James Taylor & Associates

Civil & Structural Consulting Engineers

ABN 33 102 603 558 Suite 301, 115 Military Road Neutral Bay NSW 2089 Postal Address: PO Box 742 Cremorne Junction NSW 2090 Tel: +61(0)2 9969 1999 Email: mail@jamestaylorassociates.com.au Website: www.jamestaylorassociates.com.au



Ref:6413:RY:rp

5 April 2022

Iris Capital GPO Box 5479 Sydney NSW 2001 Attention: Warwick Bowyer

Dear Sir,

PROPOSED ALTERATIONS AND ADDITIONS TO 19-23 THE CORSO, MANLY

We have been engaged by the owners of 19-21 & 23 The Corso, Manly to assess structural impacts and required structural modifications for the proposed Development Application for alterations and additions to 19-23 The Corso Manly. A summary of these proposed alterations and additions is contained in the Statement of Environmental Effects prepared by Hamptons Property Services.

The proposed development will be subject to stratum and strata subdivision.

The existing building at 19-21 The Corso is constructed with masonry walls and predominantly timber floors. Concrete floor slabs are evident in localised areas such as bathrooms.

The building consists of 3 residential floors above a commercial floor at ground level. There is no basement.

A geotechnical report prepared by GeoEnviro Consultancy P/L for 19-23 The Corso and dated April 2019 has been provided. The Report encompassed Drilling of two boreholes (BH 1 and 2), Borehole 1 drilled to auger refusal at a depth of 0.9m and Borehole 2 drilled to a depth of 4.0m. In addition Dynamic Cone Penetration (DCP) testing in two locations (DCP No 1 and 2) has been undertaken, with DCP tests taken to practical refusal depths of 6.9m below existing ground surface in both locations.

The building is underlain by a large sewer viaduct, an asset of Sydney Water. The asset is described on Sydney Water drawing as 5191 x 2667 RC (Reinforced Concrete). The site is underlain by sand.

Extracts of the approximate plan and sectional relationships of the sewer to the existing building are shown below.



Plate 1.0 Plan Extract From Durbach Block Jaggers Plan DA 15 Sewer indicated in blue



Plate 2.0 From Durbach Block Jaggers Elevation indicating sewer relationship. Dimensions are subject to confirmation.

The proposed alterations to the building are described in drawings prepared by Durbach Block Jaggers ref-DA-00, 03, 04, 05, 11, 12, 13, 15, 16, 17, 26(E).

The proposed alterations and additions consist of replanning on all floor levels including removal of various masonry walls, infill of stair wells and the construction of a new lift and stair core on the eastern side of the property. The upper level is shown to be extended north over the existing roof area.

The proposed alterations indicate an extension of the residential footprint over the top of the adjacent property #23 The Corso, levels 1, 2 and 3.

The building is located within a heritage conservation zone and is subject to restrictions on primarily, façade changes along The Corso for #19-21.

There are no significant façade changes proposed along The Corso façade of #19-21. There are some amendments to existing façade openings proposed on the Market Lane façade.

We have inspected the site. The building appears generally in fair condition for its age. It does not appear to have had regular maintenance therefore external steel elements are weathered (exhibiting corrosion). Cracking is evident in the northern brick façade. Alterations to the ground floor retail space have been carried out some time in the past. The date of these works is not known.

The proposed alterations and additions will require the construction of new foundations for the lift and stairs and transfer beam support columns. New transfer beams and supporting columns are required to support the new floor loads and wall removal.

The presence of the sewer beneath the building and the required clearances nominated by Sydney Water restricts the location and depth of new foundations in some areas. Preliminary consultation with a Sydney Water Accredited Service Provider (MPG) has indicated that expected minimum clearance requirements can be accommodated.

We have reviewed the proposed works and prepared a concept structural design to accommodate the changes without additional load being placed on the existing sewer asset. As such, the ground floor planning requires some flexibility for the demolition extent and the placement of additional transfer columns and foundations to suit.

The extension of the footprint over the adjacent property (#23) is likely to require the reconstruction of that building to provide adequate support. This building is understood to have less heritage significance than #19-21.

The proposed development application scheme represents some structural challenges as described above. These challenges have feasible solutions utilising proven industry standard techniques (such as screw piling/jet grouting). The final coordinated structural design will be documented and certified during the Construction Certificate process.

The final structural solution will be subject to assessment by Sydney Water. If Sydney Water approval is required, it may be addressed within the Construction Certificate stage following completion of the scheme's design development

We consider the proposed works shown on the architectural drawings to be feasible, subject to a detailed design development process provided they are carried out by an experienced, competent contractor. We trust that this information is sufficient for your current requirements. Should you require any further information, please contact the writer.

Yours faithfully **JAMES TAYLOR & ASSOCIATES**

RICHARD YATES B.E.(Hons) MIEAust CPEng NER 620330 **Director**

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