29 November 2024

#### REFERRAL RESPONSE – DEVELOPMENT ENGINEERING

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| FILE NO: | **Development Applications:** 376/2024/1 |
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| ADDRESS: | 29-53 Victoria Road BELLEVUE HILL 2023 |
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| PROPOSAL: | Demolition of the existing outdoor swimming pool of Scots College and construction of a new swimming pool and associated facilities including pool plant room, spectator seating and storage area. |
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| FROM: | Ms S Lin |
|  |  |
| TO: | Mr M D'Alessio |

1. **ISSUES**

* None

**2. DOCUMENTATION**

I refer to the following documents received for this report:

* Statement of Environment Effects, referenced P0052464, prepared by Urbis, dated 16/08/2024.
* Architectural Plans, referenced 240039 Rev 2, prepared by TKD Arhictects, dated 04/11/2024.
* Survey Plan, referenced 80523 Rev B, prepared by Rygate, dated 15/07/2024.
* Stormwater Management Plan, referenced 241269 Rev B, prepared by TTW, dated 23/08/2024.
* Geotechnical Report, referenced GS9279-1A, prepared by Aargus, dated 24/06/2024.
* Construction Methodology Report, referenced ST242620-00-ST-RP01 Rev 2, prepared by Northrop, dated 29/10/2024.
* Traffic Impact Assessment, referenced 2444, prepared by JMT Consulting, dated 20/08/2024.

**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 concept stormwater plans are considered satisfactory in principle subject to refinements at CC stage. OSD system and stormwater treatment system have been proposed in accordance with Chapter E2.2.3 and Chapter E2.2.4 of Council’s DCP. Stormwater runoff from the proposed development area will be directed to the proposed OSD system and discharged via the existing on-site stormwater system.*

*Council’s Infrastructure and Sustainability 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**

*Council’s Drainage Engineer has determined that the proposal is satisfactory with no condition recommended.*

**c. Impacts on Council Infrastructure comments**

*There is no works proposed on Council’s property.*

**d. Traffic comments**

*Not relevant*

**e. Vehicle Access & Accommodation comments**

*Not relevant*

**f. Geotechnical, Hydrogeological and/or Structural comments**

*A Geotechnical Report by Aargus, Ref: GS9279-1A, dated 24/06/2024, has been submitted in support of the application. The proposal involves bulk excavation with a maximum depth of about 2.5m from the existing ground surface.*

*The report identified that the subsurface conditions as:*

1. *Fill comprising silty sand to a depth of 0.4m (BH1), 0.6m (BH2) and 0.6m (BH3)*
2. *Depth of natural sand from a depth beneath the fill to a depth of 10m in all boreholes.*
3. *Sandstone bedrock was not encountered beneath the natural sand.*
4. *Groundwater was not encountered during field investigation.*

*The report made comments and recommendations on the following:*

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

*In addition, the applicant has also submitted a construction methodology report in support of the application. The report provides construction methodology to reduce the risk of vibration and disturbance to neighbouring structures.*

*Council’s Infrastructure & Sustainability Services Division has no objections to the proposed excavation on technical grounds subject to imposition of conditions. 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:

1. **GENERAL CONDITIONS**

**A.5 Approved Plans and Supporting documents**

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| **Reference** | **Description** | **Author** | **Date** |
| 241269  TTW-00-DR-CI-00001 Rev B  TTW-00-DR-CI-00002 Rev B  TTW-00-DR-CI-00003 Rev B  TTW-00-DR-CI-03001 Rev B  TTW-00-DR-CI-03011 Rev B  TTW-00-DR-CI-04001 Rev B  TTW-00-DR-CI-09201 Rev B  TTW-00-DR-CI-09211 Rev B | Stormwater Management Plan | TTW | 23/08/2024  23/08/2024  23/08/2024  23/08/2024  23/08/2024  23/08/2024  23/08/2024  23/08/2024 |
| GS9279-1A | Geotechnical Report | Aargus | 24/06/2024 |
| ST242620-00-ST-RP01 | Construction Methodology Report | Northrop | 29/10/2024 |

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

**A.31 No Underpinning Works**

1. **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**

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| Property Damage Security Deposit (S138) | $170,606 | No | T115 |

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| **B.** | **16.** | **Dilapidation Reports for Existing Buildings** |
| 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):   1. No. 9 Aston Gardens   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.21 Work (Construction) Zone – Approval & Implementation**

1. **ON COMPLETION OF REMEDIATION WORK**

**Nil**

1. **BEFORE ISSUE OF A CONSTRUCTION CERTIFICATE**

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

**D.35** **Structural Adequacy of Existing Supporting Structures**

**D.36 Professional Engineering Details**

**D.37 Engineer Certification**

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| **D.** | **40.** | **Geotechnical and Hydrogeological Design, Certification and Monitoring** |
| Before the issue of the construction certificate, the applicant must submit, for approval by the Principal Certifier, a detailed geotechnical report prepared by a Geotechnical Engineer with National Engineering Register (NER) credentials in accordance with Chapter E2.2.10 of Council’s DCP and Council’s document “Guidelines for Preparation of Geotechnical and Hydrogeological Reports”. The 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 professional engineer, who is suitably qualified and experienced in geotechnical and hydrogeological engineering.  These details must be certified by the professional engineer to:   1. 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. 2. 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). 3. 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 0.3m at any time. 4. 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. 5. Provide 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 in accordance with AS 2187.2 Appendix J including acceptable velocity of vibration (peak particle velocity),    * 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 professional engineer, and    * details a contingency plan. |
| **Condition Reason:** To ensure that geotechnical and hydrogeological impacts are appropriately managed. |

D.41 Ground Anchors

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| **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 by a chartered professional civil engineer, which detail the following:   1. General design in accordance with stormwater management plans, referenced 241269 Rev B, prepared by TTW, dated 23/08/2024 other than amended by this and other conditions, 2. The installation of an on-site stormwater detention (OSD) system with a minimum storage volume of 33m3. The total discharge from the proposed development area must not exceed 47.6 L/s for 1% AEP storm event to comply with Chapter E2.2.4 of the Council’s DCP, full supporting calculations shall be provided on the stormwater plans, 3. The installation of stormwater treatment system to achieve the minimum water quality targets stipulated in Chapter E2.2.3 of Council’s DCP, 4. The stormwater management plans must specify any components of the existing drainage system to be retained and certified to be in good condition and of adequate capacity to convey additional runoff and be replaced or upgraded if required. 5. Detail the location of the existing stormwater drainage system including all pipes, inspection openings, surface drains, pits and their discharge location as well as any new stormwater drainage system. 6. Detail any remedial works required to upgrade the existing stormwater drainage system. 7. Subsoil drainage/seepage water is NOT discharged to the kerb and gutter to comply with Chapter E2.2.5 of Council’s DCP. 8. Dimensions of all drainage pits and access grates must comply with AS3500.3, 9. Compliance with the objectives and performance requirements of the BCA, 10. 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:   1. All pipe layouts, dimensions, grades, lengths and material specification. 2. Location of proposed rainwater tanks. 3. All invert levels reduced to Australian Height Datum (AHD). 4. Location and dimensions of all drainage pits. 5. Point and method of connection to Councils drainage infrastructure. 6. Overland flow paths over impervious areas.   On-site Stormwater Detention (OSD) details:   1. Any potential conflict between existing and proposed trees and vegetation. 2. Internal dimensions and volume of the proposed detention storage. 3. Diameter of the outlet to the proposed detention storage basin. 4. 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. 5. Details of access and maintenance facilities. 6. Construction and structural details of all tanks and pits and/or manufacturer’s specifications for proprietary products. 7. 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. 8. Non-removable fixing details for orifice plates where used.   For Stormwater Drainage works on Council’s property, separate approval under Section 138 of the Roads Act 1993 must be obtained from Council for those works before 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).  **Notes:**   * The collection, storage and use of rainwater is to be in accordance with Standards Australia HB230 “Rainwater Tank Design and Installation Handbook”. |
| **Condition Reason:** To ensure that site stormwater is disposed of in a controlled and sustainable manner. |

1. **BEFORE BUILDING WORK COMMENCES**

**E.14 Erosion and Sediment Controls – Installation**

1. **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**

**F.13 Support of Adjoining Land and Buildings**

**F.14 Vibration Monitoring**

**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**

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| **F** | **33.** | **Shoring and Adequacy of Adjoining Property** |
| 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.  While site work is being carried out, the person having the benefit of the development consent must, at the person’s own expense:   1. Protect and support the adjoining premises from possible damage from the excavation.   **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. |
| **Condition Reason:** To protect and support the adjoining premises from possible damage from the excavation. |

1. **BEFORE ISSUE OF AN OCCUPATION CERTIFICATE**

**G.7 Commissioning and Certification of Systems and Works**

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| **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 professional engineer with works-as-executed drawings prepared by a registered surveyor and submitted for approval by the Principal Certifier detailing:   1. compliance with conditions of development consent relating to stormwater, 2. the structural adequacy of the on-site detention (OSD) system, 3. that an OSD system with minimum storage of 33m3 has been constructed in accordance with the approved stormwater plans, 4. that the required stormwater treatment system has been constructed in accordance with the approved plans and meets the water quality targets stipulated in the Council’s DCP, 5. that subsoil drainage/seepage water is NOT collected and discharged into the kerb and gutter, 6. that the drainage works have been constructed in accordance with the approved design, 7. pipe invert levels and surface levels to Australian Height Datum, and 8. 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 on-site detention system and stormwater treatment system 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:**   * 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. * The occupation certificate for the whole of the building must not be issued until this condition has been satisfied. |
| **Condition Reason:** To ensure the certification and ongoing maintenance of the stormwater system prior to the occupation of the whole building. |

1. **OCCUPATION AND ONGOING USE**

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| **H** | **29.** | **Ongoing Maintenance of the On-Site Stormwater Detention System 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:   1. Permit stormwater to be temporarily detained and treated by the system, 2. Keep the system clean and free of silt rubbish and debris, 3. 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. 4. Carry out the matters referred to in paragraphs (b) and (c) at the Owners expense. 5. 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. 6. 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. 7. 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. 8. 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:   1. 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 2. 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. |
| **Condition Reason:** To ensure that owners are aware of maintenance requirements for their stormwater systems. |

1. **BEFORE ISSUE OF A SUBDIVISION WORKS CERTIFICATE**

**Nil**