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PROPOSED DEVELOPMENT OF NEIGHBOURING PROPERTY REPORT – ALEXANDRIA

ADDRESS:	102 WYNDHAM STREET, ALEXANDRIA, NSW, 2015
REPORT ISSUED FOR:	JOHN ROCHE C/O: BRIAN CULLINANE EME ADVISORY
LGA:	THE COUNCIL OF THE CITY OF SYDNEY
DATE OF THIS REPORT:	4th DECEMBER 2024
REVISION DATE:	6th DECEMBER 2024
REFERENCE:	1011/001-REV01

LIMITATIONS STATEMENT

The explicit purpose of this report and the associated services undertaken by Harrison & Morris Consultancy Pty Ltd (H&M) is to provide a structural and civil assessment in accordance with the scope of services set out in the agreement between H&M and the client. The scope of services was defined by the client or their representative and in lieu of existing physical documentation.

H&M concluded on information represented in this assessment primarily from visual inspections and a survey of existing physical conditions. The passage of time, manifestation of latent conditions or impact of future events may require further exploration at the site and subsequent data analysis, and re-evaluation of the findings, observations and conclusions expressed in this assessment.

In preparing this assessment, H&M has relied upon presumed accuracy of certain information (or absence thereof) relative to the subject residence provided by the client, architect, council, geotechnical engineer, surveyor and others identified herein. Except as otherwise stated in this assessment, H&M has not attempted to verify the accuracy or completeness of any such information.

The findings, observations, examinations and conclusions expressed by H&M in this assessment are not, and should not be considered, an assessment concerning the actual physical condition or the proposed treatment of the existing conditions. No warranty or guarantee, whether expressed or implied, is made with respect to the data reported or to the findings, observations and conclusions expressed in this report. Further, such data, findings, observations and conclusions are based solely upon information in existence at the time of examination.

INTRODUCTION

Harrison & Morris Consultancy have been engaged by Mr. Brian Cullinane of AME Advisory representing John Roche, who is the owner of 102 Wyndham Street, Alexandria, to assist with concerns raised over the proposed development of the neighbouring properties at 98-100 Wyndham Street, Alexandria, 86-96 Wyndham Street, Alexandria, 84-88 Botany Street, Alexandria, 100 Botany Street, Alexandria, 108 Botany Street, Alexandria and 74 Botany Street, Alexandria. Most pertinent to the subject residence, and hence the focus of this report shall be the neighbouring property at 98-100 Wyndham Street, Alexandria.

For background, this office has carried out structural plans for the now complete renovation at 102 Wyndham Street, Alexandria in circa 2012.

This office has reviewed the plans for the proposed development at 98-100 Wyndham Street, Alexandria et al,

Given the above, report shall outline the observations made during the 2012 renovation, comment on the concerns regarding the proposed development of the neighbouring property and recommend courses of action to protect the subject residence at 102 Wyndham Street, Alexandria.

OBSERVATIONS

The subject site, a three-storey residential terrace brick construction with metal rooves, is a single dwelling with an outbuilding to the rear located within the bounds of the City of Sydney Council. The site fronts Wyndham Street to the west and Wydnham Lane to the east, and hence, for the purposes of this report, the front boundary of the property was taken as facing west. See site plan below;

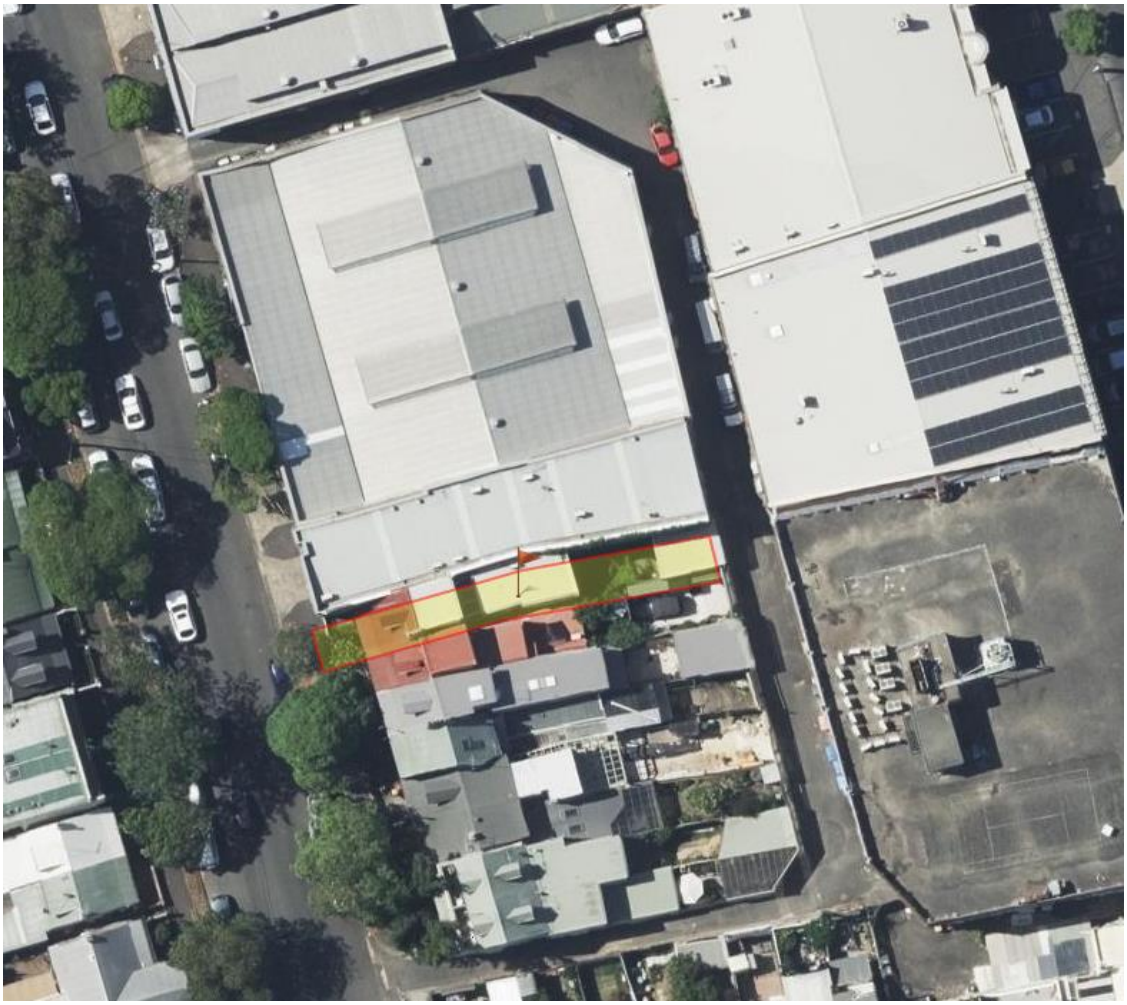

PHOTO 1: AERIAL VIEW OF SUBJECT SITE – SIX MAPS

During the circa 2012 renovation of the subject residence, this office undertook multiple site inspections both before construction and during construction. The following is some of the observations found during these inspections.

The original part of the terrace, which is predominately to front portion, was seen too be founded on loose, possibly alluvial material which is typical of the Alexandria area. The existing footings were also seen to be shallow, and of masonry construction, typical for the approximate age of the terrace (approximately early 1900's build).

The new or renovated portion of the terrace is a slab with edge beams founded on natural undisturbed strata. During the installation of the edge beams for the rear slab, it was found that a portion of the existing footings at 98-100 Wyndham Street, Alexandria was encroaching over the property boundary. Given this, an alternate edge beam method was devised in order for the new edge beams at the subject residence to be installed without resulting in the requirement for the removal of the encroaching footing.

ASSESSMENT OF DEVELOPMENT PROPOSAL

This section should be read in conjunction with the architectural drawings produced by Gensler and Report on Geotechnical Investigation by Douglas Partners (available on City of Sydney Council DA tracker).

The proposed development, which is currently lodged with The City of Sydney Council (D/2024/937), is to demolish all structures on 98-100 Wyndham Street, Alexandria et al, and construct a mixed use, multi-building precinct encompassing medical research centres, retail areas and parking.

Most specific to the subject site, the propose seeks to install four levels of basement, meaning significant excavation adjacent the property boundary would be required. The proposed RL of the ground floor retail space is nominated at RL - 15.52 (page 15 of 69), and the RL of the proposed Proton Therapy System on the lowest basement level is nominated at RL – 1.20 (page 11 of 69). The RL of the porch of 102 Wyndham Street, Alexandria is RL – 14.77, meaning excavation of a minimum of 13.57m is proposed adjacent the property boundary.

PHOTO 2: EXCERPT PAGE 11 OF GENSLER ARCHITECTURAL PLANS SHOWING BASMENT RL – SUBJECT SITE IN YELLOW APPROX

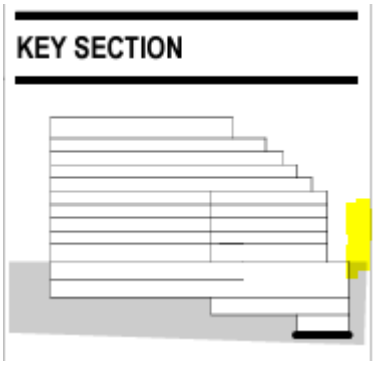

PHOTO 3: EXCERPT PAGE 11 OF GENSLER ARCHITECTURAL PLANS – SUBJECT SITE IN YELLOW APPROX – SHOWING 4 STOREYS OF EXCAVATION ADJACENT SUBJECT SITE

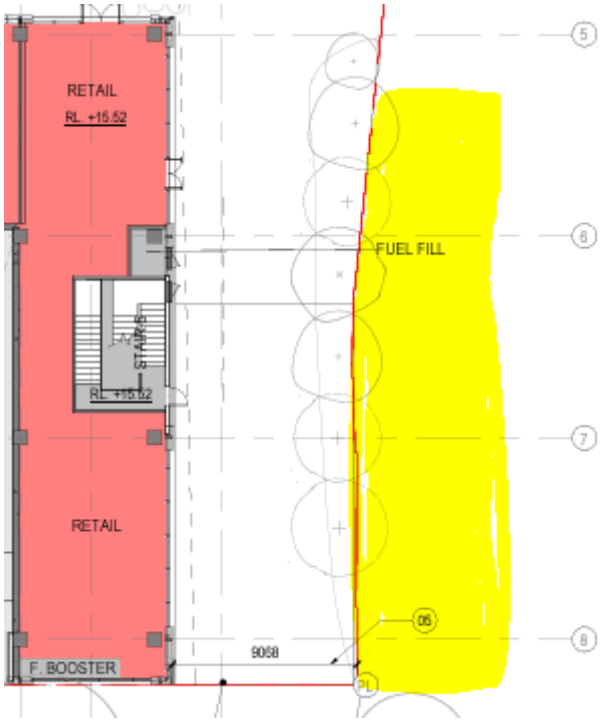

PHOTO 4: EXCERPT PAGE 15 OF GENSLER ARCHITECTURAL PLANS SHOWING RETAIL (GROUND) LEVEL RL – SUBJECT SITE IN YELLOW APPROX

Clearly, excavations of this depth have the potential to undermine footings and structures on the surrounding sites. Further to this, the installation of any shoring and retaining methods will require large machinery and significant vibration to the soil, further increasing the likelihood of damage to surrounding structures. Further to this, the Report on Geotechnical Investigation by Douglas Partners describes the excavation (page 11 of 20, paragraph 1) as being into "fill, natural soil and low strength shale" meaning the footings at 102 Wyndham Street, Alexandria, as well as other surrounding structures, are likely founded on loose material, of which the likelihood of movement/disturbance is heightened.

9.1 Earthworks

9.1.1 Excavation

Excavation for the two basement levels will be required in fill and predominantly natural soils. Excavation of the partial third and fourth basement levels (for the Proton Therapy Area) will be required in fill, natural soils and very low strength shale and laminite (Unit 4). Excavation in the fill, natural soils and very low strength shale and laminite should be readily achievable using conventional earthmoving equipment such as hydraulic excavators with bucket attachments. If required, bulk excavation in strong rock (i.e. Class III or better) would likely require the use of heavy ripping, rock hammers etc. for effective removal.

Excavation works conducted within the saturated marine soils will need to be undertaken in conjunction with a dewatering programme to reduce the moisture content of the soils and allow machinery to work on the site. This may entail the use of a large pump connected to spear-points within the excavation, sumps within the excavation, or a combination of the two. An appropriate dewatering methodology will need to be developed by the earthworks contractor.

PHOTO 5: EXCERPT FROM DOUGLAS PARTNERS REPORT

This description of the geological material to be excavated supports the findings of this office that the original portion (mainly the front portion) of 102 Wyndham Street, Alexandria, is founded on loose material.

STRUCTURAL CONCERNS

Given the observations outlined earlier and the assessment of the proposed development, this office and the owner of 102 Wyndham Street, Alexandria have concerns over the viability of the proposal to be carried out without impacting neighbouring structures.

A major concern is the excavation of loose material adjacent the property boundary causing disturbance to the loose material which the original portion of the subject residence is founded on. This action has the potential to cause undermining of existing structures resulting in subsidence and destabilisation likely characterised by severe cracking, the sticking or catching of doors and windows and floors becoming uneven and not level, and an overall loss of amenity.

As previously mentioned, it is likely that large plant and significant machinery will be required for the installation of any proposed shoring and retaining system required to retaining the loose foundation material and/or clay likely to be found at 98-100 Wyndham Street, Alexandria. Due to the proximity of the proposed basement, the machinery will need to access areas very close to the existing structures at 102 Wyndham Street, Alexandria, and as such there is the potential for contact and hence damage to occur to the structures at the subject address.

Further to the above, as complete demolition of the existing structures is proposed at 98-100 Wyndham Street, Alexandria, the previously mentions existing footing which has encroached onto the subject site will need to be demolished, further increasing the likelihood of damage to existing structures at the subject site.

In addition, excavations such as those proposed at 98-100 Wyndham Street, Alexandria et al will likely require groundwater removal which could in turn affect the water content of the founding strata at the subject residence through the dewatering process, potentially causing shrink and or swell of the founding strata which in turn has the potential to damage existing structures.

Encompassing all points above, the significant construction activity including but not limited to; bulk excavation by large machinery, significant demolition and excavation into rock will all be extremely loud and have the potential to induce vibrations both directly into the existing structure and founding strata at the subject address. Further to this, the Gensler proposal shows (pages 11-15 of 69) significant plant being installed in the proposed four storey basement adjacent the subject residence and this plant may have the potential to induce on-going noise and vibration into the founding strata once construction activity has concluded.

RECOMMENDATIONS

With the concerns outlined previously in mind, this office has the following recommendations which may work towards alleviating some of the potential issues raised.

It is highly recommended that council request the commission (at the cost of the applicant) of a thorough construction methodology report prior to the approval of the proposed development. The commissioned report should address and discuss:

1) The proposed methods of demolition to be used on site to minimise impacts to surrounding structures.
2) The proposed methods of excavation to be used on site to minimise impacts to surrounding structures.
3) The proposed methods of shoring to be used on site to minimise impacts to surrounding structures. Both the temporary (during construction) and the ongoing (continued inhabitation) shoring method should be discussed and outlined.
4) The proposed methods to reduce noise and vibration to be used on site as well as any noise and vibration monitoring.

A construction noise report should also be commissioned outlining the expected noise from various construction activities and machinery to be used on site.

Dilapidation reports should be undertaken of all structures, both public and private and inclusive of the subject residence prior to the commencement of any construction activity including demolition. The reports should be made available to all affected owners of properties.

A recommended relocation of the proposed four storey basement and associated excavations to a location more central of the 98-100 Wyndham Street, Alexandria et al site, where disturbance of neighbouring structures is less likely, would be widely welcomed.

It is also recommended that any basement structures be fully tanked to avoid potential issues and effects of long-term dewatering.

CONCLUSIONS

While the proposal at the neighbouring structures to 102 Wyndham Street, Alexandria would provide significant benefit to the community, it is imperative that the surrounding existing structures and people who make up that community are protected during the planning, construction and continued habitation process.

This report has outlined some of the concerns of just one of the properties adjacent to 98-100 Wyndham Street, Alexandria and has attempted to recommend ways in which these concerns can be alleviated to the benefit of all involved.

As with any project, care needs to be taken to ensure no undermining, vibrating or damaging of existing structures is caused by nearby developments during all stages of construction including but not limited to; demolition, excavation and shoring/retaining.

Yours faithfully,
HARRISON & MORRIS CONSULTANCY PTY. LTD.

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