



06 November 2020

❖ Ian Leary
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c/- Spencer Holmes Limited
PO BOX 588
WELLINGTON 6140

Dear Ian

55 - 61 MOLESWORTH STREET - NESCS MATTERS

1.0 Introduction

Primeproperty Group Limited intends to redevelop the site at 55 – 61 Molesworth Street, Wellington, and is in the process of applying for resource consent from Wellington City Council (WCC). The council has information that indicates the site once had petrol tanks within a storeroom in the basement of the multi-storey building that occupied the site prior to 2017. This falls within Category A17 of the Ministry for the Environment's (MfE) Hazardous Activities and Industries List (HAIL) and therefore triggers the need to consider the redevelopment in light of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (the NESCS). The council has therefore requested Primeproperty to address the NESCS in the consent application.

This letter provides our view of the likely environmental effects on the development from the past presence of the petroleum installation and the matters that need to be addressed under the NESCS. This is a revised version of a 2018 letter, the revision resulting from a change to the detail of the proposed development. The change has not altered the conclusions.

2.0 Site Description

The site is vacant land being operated as a car park. It is covered by a concrete slab which was formerly the basement floor of the building that occupied the site prior to that building being demolished in 2017 following the Kaikoura Earthquake. A panorama of the site taken in 2018 is attached as Photograph 1.

That former building, a 10-storey office tower with a basement carpark, was constructed in the early 1960s for Imperial Chemical Industries and was originally known as ICI House. A limited search of WCC files revealed two design drawings by the original architects, Stephenson and Turner, showing a plan and sections of the basement and plant room areas. Much of the plan view has no features of interest, but along the western wall of the basement were:

- ❖ At the southern end, a small workshop with vehicle hoist, and two petrol pumps. No petrol tanks are shown on the drawing.
- ❖ In the centre, an enclosed electrical substation (which still exists and is thought to be part of the electrical network for public supply).



- ∴ At the northern end, a small room in which a fuel oil tank was located, mounted on a concrete pedestal. This tank provided fuel for a boiler which was located in the adjacent plant room.

The condition of the rear of the site in 2018 is shown in photographs 2 and 3. Inspection of these areas showed no evidence of underground storage tanks (UST) near the former petrol pumps, and no sign of past workshop use. The former fuel tank room also showed no sign of its former use, with no evidence of staining. The substation was not inspected, being a locked, hazardous area.

The 1989 WCC correspondence supplied to Primeproperty, attached, indicates the petrol tanks and pumps were no longer compliant with dangerous goods regulations and were not being used, but as the tanks were located in a storeroom they were unable to be removed, and were to be water-filled and left in place. It is probable that the tanks (there appears to be more than one, probably two as there were two pumps) are still under the basement somewhere. There is no information as to their exact location, but given the limited space within the original basement layout and limited access for filling the tank, it is probable they were located within a few to several metres of the original fuel pump location.

3.0 Proposed Development

It is proposed to construct a building with 11 office levels with vehicle access, ground floor lobby and retail and café below the offices. There will be basement parking. As shown on the appended Jasmax drawing RC-4001, the ground floor is separated from the underlying ground by the ventilated basement parking.

It is intended to excavate between approximately 3.5 and 7.5 m below the current surface to provide room for the base slab and basement parking. Approximately 11,000 m³ of excavated material will be removed across the building footprint.

4.0 HAIL Status and NESCS Implications

The Greater Wellington Regional Council has the complete property listed on its Selected Land Use Register (SLUR) as “Verified History of Hazardous Activity and Industry”, for the storage of fuel, being the known presence of the petrol tanks. However, it is not appropriate to have the complete site listed as only the rear of the basement had HAIL uses.

Based on the available information, the following HAIL categories are appropriate for the rear part of the property:

- ∴ The southwest corner over an estimated area of 15 x 15 m should be categorised as A17, fuel storage and F4, vehicle workshop.
- ∴ The substation in the central part of the rear of the site should be assigned Category B4, substation.
- ∴ The extreme northwest corner should be assigned Category A17, fuel storage.

The remainder of the site should not be considered HAIL and the NESCS will not apply.

For the HAIL areas, there are two regulated activities that may apply, soil disturbance, as it is intended to excavate for the new building basement, and change of use. It is debateable whether change of use is actually occurring because until recently there was an office block on the site and the proposed use is an office block. However, it could be argued that the more recent carpark is the current use, and the use is changing to office use. I have assumed both regulated activities in the assessment below.

5.0 Environmental Assessment

5.1 Conceptual Site Model

A risk to human health can only exist if there is a hazard (in this case, a source of contaminated soil), a receptor (e.g. people) and an exposure pathway linking the hazard and the receptor. An absence of any one of these components means no risk can exist. A conceptual site model (CSM) is designed to identify the hazards, receptors and possible links between these.

There are three potentially hazardous areas that need to be considered for the future use. The potential receptors and exposure pathways are set out below.

Table 1: Conceptual Site Model – 55 - 61 Molesworth Street, Wellington			
Source	Exposure Pathway	Possible Receptor	Pathway Linkage
Potential hydrocarbon residues from past workshop use and petrol storage.	Ingestion of soil	Future commercial occupants.	Incomplete – see Section 5.2
	Dermal Contact		Incomplete – see Section 5.2
	Inhalation of vapours		Incomplete – see Section 5.2
	Ingestion of soil	Excavation workers	Potentially Complete during foundation works.
	Dermal Contact		
	Inhalation of vapours		
Potential transformer oil residues below substation.	Ingestion of soil	Future commercial occupants.	Incomplete – see Section 5.3
	Dermal Contact		Incomplete – see Section 5.3
	Ingestion of soil	Excavation workers	Potentially Complete during foundation works.
	Dermal Contact		
Potential fuel oil residues below fuel storage room.	Ingestion of soil	Future commercial occupants.	Incomplete – see Section 5.4
	Dermal Contact		Incomplete – see Section 5.4
	Inhalation of vapours		Incomplete – see Section 5.4
	Ingestion of soil	Excavation workers	Potentially Complete during foundation works.
	Dermal Contact		
	Inhalation of vapours		

5.2 Workshop and Petrol Tanks

Assuming the petrol tanks still exist, it is likely these will be encountered during foundation excavation works. The tanks are likely to extend about 3.5 m below the current ground surface, and therefore any petroleum hydrocarbon residues that may exist around the tanks would be removed along with the material that is excavated for the building foundation. However, if the tank or fuel lines have leaked, residues may extend below the base of the excavation.

The primary risk for petrol residues is generation of vapours that may migrate into building spaces where they may be inhaled over the long term by future occupants, as the complete coverage of the site prevents direct contact with soil. The potential vapour inhalation pathway would only be for the southwestern corner of the building. However, the building design will prevent any such vapour migrating into the office spaces, as the basement creates an air gap which should prevent upward migration of vapours. Consequently, there will be no risk to future occupants from vapours migrating from the presumed tank locations.

Excavation workers may encounter hydrocarbon residues and be at minor risk. However, the excavation will largely be carried out by machinery, with little direct contact with the ground by workers. Any excavated material that contains residues should be sampled and tested by a suitably qualified and experienced practitioner and disposed of appropriately.

If the tanks do still exist, it is a regulatory requirement of the NESCS and the Health and Safety at Work (Hazardous Substances) Regulations 2017 that the tanks and any pipes connected to them are removed, and a soil sampling investigation carried out at the time of the removal by a suitably qualified and experienced practitioner. The WCC must be notified before the tank removal and provided with the soil investigation report after the removal.

5.3 Substation

Transformers within the substation will contain dielectric fluid. This may have historically contained polychlorinated biphenyls (PCBs) but as these substances have been banned some years ago, the transformers almost certainly now contain a PCB-free oil of some sort, commonly a mineral oil.

While the substation has not been inspected, it is expected to have a substantial concrete floor with a waterproofing membrane below. Given this, it is unlikely any dielectric fluid that might have leaked or spilled will have penetrated the floor. However, should this have occurred, given the fluid's viscosity, it is unlikely to have penetrated far into the ground. Any residues that may be present will most likely be removed during the foundation excavation. Any soil that contains residues should be tested and disposed of appropriately.

Transformer oils are not volatile and therefore do not present a risk from vapours. Mineral oils have a low toxicity and soil residues present only a low risk for dermal contact or ingestion. Some PCBs have dioxin-like properties and present a greater risk to human health, although these PCBs are generally not present in the PCB mixtures historically used in transformers.

5.4 Fuel Oil Storage

While there is no visual evidence, the above ground tank that contained diesel or similar fuel may have leaked. What appears to be a concrete floor in good condition would most likely have stopped penetration of any leaks or spills into the ground, although this cannot be entirely discounted. While of lower volatility and lower risk than petrol, fuel oil presents similar exposure pathways to petrol.

Given the ventilated nature of the future basement there will be no risk to future occupants from historical fuel residues in the ground that may remain after excavation. Any soil residues that may exist could present a minor risk to excavation workers. Any soil with residues should be tested and disposed of appropriately.

6.0 Conclusions and Recommendations

The rear part of the basement of the former ICI House at 55 – 61 Molesworth Street formerly had a small vehicle workshop, petrol tanks, two petrol pumps and a fuel oil tank. A substation still exists. These are all activities that fall within the HAIL and therefore the NESCS regulations must be considered for the proposed redevelopment.

The greater part of the site does not appear to have had any HAIL activities and therefore does not fall within the NESCS regulations and should not be listed on GWRC's SLUR.

The substation and former fuel oil storage is not expected to have resulted in significant ground contamination. Any residues that might exist in the ground will be removed during the intended 3.5 to 7.5 m depth of excavation.

Possible soil residues from past leaks from the former petrol tanks may extend below the intended depth of excavation. However, these will not present a risk to future occupants as there will be no complete exposure pathway.

Given the minor risks, there is no need to carry out a ground investigation prior to any development works. It is recommended that, following removal of the existing concrete slab, the ground be inspected at the three locations for signs of contamination, and for the presence of the underground storage tanks (a tank pit should be visible).

As appropriate, impacted soil should be sampled by a suitably qualified practitioner to determine appropriate soil disposal locations.

If the petrol tanks still exist, these should be removed by a specialist petroleum services company. A soil investigation in compliance with the NESCS regulations should be carried out at the time of the tank removal.

7.0 Limitations

This report has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Primeproperty Group Limited and the Wellington City Council. PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the report. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This report has been prepared by PDP on the specific instructions of Primeproperty Group Limited for the limited purposes described in the report. PDP accepts no liability if the report is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

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I trust this report provides the information you were seeking. If you should have any queries please do not hesitate to contact me.

Yours sincerely

PATTLE DELAMORE PARTNERS LIMITED

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Approved by



Graeme Proffitt

Technical Director – Contaminated Land
Suitably Qualified and Experienced Practitioner



Photograph 1: Panorama of site showing former workshop area (PrimeParking sign above), substation (red door) and plantroom and fuel storage room (black door opening) at the rear of the site, with Molesworth Street visible to the far right. The rear wall and associated workshop and services areas are aligned approximately north-south.



Photograph 2: Approximate location of former workshop and petrol tank in southwest corner of site. The petrol pumps were located immediately to the right of the middle column.



Photograph 3: View of northwest corner of the site showing, left to right, the enclosed substation, the former plant room which was originally enclosed and, through the door, the fuel oil tank room.



BUILDING & ENVIRONMENTAL HEALTH DEPARTMENT

SR 9800465

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enquiries to: MR D R HOUSLEY Ext 8303

14 November 1989

Branch Manager
Caltex Oil NZ Ltd
PO Box 31246
LOWER HUTT

Attention: Dominic Hare

Dear Sir

ABANDONED PETROL TANK : ICI HOUSE, MOLESWORTH STREET

With reference to the above subject, I now confirm the Senior Dangerous Goods Inspector's verbal advice that in view of the petrol tank's location inside a storeroom at the above premises it is considered impractical to remove the tank.

In addition, the only means of filling the tank with concrete slurry was by forcing it through a remote fillpipe which is also considered dangerous, accordingly the contractor has filled the tank with water which under the circumstances is considered satisfactory by the property owners and by this Department.

Yours faithfully

CHIEF BUILDING INSPECTOR

SR 800465
Link 372037
#435302



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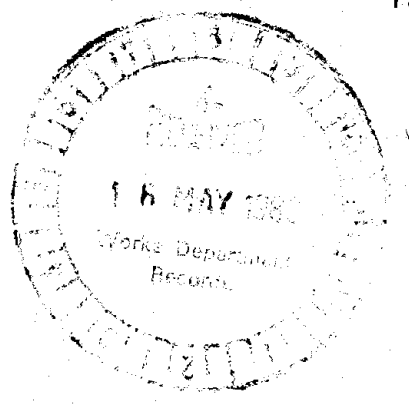
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11 May 1989

Wellington City Council
P O Box 2199
WELLINGTON

Attention: Mr D R Housley



Dear Sir

Thank you for your letter of 20 February 1989 in connection with the petrol pump installed in the basement of ICI House at 55-67 Molesworth Street.

We note your comment that this installation no longer complies with the Dangerous Goods Regulations and advise that ICI New Zealand will be removing this pump in the near future and will fill the empty underground storage tanks with sand as laid down in the Regulations.

Such action, we believe, will result in a safer internal environment and allay the fears of a number of our staff.

Thank you once again for your advice in this matter.

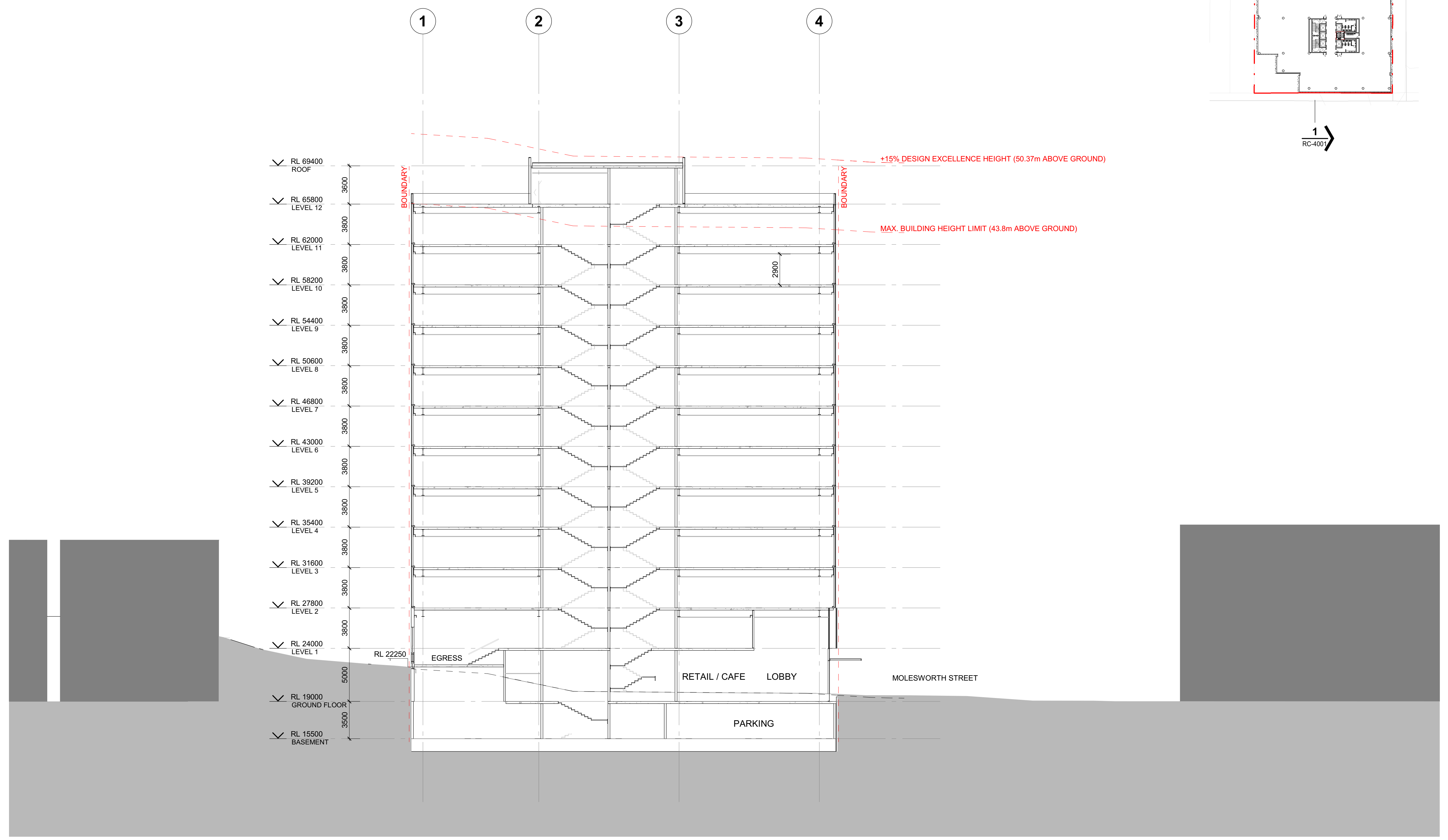
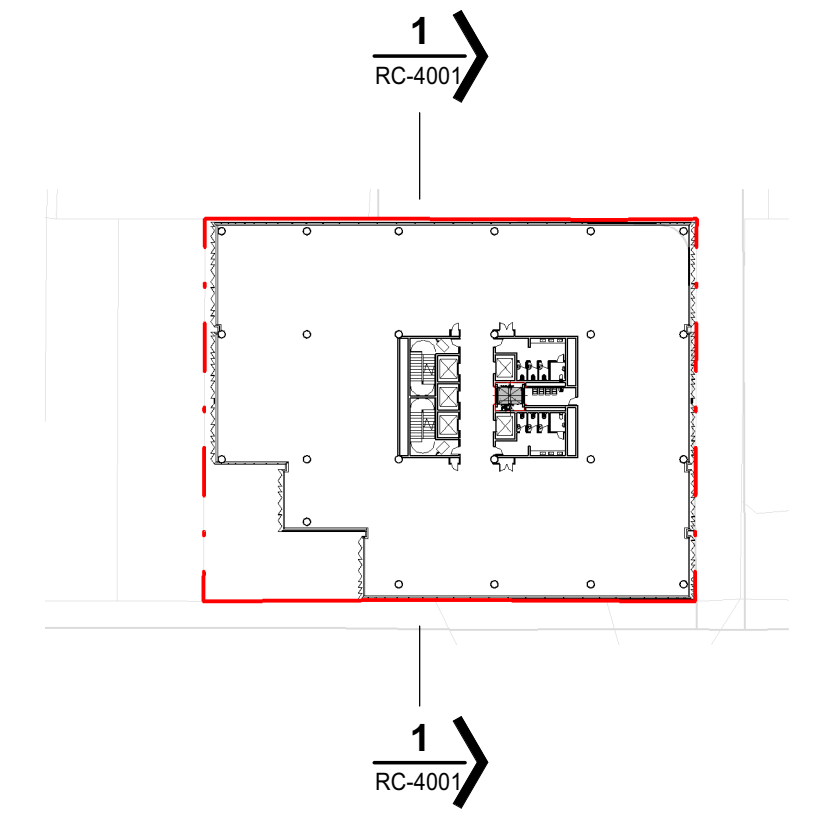
Yours faithfully

F. J. Rose
F J Rose
Property and Services Manager

MR *Housley*
TO NOTE
AND FOR YOUR ATTENTION
PLEASE.

DMU 16-5-89

*Noted & ...
skinning 16/5/89*



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RC-1000 | SECTION - E-W 02