structure, many rounded stones coarse structure, iron, manganese coatings on coarse fragments, pH7, fluvic, calcaric material;

Calcaric Stagnic Pantofluvic FLUVISOL (Polyarenic, Polyloamic, Aric, Humic)



Profile 13 - Babiči - 45° 29'51.8"N 13° 46'46.6"E



Profile 13 - Babiči

Land use: Olive grove

Potential vegetation: deciduous forest (beech forest)

Vegetation/crops: olive trees, grasses

Landform: terraced slope

Microtopography : flat



Profile 14 - Babiči - $45^{\circ} 29'51.9''N$ $13^{\circ} 46'49.8''E$



Profile 14 - Babiči

Land use: deciduous forest

Potential vegetation: deciduous forest (beech forest)

Vegetation/crops: olive trees, grasses

Landform: terraced slope

Microtopography : flat

Profile 14 - Babiči

AB - 0 - 40 cm, silty loam texture, colour - moist (2.5 Y 4/2) dark grayish yellow, strong angular very coarse structure, few roots, pH 8, calcaric material;

Bwk - 40 - 62 cm, silty loam texture, colour - moist (2.5 Y 4/3) light yellowish-brown, strong angular blocky extremely coarse structure, pH 8, very few secondary carbonates, calcaric material;

Ck - 62 - (70) cm, silty loam texture, colour - moist (2.5 Y 5/4) moderately strong yellow color, strong angular blocky extremely coarse structure, pH 8, very few secondary carbonates, calcaric material;

Calcaric Relocatic Skeletic REGOSOL (Siltic, Ecsclalic, Ochric)



For additional information you can contact me:



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