



2 February 2026

REFERRAL RESPONSE – DEVELOPMENT ENGINEERING

FILE NO: Development Applications: 376/2025/1

ADDRESS: 351 New South Head Road DOUBLE BAY 2028

PROPOSAL: Demolition of the existing building and construction of a new residential flat building including basement carpark with affordable housing

FROM: Mr R Lam

TO: Mr B McIntyre

1. ISSUES

- None

2. DOCUMENTATION

I refer to the following documents received for this report:

- Statement of Environment Effects, referenced 25225-D, prepared by GSA Planning, dated 19 September 2025.
- Architectural Plans, referenced 2508/2510, prepared by Luigi Rosselli, dated 16/09/2025.
- Survey Plan, referenced 3545/25-B, prepared by ESA Survey, dated 05/08/2025.
- Revised Stormwater Management Plan, referenced P171536-Rev 1, prepared by Stellen, dated 11/11/2025.
- Geotechnical Report, referenced GF1995, prepared by Geofirst P/L, dated 10 October 2025.
- Flood Impact Assessment, unreferenced, prepared by Stellen, dated 11 September 2025.
- TfNSW, Referral Response, dated 21 November 2025.

3. ASSESSMENT

Comments have been prepared on the following. **Where Approval is recommended, Conditions of Consent follow at the end of the comments.**

a. Site Drainage comments

The submitted revised concept stormwater plans are considered satisfactory in principle. However, an OSD system is required to comply with Chapter E2.2.4 of the Council's DCP. As part of the subject site is located within an OSD exemption area, the provision of an OSD system across the entire site is not required. Hence, an OSD storage volume of 11.2m³ shall be provided, calculated based on the portion of site to which the OSD requirement applies. A basement pumpout system shall be provided and designed in accordance with AS3500.3.



Stormwater runoff will be discharged to the TfNSW's underground drainage system by gravity via the provision of stormwater filtration/treatment system. Conditions will be imposed to ensure this filtration pit will not be subject to backwater effect from the Council's underground drainage system. Stormwater treatment system is to be installed to satisfy the water quality targets stipulated in Chapter E2.2.3 of Council's DCP which will be conditioned accordingly.

Council's Infrastructure & Sustainability Services Division is satisfied that adequate provision could be made for the disposal of stormwater from the land it is proposed to develop and complies with Chapter E2 "Stormwater and Flood Risk Management" DCP.

b. Flooding & Overland Flow comments

Refer to comments from Council's Drainage Engineer separately. (Trim 25/221817)

c. Impacts on Council Infrastructure comments

As part of this application, the applicant is required to upgrade the existing infrastructures, including the footpath and to construct a new vehicular crossing. These works can be addressed by way of appropriate conditions..

d. Traffic comments

Please refer to comments and/or conditions from Council's Traffic Engineer separately.

e. Vehicle Access & Accommodation comments

Internal vehicular access and parking arrangements are considered acceptable.

f. Geotechnical, Hydrogeological and/or Structural comments

A Geotechnical Report by Geofirst P/L, Ref: GF1995, dated 10 October 2025, has been submitted in support of the application. The proposal involves actual excavation with a maximum depth of about 6.2m below the proposed ground level as the new development will be separated into two retention systems.

The report identified that the subsurface conditions as:

- a) Fill comprising silty sand to a depth of 0.3m, 0.6m and 0.5m in BH1, BH3 and BH4.*
- b) Depth of natural sand with various density from a depth beneath the fill to a depth of 8.2m, 10m, 7.9m and 6.5m in BH1, BH2, BH3 and BH4.*
- c) Sandstone bedrock was encountered beneath the natural sand in all boreholes,*
- d) The return of groundwater was observed in BH2 during investigation.*

The report made comments and recommendations on the following:

- Shoring and support,*
- Vibration Monitoring,*
- Excavation method,*
- Further Geotechnical input.*

Council's Infrastructure & Sustainability Services Division has no objections to the proposed excavation on technical grounds. Notwithstanding this, Council's Planning Officer is also to undertake an assessment of the proposed excavation against the relevant excavation objectives and controls prescribed under the LEP and DCP.



4. RECOMMENDATION

Council's Development Engineer has determined that the proposal is satisfactory, subject to the following conditions:

A. GENERAL CONDITIONS

A.5 Approved Plans and Supporting documents

Reference	Description	Author	Date
GF1995-3	Geotechnical Report	Geofirst P/L	10 October 2025
P171536	Stormwater Management Plan	Stellen	11/11/2025

A.8 Ancillary Aspects of Development (section 4.17(2) of the Act)

A.31 No Underpinning Works

A.32 Vehicular Access and Garaging

Driveways and vehicular access ramps must be designed to provide adequate ground clearance to the underside of B99 vehicles. In all respects, the proposed vehicular access including any parking spaces must be designed and constructed to comply with the minimum requirements of AS2890.1 and the Council's DCP.

Condition Reason: To ensure vehicular access and parking arrangement comply with Australian Standards.

B. BEFORE DEMOLITION WORK COMMENCES

B.4 Erosion and Sediment Controls - Installation

B.7 Public Road Assets Prior to Any Work/Demolition

B.14 Payment of Security and Fees

Property Damage Security Deposit (S138)	\$856,200	No	T115
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B.16 Dilapidation Reports for Existing Structures

Before any site work commences, dilapidation surveys and dilapidation reports must be conducted and prepared by a professional structural engineer for all buildings and/or structures that are located within the likely "zone of influence" of any excavation, dewatering and/or construction induced vibration as determined applicable by the structural engineer.

These properties must include (but is not limited to):

No. 349, 355, 357-359 New South Head Road

No. 3, 3A, 5 Manning Road

Where access is not granted to any adjoining properties to prepare the dilapidation report, the report must be based on a survey of what can be observed externally and it must be demonstrated, in writing, to the satisfaction of the Principal Certifier, that all reasonable steps were taken to obtain access.



The completed dilapidation reports must be submitted to the Principal Certifier for approval, and an approved copy of the reports must be submitted to Council with the Notice of Commencement prior to the commencement of any development work.

No less than two (2) days before any site work commences, neighbouring building owner(s) must be provided with a copy of the dilapidation report for their property(ies).

Notes:

- The dilapidation report will be made available to affected property owners on request and may be used by them in the event of a dispute relating to damage allegedly caused by the carrying out of the development.
- This condition cannot prevent neighbouring buildings being damaged by the carrying out of the development.
- Council will not be held responsible for any damage which may be caused to adjoining buildings as a consequence of the development being carried out.
- Council will not become directly involved in disputes between the developer, its contractors and the owners of neighbouring buildings.

Condition Reason: To establish and document the structural condition of adjoining properties for comparison as site work progresses and is completed and ensure neighbours and Council are provided with the dilapidation report.

B.18 Adjoining buildings founded on loose foundation materials

B.19 Piezometers for the Monitoring of Ground Water Levels

Before any site work commences, 2 piezometers within the excavation area and a further 2 piezometers around the perimeter of the wall must be provided. The piezometers are to be installed to monitor ground water levels (GWL) before and during all dewatering works for the construction phase.

The GWL monitoring wells and monitoring program must be maintained until the issue of the occupation certificate.

The GWL are to be regularly monitored during the course of the works as required by the work method statement for the control of GWL. Any damaged piezometers are to be replaced to allow uninterrupted monitoring.

Where there are any movements in the GWL outside a safe range set by the work method statement for the control of GWL, corrective action must be undertaken under the direction of the professional engineer (hydrological/geotechnical engineer).

Condition Reason: To ensure that piezometers are provided to monitor ground water levels.

C. ON COMPLETION OF REMEDIATION WORK

Nil

D. BEFORE ISSUE OF A CONSTRUCTION CERTIFICATE



D.13 Road and Public Domain Works

Before the issue of any construction certificate, a separate application under Section 138 of the Roads Act 1993 is to be made to, and be approved by Council, for the following infrastructure works. The infrastructure works must be carried out at the applicant's expense:

- a) The removal of the redundant vehicular crossing and reinstated into TfNSW's standard kerb and gutter in accordance with TfNSW's requirements. A copy of the approved design plans from TfNSW must be submitted with this S138 application,
- b) The removal of the existing vehicular crossing including layback and gutter and the construction of a new 5.74 metres wide vehicular crossing in accordance with Council's Crossing Specification, standard driveway drawing RF2_D and to the satisfaction of Council's Assets Engineers. The new vehicular crossing must be constructed at a right angle to the street kerb in plain concrete where the centreline of the new crossing must align with the centreline of the internal driveway at the property boundary. Design longitudinal surface profiles along each side/edge for the proposed driveway, starting from the road centreline to the parking slab must be submitted for assessment,
- c) The reconstruction of the existing full width concrete footpath for the full frontage of the site in accordance with Council's Specification. A maximum cross-fall of 3% must be provided for the footpath, graded from the property boundary towards the top of kerb. Design longitudinal surface profile (scale 1:100) and cross sections (scale 1:50) at every 5 metres interval must be submitted for assessment,
- d) For stormwater connection, the existing TfNSW' underground drainage system must be extended by using minimum Class 4, 375mm RRJ reinforced concrete pipes (RCP) with the construction of a new kerb inlet pit with 1.8m lintel in New South Head Road in accordance with TfNSW's Specification. The new pipeline must have a minimum longitudinal fall of 1% in accordance with TfNSW' Specification and AS3725. The new KIP must be located within the frontage of the site and at a minimum distance of 0.5m from any layback. The access grates must be in Class D, bicycle friendly type. Detailed design including longitudinal section of the proposed 375mm RCP shall be prepared by a chartered professional civil engineer. Trench details shall be included in the design drawings to comply with Council's Specification and AS3725. A copy of the approved design plans from TfNSW must be submitted with this S138 application
- e) A bond of \$129,400 will be used as security to ensure the satisfactory completion of the infrastructure works. The security or bank guarantee must be the original unconditional bank guarantee with no expiry date,
- f) Council may use all or part of the Infrastructure Bond as well as the Property Damage Security Deposit to meet the cost of removing or completing the works if they do not meet Council's requirements,
- g) The Deposit/Bond will not be released until Council has inspected the site and is satisfied that the Works have been completed in accordance with Council approved drawings and to Council requirements,
- h) The reinstatement of all damaged kerb and gutter and road pavement to Council's Specification for Roadworks, Drainage and Miscellaneous Works and to the satisfaction of Council's Assets Engineers. Note: damaged kerb and gutter and road pavement on New South Head Road must be reinstated to TfNSW's Specification and to the satisfaction of TfNSW,
- i) Where a grass verge exists, the balance of the area between the footpath and the kerb over the full frontage of the proposed development must be turfed. The grass verge must be constructed to contain a uniform minimum 75mm of friable growing medium and have a total cover of Couch turf.



Before the issue of any construction certificate, the principal certifier must be provided with the original receipt(s) for the payment of all of the following security bonds and fees:

Description	Amount	Indexed	Council Fee Code
SECURITY under section 4.17(6) of the <i>Environmental Planning and Assessment Act 1979</i>			
Infrastructure Works Bond - completing any public work required in connection with the consent.	\$ 129,400	No	T113
Infrastructure Works Bond – remedying any defects in any public work that arise within 6 months after the work is completed	\$ Nil	No	T113
INSPECTION FEES under section 608 of the <i>Local Government Act 1993</i>			
Public Road and Footpath Infrastructure Inspection Fee	\$ 692 + Index Amount	Yes, yearly	T45
TOTAL SECURITY AND FEES	\$ 130,092 + Index Amount		

How must the payments be made?

Payments must be made by:

- cash deposit with Council,
- credit card payment with Council, or
- bank cheque made payable to Woollahra Municipal Council.

The payment of a security may be made by a bank guarantee where:

- the guarantee is by an Australian bank for the amount of the total outstanding contribution,
- the bank unconditionally agrees to pay the guaranteed sum to the Council on written request by Council on completion of the development or no earlier than 12 months from the provision of the guarantee whichever occurs first [NOTE: a time limited bank guarantee or a bank guarantee with an expiry date is not acceptable],
- the bank agrees to pay the guaranteed sum without reference to the Applicant or landowner or other person who provided the guarantee and without regard to any dispute, controversy, issue or other matter relating to the development consent or the carrying out of development in accordance with the development consent,
- the bank guarantee is lodged with the Council prior to any site works being undertaken, and
- the bank's obligations are discharged when payment to the Council is made in accordance with the guarantee or when Council notifies the bank in writing that the guarantee is no longer required.

Notes:

- **Road** has the same meaning as in the Roads Act 1993.
- Changes in levels may arise from the detailed design of buildings, road, footpath, driveway crossing grades and stormwater. Changes required under Roads Act 1993 approvals may necessitate design and levels changes under this consent. This may in turn require the Applicant to seek to amend this consent.
- Works or structures over, on or under public roads or footpaths are subject to sections 138, 139 and 218 of the Roads Act 1993 and specifically:
 - Construction of driveways and/or new or alterations to footpath paving
 - Alteration and/or extension to Council drainage infrastructure
 - Alteration and/or addition of retaining walls



- Pumping of water to Council's below ground stormwater system
- Installation of soil/rock anchors under the roadway
- Installation of Stormwater outlet pipes across the nature strip
- An "Application to Carry Out Works" form must be completed and lodged, with the application fee, at Council's Customer Services. Detailed plans and specifications of all works (including but not limited to structures, road works, driveway crossings, footpaths and stormwater drainage etc) within existing roads, must be attached, submitted to and approved by Council under section 138 of the Roads Act 1993, before the issue of any construction certificate.
- Detailed engineering plans and specifications of the works required by this condition must accompany the application form. The plans must clearly show the following:
 - Engineering drawings (plan, sections and elevation views) and specifications of the footpath, driveways, kerb and gutter, new gully pit showing clearly the connection point of site outlet pipe(s). The connection drainage lines must be as direct as possible and generally run perpendicular to the kerb alignment.
 - Engineering drawings of the new drainage line to be constructed joining the new and existing drainage pits including services.
- All driveways must include a design longitudinal surface profile for the proposed driveway for assessment. The driveway profile is to start from the road centreline and be along the worst case edge of the proposed driveway. Gradients and transitions must be in accordance with clause 2.5.3, 2.6 of AS 2890.1 – 2004, Part 1 – Off-street car parking. The driveway profile submitted to Council must be to (1:25) scale (for template checking purposes) and contain all relevant details: reduced levels, proposed grades and distances.
- The existing footpath level and grade at the street alignment of the property must be maintained unless otherwise specified by Council. Your driveway levels are to comply with AS2890.1 and Council's Standard Drawings. There may be occasions where these requirements conflict with your development and you are required to carefully check the driveway/garage slab and footpath levels for any variations.
- Any adjustments required from the garage slab and the street levels are to be carried out internally on private property
- Drainage design works must comply with the Woollahra DCP 2015 Chapter E2 – Stormwater and Flood Risk Management.
- Temporary ground anchors may be permitted, in accordance with Council's "Rock Anchor Policy".
- Services: Prior to any excavation works, the location and depth of all public utility services (telephone, cable TV, electricity, gas, water, sewer, drainage, etc.) must be ascertained. The Applicant must be responsible for all public utility adjustment/relocation works, necessitated by the development work and as required by the various public utility authorities and/or their agents.
- All public domain works must comply with the latest version of Council's "Specification for Roadworks, Drainage and Miscellaneous Works" unless expressly provided otherwise by these conditions. This specification and the application form can be downloaded from www.woollahra.nsw.gov.au.
- When an application under the Roads Act is required, then four (4) weeks is to be allowed for assessment.
- An application must be made to Council by the person who paid the security for release of the securities held under section 4.17 of the Act.
- The securities will not be released until the Occupation Certificate has been lodged with Council, Council has inspected the site and Council is satisfied that the public works have been carried out to Council's requirements. Council may use part or all of the security to complete the works to its satisfaction if the works do not meet Council's requirements.
- Council will only release the security upon being satisfied that all damage or all works, the purpose for which the security has been held have been remedied or completed to Council's satisfaction as the case may be.
- When determining whether the works within public land are satisfactory, Council will consider the ownership, construction quality, maintenance, operations, and public utility of such item/s.
- Upon completion of each section of road, drainage and landscape work to Council's satisfaction, 90% of the bond monies held by Council for these works will be released upon application. 10% may be retained by Council for a further 6 month period and may be used by Council to repair or rectify any defects or temporary works during the 6 month period.



Condition Reason: To ensure the design of the road, footpaths, driveway crossings and public stormwater drainage works are detailed and approved under section 138 of the Roads Act 1993 and to ensure the works are completed to Council's satisfaction.

D.21 Provision for Energy Supplies

D.25 Erosion and Sediment Control Plan – Submissions & Approval

D.36 Professional Engineering Detail

D.37 Engineer Certification

D.40 Geotechnical and Hydrogeological Design, Certification and Monitoring

Before the issue of the amended construction certificate, the applicant must submit, for approval by the Principal Certifier, a detailed geotechnical report prepared by a chartered professional geotechnical engineer in accordance with Council's DCP and DA Guide document "Guidelines for Geotechnical and Hydrogeological Reports".

The geotechnical report must include a Geotechnical / Hydrogeological Monitoring Program together with civil and structural engineering details for foundation retaining walls, footings, basement tanking, and subsoil drainage systems, as applicable, prepared by a chartered professional structural engineer.

The geotechnical report must be certified by the chartered professional geotechnical engineer to:

- a) Provide appropriate support and retention to ensure there will be no ground settlement or movement, during excavation or after construction, sufficient to cause an adverse impact on adjoining property or public infrastructure.
- b) Provide appropriate support and retention to ensure there will be no adverse impact on surrounding property or infrastructure as a result of changes in local hydrogeology (behaviour of groundwater).
- c) Provide details of cut-off walls or similar controls prior to excavation such that any temporary changes to the groundwater level, during construction, will be kept within the historical range of natural groundwater fluctuations. Where the historical range of natural groundwater fluctuations is unknown, the design must demonstrate that changes in the level of the natural water table, due to construction, will not exceed 0.2m at any time.
- d) Provide tanking to below ground structures to prevent the entry of seepage water such that subsoil drainage/ seepage water is NOT collected and discharged to the kerb and gutter.
- e) Provide that vibration from site works (including but not limited to demolition, excavation, sifting, piling and construction) does not exceed the following limits at any time, as measured from the site boundary:
 - For continuous vibration: Maximum peak velocity of 0.28 mm/s
 - For intermittent vibration: Maximum peak velocity of 2.5 mm/s and maximum vibration dose value of 0.2 m/s 1.75
 - For impulsive vibration: Maximum peak velocity of 2.5 mm/s

These are the minimum standards. Some locations may be more susceptible to vibration impacts and require more stringent vibration limits to protect human comfort and prevent structural damage. A chartered professional geotechnical engineer must determine whether more stringent vibration limits are required.

Factors that may influence vibration impacts include, but are not limited to: ground conditions, and sensitive buildings in the vicinity of the site, e.g. heritage, age, construction type and materials of buildings.



The report must include a Geotechnical and Hydrogeological Monitoring Program that:

- will detect any settlement associated with temporary and permanent works and structures,
- will detect deflection or movement of temporary and permanent retaining structures (foundation walls, shoring bracing or the like),
- will detect vibration so that vibration does not exceed the maximum peak particle velocity standards,
- details the trigger levels for anticipated vibration types and buildings in the neighbourhood, and frequency of monitoring,
- will detect groundwater changes calibrated against natural groundwater variations,
- details the location and type of monitoring systems to be utilised,
- details the pre-set acceptable limits for peak particle velocity and ground water fluctuations,
- details recommended hold points to allow for the inspection and certification of geotechnical and hydrogeological measures by the chartered professional geotechnical engineer, and
- details a contingency plan.

Condition Reason: To ensure that geotechnical and hydrogeological impacts are appropriately managed.

D.41 Ground Anchors

D.51 Stormwater Management Plan

Before the issue of any construction certificate, the applicant must submit, for approval by the Principal Certifier, detailed stormwater management plans prepared and certified by a chartered professional civil engineer, which detail the following:

- a) General design in accordance with stormwater management plan, referenced P171536, prepared by Stellen, dated 11/11/2025, other than amended by this and other conditions,
- b) The discharge of stormwater from the site, by direct connection, to a new kerb inlet pit in New South Head Road to TfNSW's requirements and specification,
- c) The provision of a minimum 600x600 boundary junction pit must be provided prior to discharging stormwater from the site to the street drainage system. The stormwater outlet pipe must be made by using a minimum 150mm x 75mm x 6mm galvanised RHS or equivalent and be located within the frontage of the subject site with a minimum grade of 1% to comply with Council's DCP and AS3500.3,
- d) The installation of an OSD system with a minimum storage capacity of 11.2m³, calculated based on the site area which is located outside the OSD exemption area in accordance with the Council's DCP. The Permissible Site Discharge for the proposed development including runoff from the OSD bypass areas must not exceed 41.4 l/s for the 1% AEP storm event,
- e) The provision of stormwater treatment system including but not limited to 5xOceanGuard, SF Chamber with 3x310mm PSorb StormFilter by Ocean Protect to meet the water quality targets stipulated in Chapter E2.2.3 of Council's DCP,
- f) In order to prevent any backwater effects, invert level of the discharge outlet must be designed so that it is set above the HGL of the downstream drainage system where the top of kerb level is to be used as the tailwater level when connecting into the underground drainage system. The tailwater level must be higher than the top of kerb where the point of connection is affected by mainstream or overland flooding. No submerged condition and/or the use of non-return valve will be permitted. All invert



levels and finished levels of all junction pits and kerb inlet pit must be clearly depicted on the drawings,

- g) All below-ground structures are to be fully tanked such that subsoil drainage/seepage water must not be collected and discharged to the kerb and gutter to comply with Chapter E2.2.5 of Council's DCP. Notation to this requirement must be clearly depicted on the drawings,
- h) Internal stormwater drainage including but not limited to gutters and downpipes, pipes and pits are to be designed for rainfall intensities up to and including the 1% AEP event if an unimpeded overland flow path to the street drainage system is not available. Design details and calculations must be included in the stormwater management plans,
- i) Interceptor drain(s) at the site boundary to prevent stormwater flows from the site crossing the footpath,
- j) The dimensions of all drainage pits and access grates must comply with AS3500.3,
- k) Compliance with the objectives and performance requirements of the BCA,
- l) General compliance with the Council's Woollahra DCP 2015 Chapter E2 – Stormwater and Flood Risk Management.

The *Stormwater Management Plan* must also include the following specific requirements:

Layout plan

A detailed drainage plan at a scale of 1:100 based on drainage calculations prepared in accordance with the Australian Government publication, *Australian Rainfall and Run-off, 2019* edition or most current version thereof. It must include:

- a) All pipe layouts, dimensions, grades, lengths and material specification,
- b) Location of proposed rainwater tanks,
- c) All invert levels reduced to Australian Height Datum (AHD),
- d) Location and dimensions of all drainage pits,
- e) Point and method of connection to Council's drainage infrastructure, and
- f) Overland flow paths over impervious areas.

On-site Stormwater Detention (OSD) details:

- a) Any potential conflict between existing and proposed trees and vegetation,
- b) Internal dimensions and volume of the proposed detention storage,
- c) Diameter of the outlet to the proposed detention storage basin,
- d) Plans, elevations and sections showing the detention storage basin invert level, centre-line level of outlet, top water level, finished surface level and adjacent structures,
- e) Details of access and maintenance facilities,
- f) Construction and structural details of all tanks and pits and/or manufacturer's specifications for proprietary products,
- g) Details of the emergency overland flow-path (to an approved Council drainage point) in the event of a blockage to the on-site detention system,
- h) Non-removable fixing details for orifice plates where used,

Rainwater Reuse System details:

- a) Any potential conflict between existing and proposed trees and vegetation,
- b) Internal dimensions and volume of the proposed rainwater storage,
- c) Plans, elevations and sections showing the rainwater tanks, finished surface level and adjacent structures,
- d) Details of access and maintenance facilities,
- e) Construction and structural details of all tanks and pits and/or manufacturer's specifications for proprietary first flush products,



- f) Details of the emergency overland flow-path (to an approved Council drainage point) in the event of a blockage to the rainwater tanks,

For the proposed stormwater connection to the Council's drainage infrastructure, separate approval under Section 138 of the *Roads Act 1993* must be obtained from Council for those works prior to the issue of any Construction Certificate.

All Stormwater Drainage System work within any road or public place must comply with Woollahra Municipal Council's Specification for Roadworks, Drainage and Miscellaneous Works (2012).

Condition Reason: To ensure that site stormwater is disposed of in a controlled and sustainable manner.

D.52 Non-gravity Drainage System

D.54 Flood Protection

Before the issue of any construction certificate, the construction certificate plans and specifications required under clause 7 of the Development Certification and Fire Safety Regulation, must include a Flood Risk Management Plan on the basis of the Flood Planning Level (FPL).

The flood planning level must be based on a 1 in 100 year AEP flood level.

The Flood Risk Management Plan must detail:

- a) Enclosed car parking areas with more than three spaces must be protected from inundation to a FPL of 300mm above the 1 in 100 year AEP flood level,
- b) A permanent flood risk management plan shall be installed in a prominent area of the basement carpark,
- c) The proposed below ground car park shall be protected by a physical threshold set at or above the flood planning level of a minimum of 400mm above the adjacent kerb invert level,
- d) Emergency self-powered lights, indicating the safe exit to a flood free area above the probable maximum flood (PMF) shall be installed in the car parking area,
- e) Flood compatible materials shall be used for all flood exposed construction,
- f) All flood exposed electrical wiring and equipment shall be waterproofed,
- g) All flood protection measures shall be inspected and certified as fit for purpose after construction is complete by an engineer experienced in flood mitigation,

Flood protection is to comply with Woollahra DCP 2015, Part E General Controls for All Development, Chapter E2 –Stormwater and Flood Risk Management.

Notes:

- The revised driveway profile, gradients and transitions must be in accordance with Australian Standard 2890.1, Part 1: Off-street car parking. The driveway profile submitted to Council must contain all relevant details: reduced levels, proposed grades and distances. Council will not allow alteration to existing reduced levels within the road or any other public place to achieve flood protection.

Condition Reason: To ensure the development incorporates flood inundation protection measures.



E. BEFORE BUILDING WORK COMMENCES

E.14 Erosion and Sediment Controls – Installation

F. DURING BUILDING WORK

F.7 Public Footpaths – Safety, Access and Maintenance

F.11 Maintenance of Environmental Controls

F.12 Compliance with Geotechnical/Hydrogeological Monitoring Program

While site work is being carried out, excavation must be undertaken in accordance with the recommendations of the Geotechnical / Hydrogeological Monitoring Program and any oral or written direction of the supervising chartered professional geotechnical engineer.

The Principal Contractor and any sub-contractor must strictly follow the Geotechnical / Hydrogeological Monitoring Program for the development including, but not limited to:

- a) the location and type of monitoring systems to be utilised. As a minimum, vibration monitoring sensors are to be installed and monitored at adjacent properties,
- b) recommended hold points to allow for inspection and certification of geotechnical and hydrogeological measures by the chartered professional geotechnical engineer, and
- c) the contingency plan.

Should vibration limits be exceeded at any time during construction, the construction activity causing vibration must cease until the measures to limit the vibration are implemented .

Notes:

- The consent authority cannot require that the author of the geotechnical/hydrogeological report submitted with the development application to be appointed as the chartered professional geotechnical engineer supervising the work however, it is the Council's recommendation that the author of the report be retained during the construction stage.
- The trigger level for vibration monitoring is to be set in consultation with the chartered professional structural engineer following completion of the pre-construction dilapidation surveys of the adjacent buildings and review geotechnical conditions and construction methodology.

Condition Reason: To ensure the geotechnical and/or hydrogeological impacts of the development are appropriately managed.

(Autotext 12F)

F.13 Support of Adjoining Land and Buildings

F.14 Vibration Monitoring

While site work is being carried out, vibration monitoring equipment must be installed and maintained, under the supervision of a chartered professional geotechnical engineer, between any potential source of vibration and any building identified by the chartered professional geotechnical engineer as being potentially at risk of movement or damage from settlement and/or vibration during the excavation and during the removal of any excavated material from the land being developed.



If vibration monitoring equipment detects any vibration at the level of the footings of any adjacent building exceeding the maximum peak particle velocity for continuous vibration, intermittent vibration, or impulsive vibration, an audible alarm must activate such that the Principal Contractor and any sub-contractor are easily alerted to the event. All activities must cease immediately until the measures to limit the vibration are implemented. The maximum peak velocity must not exceed the following limits at any time, as measured from the site boundary:

- For continuous vibration: Maximum peak velocity of 0.28 mm/s
- For intermittent vibration: Maximum peak velocity of 2.5 mm/s and maximum vibration dose value of 0.2 m/s 1.75
- For impulsive vibration: Maximum peak velocity of 2.5 mm/s

Prior to the vibration monitoring equipment being reset by the chartered professional geotechnical engineer and any further work recommencing the event must be recorded and the cause of the event identified and documented by the chartered professional geotechnical engineer.

Where the event requires, in the opinion of the chartered professional geotechnical engineer, any change in work practices to ensure that vibration at the level of the footings of any adjacent building does not exceed the peak particle velocity adopted by the chartered professional geotechnical engineer as the maximum acceptable peak particle velocity these changes in work practices must be documented and a written direction given by the chartered professional geotechnical engineer to the Principal Contractor and any sub-contractor clearly setting out required work practice.

The Principal Contractor and any sub-contractor must comply with all work directions, verbal or written, given by the chartered professional geotechnical engineer.

A copy of any written direction required by this condition must be provided to the Principal Certifier within 24 hours of any event.

Where there is any movement in foundations such that damaged is occasioned to any adjoining building or such that there is any removal of support to supported land the chartered professional geotechnical engineer, Principal Contractor and any sub-contractor responsible for such work must immediately cease all work, inform the owner of that supported land and take immediate action under the direction of the chartered professional geotechnical engineer to prevent any further damage and restore support to the supported land.

Notes:

- **Building** has the same meaning as in section 1.4 of the Act i.e. “building includes part of a building and any structure or part of a structure....”
- **Supported land** has the same meaning as in the Conveyancing Act 1919.

Condition Reason: To monitor and manage vibration impacts from development.
(Autotext 14F)

F.15 Erosion and Sediment Controls – Maintenance

F.17 Disposal of Site Water during Construction

F.19 Site Cranes

F.20 Check Surveys - boundary location, building location, building height, stormwater drainage system and flood protection measures relative to Australian Height Datum

F.24 Compliance with Council’s Specification for Roadworks, Drainage and Miscellaneous Works, Road Works and, Work within the Road and Footway



F.33 Shoring and Adequacy of Adjoining Property

While site work is being carried out, the person having the benefit of the development consent must, at the person's own expense:

- a) protect and support the adjoining premises from possible damage from the excavation.

For the purposes of section 4.17(11) of the Act, the following condition is prescribed in relation to a development consent for development that involves an excavation that extends below the level of the base of the footings of a building on adjoining land.

Notes:

- This condition does not apply if the person having the benefit of the development consent owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying.

G. BEFORE ISSUE OF AN OCCUPATION CERTIFICATE

G.7 Commissioning and Certification of Systems and Works

G.9 Commissioning and Certification of Public Infrastructure Works

G.29 Works within Public Land (including Council, State or Federal owned land or property)

G.32 Positive Covenant and Works-As-Executed Certification of Stormwater Systems

Before the issue of an occupation certificate for the whole of the building, and on the completion of construction work, stormwater drainage works are to be certified by a chartered professional civil engineer with works-as-executed drawings prepared by a registered surveyor supplied to the Principal Certifier detailing:

- a) compliance with conditions of development consent relating to stormwater,
- b) the structural adequacy of the on-site stormwater detention (OSD) system,
- c) that an OSD tank with minimum storage of 11.2m³ has been constructed in accordance with the approved stormwater plans,
- d) that only one stormwater outlet pipe has been constructed in accordance with the approved stormwater plans,
- e) that all required stormwater treatment system have been constructed in accordance with the approved construction stormwater plans and that the system meets the water quality targets stipulated in the Council's DCP,
- f) that the works have been constructed in accordance with the approved design and will provide the detention volume in accordance with the submitted calculations,
- g) that all below ground structures are fully tanked and subsoil drainage/seepage water is NOT collected and discharged into the kerb and gutter in accordance with the approved stormwater drawings,
- h) pipe invert levels and surface levels to Australian Height Datum, and
- i) contours indicating the direction in which water will flow over land should the capacity of the pit be exceeded in a storm event exceeding design limits.

A positive covenant under section 88E of the Conveyancing Act 1919 must be created on the title of the subject property, providing for the on-going maintenance of the OSD system, stormwater treatment system, charged system and including any pumps and sumps incorporated in the development. The wording of the Instrument must be in accordance with Council's standard format and the Instrument must be registered with the NSW Land



Registry Services. The person with the benefit of this consent must reimburse Council's reasonable expenses incurred in the drafting, negotiation and registration of the covenant

Notes:

- a) The required wording of the Instrument can be downloaded from Council's website www.woollahra.nsw.gov.au. The PC must supply a copy of the Works As Executed plans to Council together with the occupation certificate.
- b) The occupation certificate for the whole of the building must not be issued until this condition has been satisfied.

H. OCCUPATION AND ONGOING USE

H.29 Ongoing Maintenance of the OSD and Stormwater Treatment System

During the occupation and ongoing use, in accordance with this condition and any positive covenant, the person with the benefit of this consent must:

- a) Permit stormwater to be temporarily detained and treated by the System;
- b) Keep the system clean and free of silt rubbish and debris,
- c) Maintain renew and repair as reasonably required from time to time the whole or part of the system so that it functions in a safe and efficient manner.
- d) Carry out the matters referred to in paragraphs (b) and (c) at the Owners expense.
- e) Not make any alterations to the system or elements thereof without prior consent in writing of the Council and not interfere with the system or by its act or omission cause it to be interfered with so that it does not function or operate properly.
- f) Permit the Council or its authorised agents from time to time upon giving reasonable notice (but at any time and without notice in the case of an emergency) to enter and inspect the land with regard to compliance with the requirements of this covenant.
- g) Comply with the terms of any written notice issued by Council in respect to the requirements of this clause within the time stated in the notice.
- h) Where the Owner fails to comply with the Owner's obligations under this covenant, permit the Council or its agents at all times and on reasonable notice at the Owner's cost to enter the land with equipment, machinery or otherwise to carry out the works required by those obligations.

The owner:

- a) Indemnifies the Council from and against all claims, demands, suits, proceedings or actions in respect of any injury, damage, loss, cost, or liability (Claims) that may be sustained, suffered, or made against the Council arising in connection with the performance of the Owner's obligations under this covenant except if, and to the extent that, the Claim arises because of the Council's negligence or default; and
- b) releases the Council from any Claim it may have against the Council arising in connection with the performance of the Owner's obligations under this covenant except if, and to the extent that, the Claim arises because of the Council's negligence or default.

Notes:

- This condition is supplementary to the owner(s) obligations and Council's rights under any positive covenant.

I. BEFORE ISSUE OF A SUBDIVISION WORKS CERTIFICATE

I.1 Electricity Substations – Dedication as Road and/or Easements for Access



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