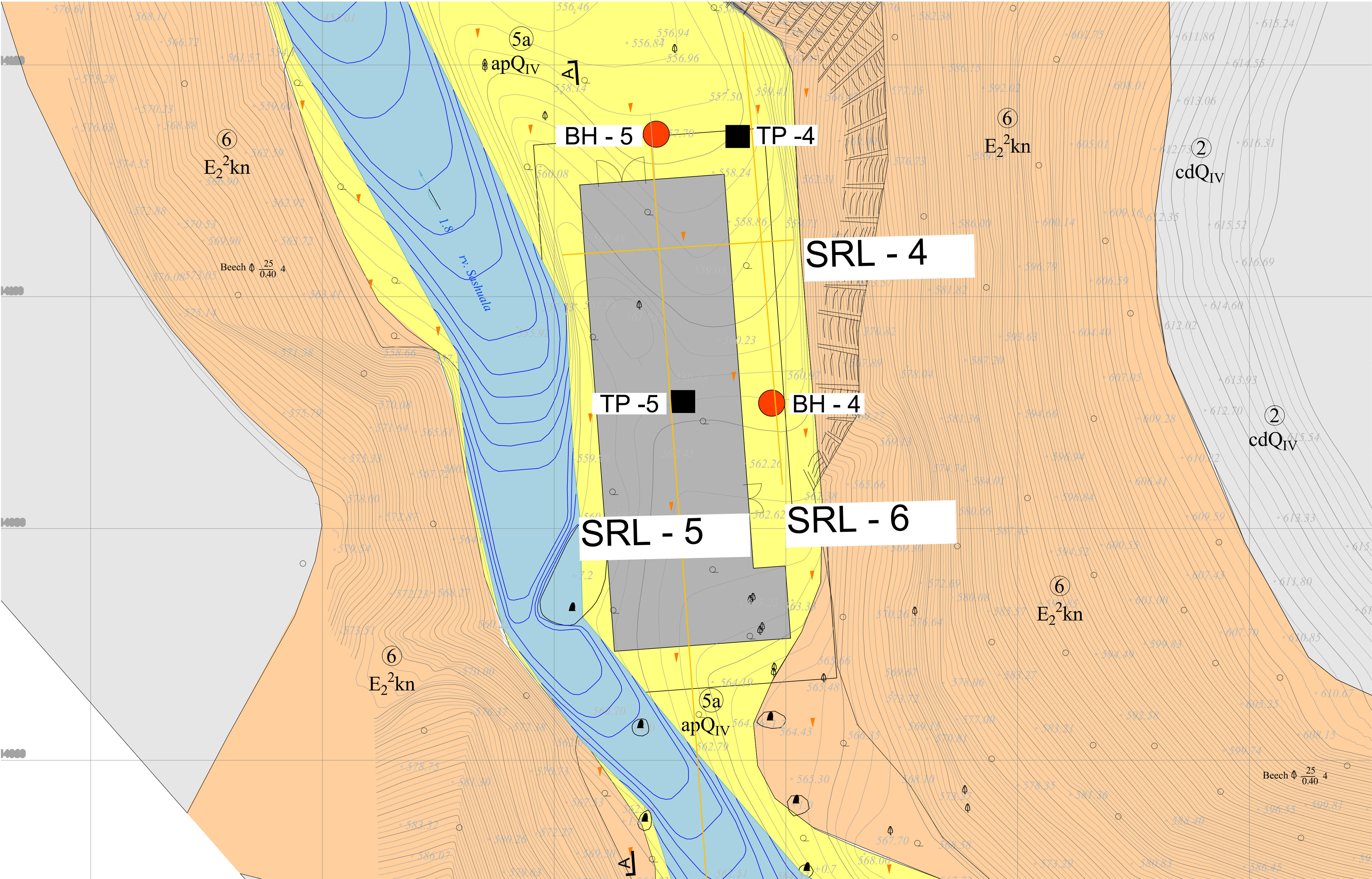


GEOLOGICAL MAP
1:200



- LEGEND:**
- cdQIV Sandy, silty-clayey GRAVEL and COBBLES with some boulders. Gravel and cobbles are angular and sub-angular.
 - dpQIV Sandy, silty-clayey GRAVEL and COBBLES with some boulders. Gravel and cobbles are angular and sub-angular.
 - apQIV Sandy, silty-clayey COBBLES with gravel and boulders (at some places with large (1-5m) boulders). Cobbles and gravel are rounded and sub-rounded.
 - E₂²kn Massive lavas of andesite-basalt composition, lava breccias, tuff breccias and tuffs (Middle Eocene)
 - Groundwater level
 - Presumable border between lithological varieties
 - Completed borehole, its number and depth
 - Suspended boreholes shall be performed prior start of construction works
 - BH Borehole (BH)
 - TP Trial pit (TP)
 - Seismic refraction line (SRL)

- Remark(s):**
- All dimensions are in meters.
 - The maps and coordinates are based on UTM-WGS 84 grid system.

Reference(s):
All geological information comes from geological-geotechnical investigation performed in 2017 by Geoengineering.

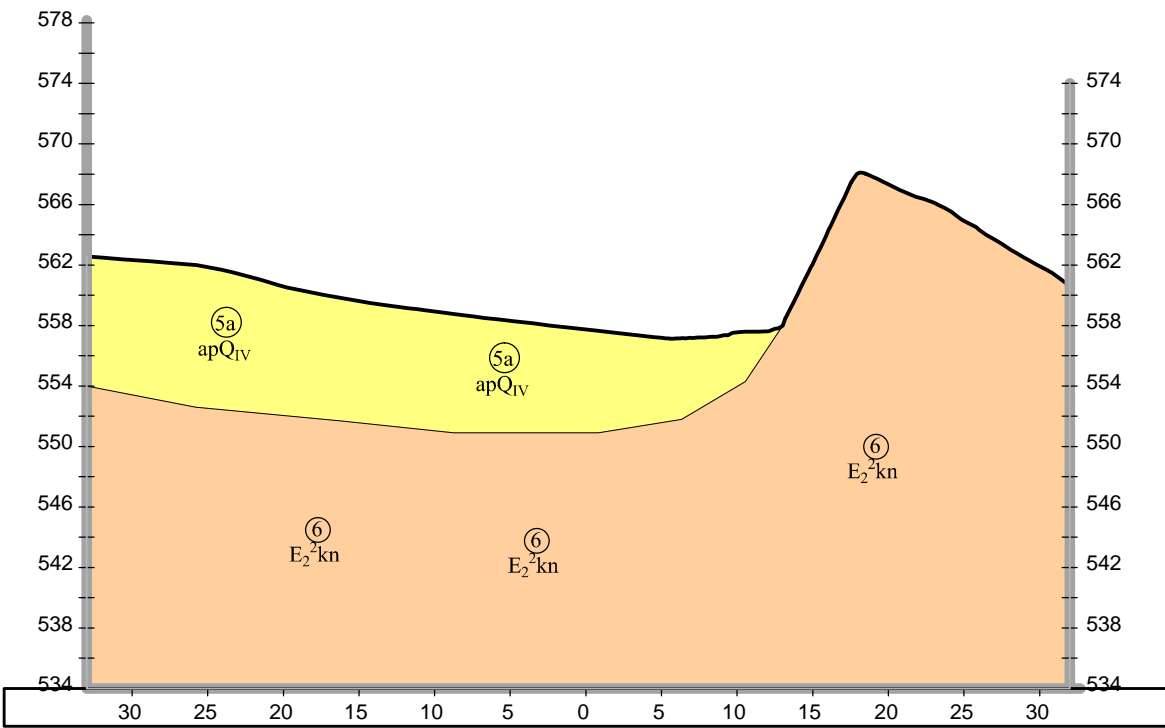
d				
c				
b				
a				
-	Initial version	31.05.18	MUGI	TP
Index	Revisions	Date	Draftsman	Verified

ENERGY DEVELOPMENT GEORGIA LTD

SASHUALA HPP 1	PHASE 2	
GEOLOGY HEADWORKS SITE GEOLOGICAL SECTION A-A	SCALE 1:200/250	
	FORMAT A1	
	DRAFTSMAN MUGI	DATE 31.05.18
	VERIFIED TP	APPROVED REPA

DRAWING N° INDEX
5417.1903 -

SECTION A-A
1:200



PARAMETER VALUES OF PROPERTIES AND OTHER DESIGN DATA OF SOILS & ROCKS OBSERVED
AT SASHUALA HPP LOCATION AREA

Stratum #	Description of Strata	Density, ρ t/m ³	Internal friction angle, φ°	Cohesion, c kPa	Deformation modulus, E_s MPa	Uniaxial compressive strength, R_u MPa	Soil tern (group) as per excavation difficulty (SNIP IV-5-82)
1	Moist, brown, stiff, slightly sandy, gravelly (at some places slightly gravelly), silty CLAY. Gravel is angular and sub-angular (deluvial-dQIV)	1.88	25.0	13.1	13.37	250	p. 33-b Group II (Vol.-1)
2	Sandy, silty-clayey GRAVEL and COBBLES with some boulders. Gravel and cobbles are angular and sub-angular (colluvial/deluvial-cdQIV)	2.0	33.4	26.0	51.82	450	p. 6-g Group IV (Vol.-1)
3	Sandy, silty-clayey (at some places very sandy, or very silty-clayey) GRAVEL with cobbles and boulders. Gravel and cobbles are angular and sub-angular (deluvial/proluvial-dpQIV)	2.0	32.3	28.4	48.24	450	p. 6-g Group IV (Vol.-1)
4	Sandy, silty-clayey COBBLES with gravel and boulders. Cobbles and gravel are sub-angular and sub-rounded (proluvial-pQIV)	2.0	32.0	28.0	48.0	450	p. 6-d Group V (Vol.-1)
5	Sandy, slightly silty-clayey, COBBLES with gravel and boulders (at some places with large (1-5m) boulders. Cobbles and gravel are rounded and sub-rounded (alluvial/proluvial-apQIV)	2.2	40.0	10.0	60.0	600	p. 6-d Group V (Vol.-1)
6	Volcanic-sedimented rocks, massive lavas, lava breccias, tuff breccias and tuffs of andesite/basalt content (Mid-Eocene-E ₂ ² kn)	2.62	-	-	5000	-	p. 20-b, Group VIII (Vol.-3)

Note: Inclination of up to 12 m high man-made slope above water-table, as well as the inclination of up to 12 m and higher slope below water-table (for saturated soils) should be calculated individually;