

## 6 SAMPLING I LABORATORY ANALYSIS

### 6.1 Field work

During the site visit four (4) boreholes numbered F1-F4 were drilled to a maximum depth of 5 m. The location of the boreholes is shown in the figure below.

Figure 25 - Location of boreholes drilled and rocks extracted by depth intervals



#### LEGEND

- Rulmentul Braşov Platform
- ▲ Boreholes

The location data of the boreholes and samples taken are given in the table below.

Table 19 - Location of investigation points and inventory of soil samples taken

Borehole no.	Location		Z [m]	Total depth [m]	Samples taken
	X(E) [m]	Y(N) [m]			
F1	548662.8	464142.3	549.6	4.0	F1/0.5m F1/0.9m F1/1.4m F1/2.4m
F2	548501.4	464381.5	547.2	5.0	F2/0.6m F2/1.0m F2/3.1m F2/4.7m
F3	548385.1	464323.3	547.0	4.0	F3/1.1m F3/2.1m F3/2.8m F3/3.5m

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F4	548208.0	464471.8	546.1	3.0	F4/0.4m F4/1.5m F4/1.9m F4/2.3m
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All boreholes were drilled with a mechanized coring rig to collect undiluted samples. The tools used for the sampling were cleaned with softened water between samplings to avoid possible intercontamination. The lithology intercepted during drilling is given in the table below.

*Table 20 - Lithology intercepted during drilling*

Borehole	Interval [m]		Description
F1	0	0.1	Concrete slab
	0.1	0.4	Crushed concrete fill, boulders and brick rubble
	0.4	1.8	Grayish-brown fill of dusty clay with rare gravel
	1.8	2.6	Gravel in brownish clay matrix
	2.6	4	Medium gravel with brownish-yellow sand
F2	0	0.1	Concrete slab
	0.1	0.5	Brownish fill of crushed concrete, boulders, gravel, iron-concrete and brick rubble
	0.5	1.4	Black sandy clay loam fill with gravel up to 1 meter.
	1.4	2	Brownish sandy loam with rare gravel
	2	4.8	Soft brownish-yellowish soft sandy silty dust with calcareous debris
F3	4.8	5	Large gravel with coarse brownish-yellow sand
	0	0.4	Concrete slab
	0.4	1	Brown fill with coarse sand and gravel
	1	3.4	Medium gravel in a blackish sandy loam matrix, with a slight odor of oils and rare boulders that turns brownish from 2.7 m
F4	3.4	4	Fine brownish-yellow sand with gravel and boulders from 3.7 m
	0	0.3	Concrete slab
	0.3	2.4	Brown gravel fill in clay matrix with brick rubble and crushed concrete
	2.4	3	Gravel and boulders with coarse brownish-yellow sand

All soil samples were collected in hermetically sealed brown glass jars and temporarily stored in refrigerated boxes.

It was proposed to analyze the following parameters by ILAC-MRA accredited laboratory (RENAR recognized accreditation) i2 Analytical Ltd. in Poland:

- Humidity by internal gravimetric method;
- Metals by in-house method MEWAM 2006 for the determination of metals in soil by digestion with aqua regia followed by inductively coupled plasma mass spectrometry (ICP-OES);
- Total Petroleum Hydrocarbons (TPH) by internal gas chromatograph method coupled with mass spectrometer or flame ionization detector (GC-MS/GC-FID);
- Benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) by USEPA8260 based in-house gas chromatograph gas chromatograph-mass spectrometer mass spectrometer (GC-MS) method.

## 6.2 Applicable legislation

According to the Regulation on environmental pollution assessment approved by Order No. 756/1997, the following thresholds are established for contaminants that may be present in soil:

- Alert Thresholds (AP): are concentrations of pollutants in air, water, soil or in emissions/discharges, which are intended to warn the competent authorities of a potential impact on the environment and which trigger the triggering of additional monitoring and/or reduction of pollutant concentrations in emissions/discharges.