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Our ref: 10ERM2016/0945
Your ref: DA201600434

Via email: council@marrickville.nsw.gov.au

Judy Clark
Manager Development Assessment
Inner West Council
PO Box 14
Petersham NSW 2049

13 March 2017

Dear Judy,

Re: Integrated Development referral under s.91A of the *Environmental Planning and Assessment Act 1979* for 313-319 Marrickville Road Marrickville (Marrickville Community Hub and residential development)

Reference is made to your request for a response in relation to the proposed development described as 313-319 Marrickville Road Marrickville (Marrickville Community Hub and residential development) and also identified as DA201600434.

Please be advised that, following a meeting and further advice from the applicant, amended General Terms of Approval have been prepared for the subject development and are attached. The previous General Terms of Approval for temporary construction dewatering, issued to Council on 30 November 2016, should be replaced with the attached version.

Please direct all related correspondence to the following address:

Water Regulation – Coastal (Parramatta)

Water NSW

LOCKED Bag 5123

PARRAMATTA NSW 2124

Yours Sincerely

Wayne Conners

Wayne Conners

Senior Water Regulation Officer

Coastal (Parramatta)

WaterNSW

Important: As a result of NSW water reforms, many functions previously provided by DPI Water have transferred to WaterNSW, effective 1 July. These functions include customer interactions for licencing, compliance and billing – as well as all in-field services and metering operations. Customers will experience streamlined, more convenient and efficient services. Over the coming months, you will begin to see WaterNSW branded materials for these services.

General Terms of Approval

General

1. An access licence is required for the take of groundwater by the below-ground structure proposed as part of the development application and it is to be obtained by the applicant and a copy of the certificate provided to Council and the relevant approval body within 6 months of the commencement of excavation at the subject property.
2. A copy of the written permission from the relevant controlling authority for the disposal of any pumped groundwater is to be obtained by the applicant and a copy of the certificate provided to Council and the relevant approval body before excavation commences at the subject property.
3. Unless authorised by an access licence purchased by the applicant for the long-term take of groundwater from the appropriate water source(s) identified in the relevant water sharing plan, the substructure of the building must be made fully watertight across its entire subsurface extent for the anticipated occupational life of the development.
4. The access licence purchased by the applicant for the long-term take of groundwater from the appropriate water source(s) identified in the relevant water sharing plan must:
 - a. identify sufficient entitlement to account for the maximum possible annual extraction volume to ensure compliance with water management legislation; and
 - b. be retained by the applicant and attached to the completed building to account for the ongoing take of groundwater for its occupational life.
5. Sufficient permanent drainage shall be provided beneath and around the outside of the watertight structure where an access licence has not been obtained to ensure that natural groundwater flow is not impeded and:
 - (a) any groundwater mounding at the edge of the structure shall be at a level not greater than 10 % above the level to which the water table might naturally rise in the location immediately prior to the construction of the structure; and
 - (b) any elevated water table is more than 1.0 m below the natural ground surface existent at the location immediately prior to the construction of the structure; and
 - (c) where the habitable part of the structure (not being footings or foundations) is founded in bedrock or impermeable natural soil then the requirement to maintain groundwater flows beneath the structure is not applicable.
6. Construction methods and material used in and for construction shall be designed to account for the likely range of salinity and pollutants which may be dissolved in groundwater, and shall not themselves cause pollution of the groundwater.
7. Documentation (referred to as a 'report') comprising measurements, maps, bore logs, calculations, results, discussion and justification for various matters related to the dewatering process must be provided. Information will be required at several stages: prior to construction commencing (initial report - which will accompany the application for the authorisation), at any time when a significant change in activities occurs (intermediate report); and at the completion of construction (completion report). Reports need to be submitted in a format consistent with electronic retrieval without editing restrictions; raw data should be presented in Excel spreadsheets without editing restrictions.

Prior to excavation

8. The following shall be included in the initial report:
 - (a) measurements of groundwater levels beneath the site from a minimum of three relevant monitoring bores, together with details of the bores used in the assessment including bore logs and three-dimensional identification information.
 - (b) a map of the site and its immediate environs depicting the water table (baseline conditions) shown relative to the topography and approved construction footprint from the surface level and below. An assessment of the potential variation in the water table during the life of the proposed building together with a discussion of the methodology and information on which this assessment is based.
 - (c) details of the present and potential groundwater flow paths and hydraulic gradients in and around the site; the latter in response to the final volumetric emplacement of the construction.
 - (d) a schedule for the ongoing water level monitoring and description of the methodology to be used, from the date of consent until at least two months after the cessation of pumping. [Note that groundwater level measurements should be undertaken on a continuous basis using automatic loggers in monitoring bores.]
9. The applicant shall assess the likely impacts of the dewatering activities on other groundwater users or structures or public infrastructure; this assessment will include an appropriate bore, spring or groundwater seep census and considerations relevant to potential subsidence or excessive settlement induced in nearby buildings and property, and be documented together with all calculations and information to support the basis of these in the initial report.
10. Groundwater quality testing of samples taken from outside the footprint of the proposed construction, with the intent of ensuring that as far as possible the natural and contaminant hydrochemistry of the potential dewatered groundwater is understood, shall be conducted on a suitable number of samples and tested by a NATA-certified laboratory. Details of the sampling locations and the protocol used, together with the test results accompanied by laboratory test certificates shall be included in the initial report. An assessment of results must be done by suitably qualified persons with the intent of identifying the presence of any contaminants and comparison of the data against accepted water quality objectives or criteria for the intended dewatering purpose. In the event of adverse quality findings, the applicant must develop a plan to mitigate the impacts of the hydrochemistry on the dewatered groundwater and present the details of all assessments and plans in the initial report.
11. Groundwater quality testing generally in accordance with the above clause, shall be undertaken on any anniversary or other renewal or alteration of any dewatering authorisation.
12. A reasonable estimate of the total volume of groundwater to be extracted shall be calculated and included in the initial report; together with details and calculation methods for the parameters and supporting information to confirm their development or measurement (e.g. permeability determined by slug-testing, pump-testing or other means).
13. A copy of a valid consent for the development shall be provided in the initial report.
14. The method of disposal of pumped water shall be nominated (i.e. reinjection, drainage to the stormwater system or discharge to sewer) and a copy of the written permission from the relevant controlling authority shall be included in the initial report. The disposal of any

contaminated pumped groundwater (sometimes called “tailwater”) must comply with the provisions of the *Protection of the Environment Operations Act 1997* and any requirements of the relevant controlling authority.

15. Contaminated groundwater (i.e. above appropriate NEPM 2013 thresholds) shall not be reinjected into any aquifer. The reinjection system design and treatment methods to remove contaminants shall be nominated and included in the initial report and any subsequent intermediate report as necessary. The quality of any pumped water that is to be reinjected must be demonstrated to be compatible with, or improve, the intrinsic or ambient groundwater in the vicinity of the reinjection site.

During excavation

16. Engineering measures designed to transfer groundwater around and beneath the basement shall be incorporated into the basement construction to prevent the completed infrastructure from restricting pre-existing groundwater flows.
17. Piping, piling or other structures used in the management of pumped groundwater shall not create a flooding hazard or induce mounding of groundwater. Control of pumped groundwater is to be maintained at all times during dewatering to prevent unregulated off-site discharge.
18. Measurement and monitoring arrangements to the satisfaction of the approval body are to be implemented. Weekly records of the volumes of all groundwater pumped and the quality of any water discharged are to be kept and a completion report provided after dewatering has ceased. Records of groundwater levels are to be kept and a summary showing daily or weekly levels in all monitoring bores provided in the completion report.
19. Pumped groundwater shall not be allowed to discharge off-site (e.g. adjoining roads, stormwater system, sewerage system, etc.) without the controlling authority’s approval and/or owner’s consent/s. The pH of discharge water shall be managed to be between 6.5 and 8.5. The requirements of any other approval for the discharge of pumped groundwater shall be complied with.
20. Dewatering shall be undertaken in accordance with groundwater-related management plans applicable to the excavation site. The requirements of any management plan (such as acid sulfate soils management plan or remediation action plan) shall not be compromised by the dewatering activity.
21. The location and construction of groundwater extraction works that are decommissioned are to be recorded in the completion report. The method of decommissioning is to be identified in the documentation.
22. Access to groundwater management works used in the activity is to be provided to permit inspection when required by the approval body under appropriate safety procedures.

Following excavation

23. Following cessation of the dewatering operations, the applicant shall submit the completion report which shall include:
 - (a) detail of the volume of water taken, the precise periods and location of water taken, the details of water level monitoring in all of the relevant bores; and
 - (b) a water table map depicting the aquifer’s settled groundwater condition and a comparison to the baseline conditions; and

- (c) a detailed interpreted hydrogeological report identifying all actual resource and third party impacts, including an assessment of altered groundwater flows and an assessment of any subsidence or excessive settlement induced in nearby buildings and property and infrastructure.
 - (d) details of the ongoing monitoring program to be implemented by the applicant, for the purposes of demonstrating compliance with the requirements of the authorisation and the *NSW Aquifer Interference Policy*.
24. The completion report is to be assessed by the approval body prior to any certifying agency's approval for occupation or use of the completed construction.
25. Monitoring (measurement and recording) of discharge volumes arising from ongoing dewatering groundwater take must be carried out on a monthly basis for the life of the building using a method compliant with the *NSW Water Extraction Monitoring Policy* (e.g. pumping diary, pump revolution meter, operating hour meter, electricity meter or flow meter). The design of the drainage system to isolate groundwater inflows from other sources of water is the responsibility of the applicant.
26. All monitoring records are to be maintained by the applicant for the life of the development to demonstrate the actual take of groundwater is consistent with the volumes anticipated during the design of the project. Where sump pumps have not been operated during the calendar month this must nevertheless be identified in the monitoring record (e.g. as a 'nil' entry).
27. Reports (including all monitoring data and interpretations of the groundwater-related impacts of the ongoing take) shall be prepared by a suitably qualified and experienced hydrogeological consultant on behalf of the applicant when required by Council or the relevant approval body.