

to:	Riverain Developments Inc. Ms. Emily Roukhkian – emily@mainandmain.ca
re:	Environmental Remedial Action Plan 2 Montreal Road and Part of 3 Selkirk Street- Ottawa
date:	June 28, 2022
file:	PE4546-RAP.12
from:	Lauren Kratz

Further to your request and authorization, Paterson Group (Paterson) completed a remedial action plan for the properties municipally addressed as 2 Montreal Road and part of 3 Selkirk Street in the City of Ottawa (Phase I of Development). It is our understanding that Phase I of Development consists of one level of underground parking across the majority of the 2 Montreal Road property and part of the 3 Selkirk Street property.

Environmental Site Conditions

Historical Background

A Phase I-Environmental Site Assessment (ESA) and Phase II-ESAs have been prepared for the subject site. Based on the findings of the Phase I-ESA, Paterson identified several Potentially Contaminating Activities (PCAs) on the subject site or neighbouring properties which were considered to represent Areas of Potential Environmental Concern (APECs) with respect to the subject site. Phase II ESAs were completed by Golder, EXP and Paterson to address the APECs identified in the Phase I ESA.

A summary of the impacted media presented in the reports is provided below.

Impacted Soil

Based on analytical test results, soil exceeding the Ontario Ministry of the Environment, Conservation and Parks (MECP) Table 3 Standards for residential land use (applicable site condition standards) for multiple parameters is present on Phase I of Development. Soil with concentrations of petroleum hydrocarbons (PHCs), benzene, toluene, ethylbenzene and xylenes (BTEX), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), mercury, and metals exceed the MECP Table 3 standards in the Phase II ESAs completed.

Salt Impacted Soil

EC and SAR are not considered to be contaminants of concern to the subject site but need to be considered when determining a reuse site location for soil leaving Phase I of Development.

Impacted Groundwater

Concentrations of benzene exceed the MECP Table 3 standard for residential land use on the central portion of the 2 Montreal Road property. The concentrations of benzene exceeding the MECP Table 3 Standards in groundwater have been horizontally delineated within the property boundary. Remaining groundwater samples were in compliance with the MECP Table 3 Standards.

Record of Site Condition

Due to a change in land use, the proposed residential development will require a Record of Site Condition (RSC) to be filed with the MECP. The suggested remedial approach consists of a full depth generic RSC for a portion of the property and a risk assessment based RSC for the remaining portion of Phase I of Development.

Remedial Action Plan Summary

To meet the conditions of the full depth generic RSC and risk assessment, the following remedial actions are suggested:

- Existing groundwater monitoring wells are required to be decommissioned by a licenced well driller in accordance with Ontario Regulation (O. Reg.) 903.
- During the excavation for the proposed development, impacted soil will be screened using visual and olfactory observations as well as a portable soil vapour analyser. Verification soil samples, during the excavation program, will be required to update the data to be included in the RA.
- Excess soil is required to be handled in accordance with O.Reg. 406/19 – On-Site and Excess Soil Management. Soil to be excavated and removed from Phase I of Development that cannot be beneficially reused in accordance with O.Reg 406/19 will be placed in trucks and hauled to an approved waste disposal facility.

- ❑ All soil is required to be removed from the proposed full-depth Generic RSC area and groundwater is required to be in compliance with the MECP Table 3 standards. Over excavation beyond the proposed building foundation depth may be required in some locations, followed by backfilling in accordance with the latest revision of the Geotechnical Report prepared by Paterson Group (current version: Paterson Group Report PG4915-1 Revision 3 dated March 26, 2022) and as advised by the Geotechnical consultant.
- ❑ An Ontario Land Surveyor with a surveyor's certificate will be required to survey the extent of the generic RSC Property boundary, confirm elevations and prepare a signed survey plan that shows the boundaries of the RSC Properties.
- ❑ Based on the results of the Phase II ESA, the groundwater exceeds the MECP Table 3 Standards for benzene. A trench for groundwater collection and removal will be excavated approximately 1.5 m into the water table on the 2 Montreal Road property to pump and treat impacted groundwater followed by discharging the treated groundwater to the sanitary sewer in accordance with a Sanitary Sewer Discharge Agreement. A portable granular activated carbon treatment unit can be installed in combination with a tank or tanker truck to treat the accumulated groundwater. Prior to discharging groundwater to the municipal sewer system, an Agreement from the City of Ottawa Sewer Use Program is required. Testing, reporting and discharge requirements need to be carried out in compliance with the agreement. Alternatively, impacted groundwater could be removed by a licenced pumping contractor for off-site disposal in accordance with applicable laws. Prior to pumping 50,000 L/day, a permit to take water (PTTW) from the MECP is required.
- ❑ Post remediation groundwater monitoring wells will be installed to update groundwater quality for the RA and generic RSCs. Groundwater monitoring wells are to be maintained in good condition until both the full depth generic RSC and risk assessment based RSC have been filed. Continued monitoring, post RSC, may be required as part of the risk assessment.
- ❑ Construction de-watering for Phase I of Development occurring outside of the previously mentioned trench area will require treatment if the water does not meet the Sanitary Sewer Use by-law Standards. Prior to discharging water to the municipal sewer system, an Approval or Agreement from the City of Ottawa Sewer Use Program is required. Testing, reporting and discharge requirements need to be carried out in compliance with the agreement. Alternatively, impacted water could be removed by a licenced pumping contractor for off-site disposal in accordance with applicable laws. Prior to pumping 50,000 L/day, a permit to take water (PTTW) from the MECP is required.

Emily Roukhkian
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We trust that this information satisfies your requirements,

Best Regards,

Paterson Group Inc.

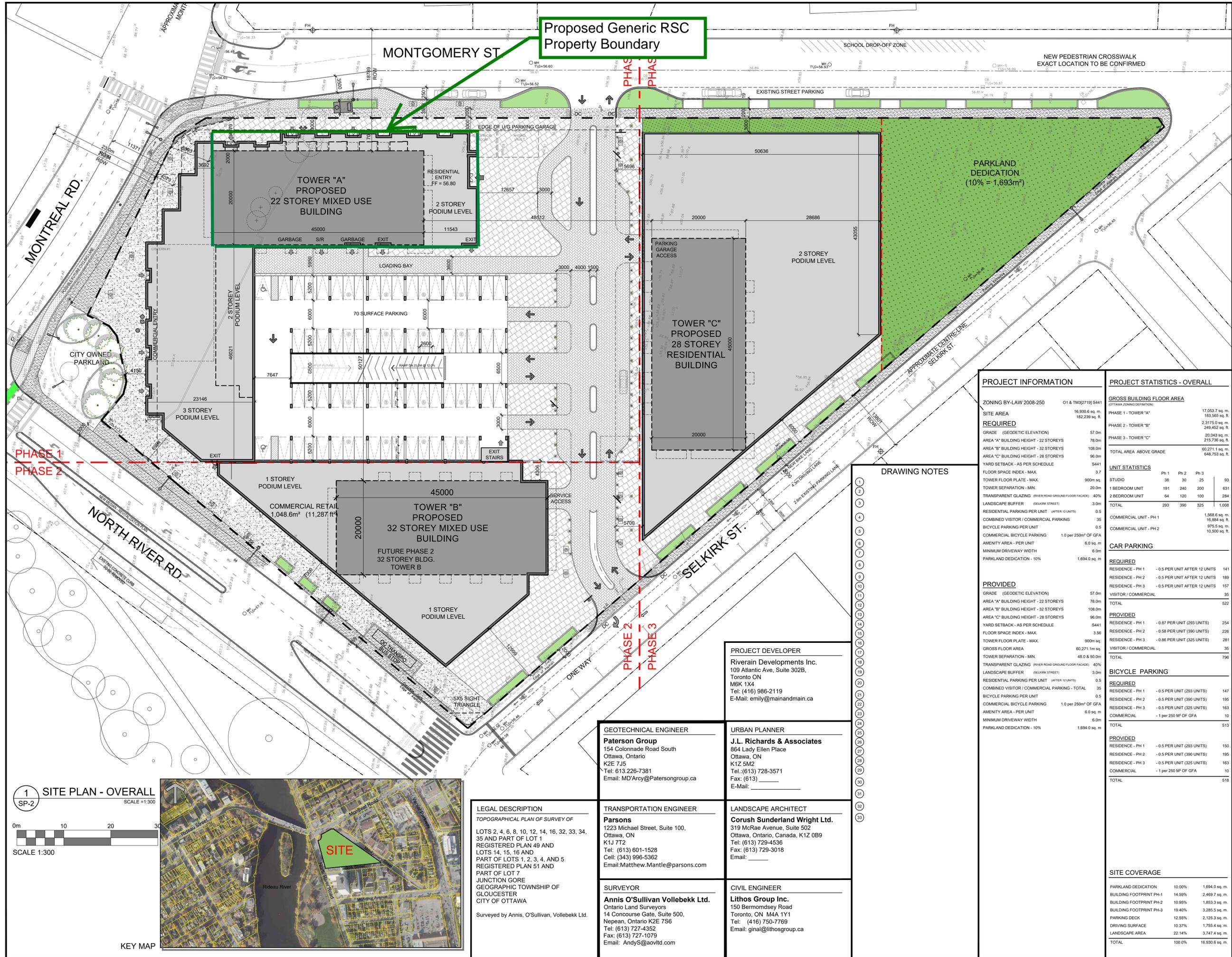


Lauren Kratz, P.Eng.



Report Distribution

- Riverain Developments Inc.
- Paterson Group Inc.



IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND TO REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.

THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT.

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NOTATION SYMBOLS:

- INDICATES DRAWING NOTES, LISTED ON EACH SHEET.
- INDICATES ASSEMBLY TYPE; REFER TO TYPICAL ASSEMBLY SCHEDULE.
- INDICATES WINDOW TYPE; REFER TO WINDOW ELEVATIONS AND DETAILS ON A300 SERIES.
- INDICATES DOOR TYPE; REFER TO DOOR SCHEDULE AND DETAILS ON A300 SERIES.
- DETAIL NUMBER
- TITLE
- SCHEMATIC
- DETAIL REFERENCE PAGE
- DETAIL CROSS REFERENCE PAGE

PROJECT INFORMATION

ZONING BY-LAW 2008-250 O1 & TM3(2719) S441

SITE AREA
 16,930.6 sq. m.
 182,239 sq. ft.

REQUIRED

GRADE (GEODETIC ELEVATION) 57.0m
 AREA "A" BUILDING HEIGHT - 22 STOREYS 78.0m
 AREA "B" BUILDING HEIGHT - 32 STOREYS 108.0m
 AREA "C" BUILDING HEIGHT - 28 STOREYS 96.0m
 YARD SETBACK - AS PER SCHEDULE S441
 FLOOR SPACE INDEX - MAX. 3.7
 TOWER FLOOR PLATE - MAX. 900m sq.
 TOWER SEPARATION - MIN. 20.0m
 TRANSPARENT GLAZING (RIVER ROAD GROUND FLOOR FACADE) 40%
 LANDSCAPE BUFFER (SELKIRK STREET) 3.0m
 RESIDENTIAL PARKING PER UNIT (AFTER 12 UNITS) 0.5
 COMBINED VISITOR / COMMERCIAL PARKING 35
 BICYCLE PARKING PER UNIT 0.5
 COMMERCIAL BICYCLE PARKING 1.0 per 250m² OF GFA
 AMENITY AREA - PER UNIT 6.0 sq. m.
 MINIMUM DRIVEWAY WIDTH 6.0m
 PARKLAND DEDICATION - 10% 1,694.0 sq. m.

PROJECT STATISTICS - OVERALL

GROSS BUILDING FLOOR AREA	
PHASE 1 - TOWER "A"	17,053.7 sq. m.
PHASE 2 - TOWER "B"	2,317.0 sq. m.
PHASE 3 - TOWER "C"	20,043.3 sq. m.
TOTAL AREA ABOVE GRADE	60,271.1 sq. m.
TOTAL	648,753 sq. ft.

UNIT STATISTICS			
	Ph 1	Ph 2	Ph 3
STUDIO	38	30	25
1 BEDROOM UNIT	191	240	200
2 BEDROOM UNIT	64	120	100
TOTAL	293	390	325
COMMERCIAL UNIT - PH 1	1,568.6 sq. m.		
COMMERCIAL UNIT - PH 2	16,884 sq. ft.		
			975.5 sq. m.
			10,500 sq. ft.

PROVIDED

GRADE (GEODETIC ELEVATION) 57.0m
 AREA "A" BUILDING HEIGHT - 22 STOREYS 78.0m
 AREA "B" BUILDING HEIGHT - 32 STOREYS 108.0m
 AREA "C" BUILDING HEIGHT - 28 STOREYS 96.0m
 YARD SETBACK - AS PER SCHEDULE S441
 FLOOR SPACE INDEX - MAX. 3.56
 TOWER FLOOR PLATE - MAX. 900m sq.
 GROSS FLOOR AREA 60,271.1m sq.
 TOWER SEPARATION - MIN. 48.0 & 50.0m
 TRANSPARENT GLAZING (RIVER ROAD GROUND FLOOR FACADE) 40%
 LANDSCAPE BUFFER (SELKIRK STREET) 3.0m
 RESIDENTIAL PARKING PER UNIT (AFTER 12 UNITS) 0.5
 COMBINED VISITOR / COMMERCIAL PARKING - TOTAL 35
 BICYCLE PARKING PER UNIT 0.5
 COMMERCIAL BICYCLE PARKING 1.0 per 250m² OF GFA
 AMENITY AREA - PER UNIT 6.0 sq. m.
 MINIMUM DRIVEWAY WIDTH 6.0m
 PARKLAND DEDICATION - 10% 1,694.0 sq. m.

CAR PARKING

REQUIRED	
RESIDENCE - PH 1	- 0.5 PER UNIT AFTER 12 UNITS 141
RESIDENCE - PH 2	- 0.5 PER UNIT AFTER 12 UNITS 189
RESIDENCE - PH 3	- 0.5 PER UNIT AFTER 12 UNITS 157
TOTAL	522

PROVIDED	
RESIDENCE - PH 1	- 0.87 PER UNIT (293 UNITS) 254
RESIDENCE - PH 2	- 0.58 PER UNIT (390 UNITS) 226
RESIDENCE - PH 3	- 0.86 PER UNIT (325 UNITS) 281
TOTAL	796

BICYCLE PARKING

REQUIRED	
RESIDENCE - PH 1	- 0.5 PER UNIT (293 UNITS) 147
RESIDENCE - PH 2	- 0.5 PER UNIT (390 UNITS) 195
RESIDENCE - PH 3	- 0.5 PER UNIT (325 UNITS) 163
COMMERCIAL	- 1 per 250 M ² OF GFA 10
TOTAL	515

PROVIDED	
RESIDENCE - PH 1	- 0.5 PER UNIT (293 UNITS) 150
RESIDENCE - PH 2	- 0.5 PER UNIT (390 UNITS) 195
RESIDENCE - PH 3	- 0.5 PER UNIT (325 UNITS) 163
COMMERCIAL	- 1 per 250 M ² OF GFA 10
TOTAL	518

SITE COVERAGE

PARKLAND DEDICATION	10.00%	1,694.0 sq. m.
BUILDING FOOTPRINT PH-1	14.59%	2,469.7 sq. m.
BUILDING FOOTPRINT PH-2	10.95%	1,853.3 sq. m.
BUILDING FOOTPRINT PH-3	19.40%	3,285.5 sq. m.
PARKING DECK	12.55%	2,125.3 sq. m.
DRIVING SURFACE	10.37%	1,755.4 sq. m.
LANDSCAPE AREA	22.14%	3,747.4 sq. m.
TOTAL	100.00%	16,930.6 sq. m.

DRAWING NOTES

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LEGAL DESCRIPTION
 TOPOGRAPHICAL PLAN OF SURVEY OF
 LOTS 2, 4, 6, 8, 10, 12, 14, 16, 32, 33, 34,
 35 AND PART OF LOT 1
 REGISTERED PLAN 49 AND
 LOTS 14, 15, 16 AND
 PART OF LOTS 1, 2, 3, 4, AND 5
 REGISTERED PLAN 51 AND
 PART OF LOT 7
 JUNCTION GORE
 GEOGRAPHIC TOWNSHIP OF
 GLOUCESTER
 CITY OF OTTAWA
 Surveyed by Annis, O'Sullivan, Vollebek Ltd.

