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Our ref: 10 ERM2015/0676  
Our file: 2015-0318  
Your ref: DA2015/612

The General Manager  
Liverpool City Council  
Locked Bag 7064  
LIVERPOOL BC NSW 1871

Attention: Nabila Samadie

5 December 2016

Dear Nabila

**Re: Integrated Development Referral – General Terms of Approval**  
**Dev Ref: DA2015/612**

**Description of proposed activity: Construction of two residential flat buildings comprising one x six storey building and underground car parking and demolition of existing works**

**Site location: 28 Shepherd Street Liverpool**

I refer to your recent letter regarding an Integrated Development Application (DA) proposed for the subject property. Attached, please find DPI Water's (formerly the NSW Office of Water) General Terms of Approval (GTA) for works requiring a controlled activity approval under the *Water Management Act 2000* (WM Act), as detailed in the subject DA.

Please note Council's statutory obligations under section 91A (3) of the *Environmental Planning and Assessment Act 1979* (EPA Act) which requires consent, granted by a consent authority, to be consistent with the general terms of any approval proposed to be granted by the approval body.

DPI Water advises that, in addition to requiring a controlled activity approval (CAA), parts of the development that intercept or extract groundwater are also required to be authorised under the WM Act. The information requirements for such an authorisation are explicitly detailed in the NSW Aquifer Interference Policy - including the need for the applicant to provide a thorough hydrogeological assessment of the predicted impacts of the proposed development and calculations of the volumes likely to be extracted. As defined in that policy, such requirements apply to activities interfering with all aquifers, including low yielding and saline groundwater systems.

The proposed development is deemed to be an aquifer interference activity requiring an authorisation under water management legislation; therefore additional General Terms of Approval have been provided.

If the proposed development is approved by Council, DPI Water requests that these GTA be included in their entirety in Council's development consent. Please also note the following:

- DPI Water should be notified if any plans or documents are amended and these amendments significantly change the proposed development or result in additional works on waterfront land, which includes:

- i. the bed of any river together with any land within 40 m inland of the highest bank of the river, or
  - ii. the bed of any lake, together with any land within 40 m of the shore of the lake, or
  - iii. the bed of any estuary, together with any land within 40 m inland of the mean high water mark of the estuary.
- Once notified, DPI Water will ascertain if the amended plans require review or variation/s to the GTA. This requirement applies even if the proposed works are part of Council's proposed consent conditions and do not appear in the original documentation.
- DPI Water should be notified if Council receives an application to modify the development consent and the modifications change any activities on waterfront land.
- DPI Water requests notification of any legal challenge to the consent.

As the controlled activity to be carried out on waterfront land cannot commence before the applicant applies for and obtains a controlled activity approval, DPI Water recommends the following condition be included in the development consent:

"The Construction Certificate will not be issued over any part of the site requiring a controlled activity approval until a copy of the approval has been provided to Council".

**The attached GTA are not the controlled activity approval.** The applicant must apply to DPI Water for a controlled activity approval **after consent** has been issued by Council **and before** the commencement of any work or activity on waterfront land.

Finalisation of a controlled activity approval can take up to eight (8) weeks from the date DPI Water receives all documentation (to its satisfaction). Applicants must complete and submit (to the undersigned) an application form for a controlled activity approval together with any required plans, documents, the appropriate fee and security deposit or bank guarantee (if required by the Office of Water) and proof of Council's development consent.

Application forms for the controlled activity approval are available from the undersigned or from DPI Water's website:

[www.water.nsw.gov.au](http://www.water.nsw.gov.au) » [Water licensing](#) » [Approvals](#) » Controlled activities

DPI Water requests that Council provides a copy of this letter to the applicant.

DPI Water also requests that Council provides DPI Water with a copy of the determination for this development application as required under section 91A (6) of the EPA Act.

Yours Sincerely



**Irene Zinger**  
**Regional Manager – Metro**  
**Water Regulation**

# General Terms of Approval

for work requiring a approval  
under s91 of the *Water Management Act 2000*

Number	Condition	File No: 2015-0318
Site Address:	28 Shepherd Street Liverpool	
DA Number:	DA2015/612	
LGA:	Liverpool City Council	
Plans, standards and guidelines		
1	<p>These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to DA2015/612 and provided by Council.</p> <p>Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified DPI Water (formerly the NSW Office of Water) must be notified to determine if any variations to these GTA will be required.</p>	
2	<p>Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CAA) under the Water Management Act from DPI Water. Waterfront land for the purposes of this DA is land and material in or within 40 metres of the top of the bank or shore of the river identified.</p>	
3	<p>The consent holder must prepare or commission the preparation of:</p> <ul style="list-style-type: none"><li>(i) Vegetation Management Plan</li><li>(ii) Works Schedule</li><li>(iii) Erosion and Sediment Control Plan</li><li>(iv) Soil and Water Management Plan</li><li>(v) A 'surveyed' cross sections plan, minimum three sections including a scale bar, that shows the top of the highest bank of Georges River, site boundary, 20-metre and 40-metre corridor lines measured from the top of the highest bank, Council's foreshore building's line. The plans should also show the natural ground level, the proposed finished level, vegetation and any other proposed activities on waterfront land.</li></ul>	
4	<p>All plans must be prepared by a suitably qualified person and submitted to the DPI Water for approval prior to any controlled activity commencing. The following plans must be prepared in accordance with DPI Water's guidelines located at <a href="http://www.water.nsw.gov.au/Water-Licensing/Approvals">www.water.nsw.gov.au/ Water-Licensing/Approvals</a>.</p> <ul style="list-style-type: none"><li>(i) Vegetation Management Plans</li><li>(ii) Riparian Corridors</li><li>(iii) Outlet structures</li></ul>	
5	<p>The consent holder must (i) carry out any controlled activity in accordance with approved plans and (ii) construct and/or implement any controlled activity by or under the direct supervision of a suitably qualified professional and (iii) when required, provide a certificate of completion to DPI Water.</p>	
Rehabilitation and maintenance		
6	<p>The consent holder must carry out a maintenance period of two (2) years after practical completion of all controlled activities, rehabilitation and vegetation management in accordance with a plan approved by the DPI Water.</p>	
7	<p>The consent holder must reinstate waterfront land affected by the carrying out of any controlled activity in accordance with a plan or design approved by the DPI Water.</p>	

Number	Condition	File No: 2015-0318
Reporting requirements		
8	The consent holder must use a suitably qualified person to monitor the progress, completion, performance of works, rehabilitation and maintenance and report to DPI Water as required.	
Security deposits		
9	The consent holder must provide a security deposit (bank guarantee or cash bond) - equal to the sum of the cost of complying with the obligations under any approval - to DPI Water as and when required.	
Access-ways		
10	The consent holder must design and construct all ramps, stairs access ways, cycle paths, pedestrian paths or other non-vehicular form of access way so that they do not result in erosion, obstruction of flow, destabilisation, or damage to the bed or banks of the river or waterfront land, other than in accordance with a plan approved by DPI Water.	
11	The consent holder must not locate ramps, stairs, access ways, cycle paths, pedestrian paths or any other non-vehicular form of access way in a riparian corridor other than in accordance with a plan approved by DPI Water.	
Drainage and Stormwater		
12	The consent holder is to ensure that all drainage works (i) capture and convey runoffs, discharges and flood flows to low flow water level in accordance with a plan approved by DPI Water; and (ii) do not obstruct the flow of water other than in accordance with a plan approved by DPI Water.	
13	The consent holder must stabilise drain discharge points to prevent erosion in accordance with a plan approved by DPI Water.	
Erosion control		
14	The consent holder must establish all erosion and sediment control works and water diversion structures in accordance with a plan approved by DPI Water. These works and structures must be inspected and maintained throughout the working period and must not be removed until the site has been fully stabilised.	
Excavation		
15	The consent holder must ensure that no excavation is undertaken on waterfront land other than in accordance with a plan approved by DPI Water.	
River bed and bank protection		
16	The consent holder must clearly mark (with stakes using a GPS or peg out survey), protect and maintain a riparian corridor with a width of 20 metres measured horizontally landward from the highest bank of the river for the length of the site directly affected by the controlled activity in accordance with a plan approved by DPI Water.	
17	The consent holder must establish a riparian corridor along Georges River in accordance with a plan approved by DPI Water.	
END OF CONDITIONS FOR CAA		

# General Terms of Approval

## for Aquifer Interference Activities

### General

1. An authorisation shall be obtained for the take of groundwater as part of the activity. Groundwater shall not be pumped or extracted for any purpose other than temporary construction dewatering at the site identified in the development application. The authorisation shall be subject to a currency period of 12 months from the date of issue and will be limited to the volume of groundwater take identified.
2. The design and construction of the building must prevent any take of groundwater after the authorisation has lapsed by making any below-ground levels that may be impacted by any water table watertight for the anticipated life of the building. Waterproofing of below-ground levels must be sufficiently extensive to incorporate adequate provision for unforeseen high water table elevations to prevent potential future inundation.
3. Sufficient permanent drainage shall be provided beneath and around the outside of the watertight structure 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 structure is founded in bedrock or impermeable natural soil then the requirement to maintain groundwater flows beneath the structure is not applicable.
4. 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.
5. DPI Water requires documentation (referred to as 'report') comprising measurements, maps, bore logs, calculations, results, discussion and justification for various matters related to the dewatering process. 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 an authorisation renewal is required or a significant change in activities occurs (intermediate report); and at the completion of dewatering and related operations (completion report). Reports need to be submitted to DPI Water at Parramatta Office, in a format consistent with electronic retrieval without editing restrictions; raw data should be presented in Excel spreadsheets without editing restrictions.

### Prior to excavation

6. 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. [DPI Water prefers that monitoring be undertaken on a continuous basis using automatic loggers in boreholes.]
7. 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.
8. 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.
9. Groundwater quality testing generally in accordance with Clause 8, shall be undertaken on any anniversary or other renewal or alteration of any dewatering authorisation.
10. 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 predicted by slug-testing, pump-testing or other means).
11. A copy of a valid consent for the development shall be provided in the initial report.
12. 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 provided 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.
13. 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

14. 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.



15. 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.
16. Measurement and monitoring arrangements to the satisfaction of DPI Water 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.
17. 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.
18. 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.
19. 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.
20. Access to groundwater management works used in the activity is to be provided to permit inspection when required by DPI Water under appropriate safety procedures.

#### Following excavation

21. Following completion of the dewatering operations, the applicant shall submit to DPI Water, Parramatta Office, 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.
22. The completion report is to be assessed by DPI Water prior to any certifying agency's approval for occupation or use of the completed construction.

**END OF CONDITON FOR GW**