

5.2.3 Brentham Street Reserve – Request to Use a Portion of the Reserve for the ReInjection of Groundwater

Ward:	North	Date:	19 June 2015
Precinct:	Precinct 3 - Leederville	File Ref:	PR11095, DD6.2014.161.1, SC544
Attachments:	1 – Site Plan		
Tabled Items:	Nil		
Reporting Officers:	S Hill, Project Officer Parks and Environment J van den Bok, Manager Parks and Property Services R Lotznicker, Director Technical Services		
Responsible Officer:	R Lotznicker, Director Technical Services		

OFFICER RECOMMENDATION:

That Council:

1. **ADVERTISES** the request from MDW Environmental Services, on behalf of Pindan to use of a portion of the Brentham Street Reserve for the reinjection of groundwater, as shown on Attachment 1, in accordance with the City’s Community Consultation Policy No. 4.1.5;
2. **RECEIVES** a further report from Administration at the conclusion of the advertising period; and
3. **ADVISES** MDW Environmental Services that advertising of its request pursuant to 1 above does not constitute Council support for the proposal and will not prejudice Council’s decision on the matter after the advertising period.

PURPOSE OF REPORT:

To consider advertising a request from the environmental consultant acting on behalf of the builder of the Rosewood Care Group’s aged care facility at Lot 40 Britannia Road, Leederville, to use a portion of Brentham Street Reserve for the installation of reinjection bores along the eastern side of the reserve.

BACKGROUND:

Ordinary Meeting of Council 24 May 2011:

Council approved the demolition of an existing single storey Institutional Building (Aged Care Facility) and construction of a three-storey Institutional Building (Aged Care Facility) at Lot 40, No. 5-9 Britannia Road, Leederville.

In approving the development Council conditionally approved the use of a small portion of Brentham Street Reserve for a builder’s compound.

This compound, albeit of a lesser area than was approved by Council, has been in place for just under 12 months and the matter is currently being reviewed by Administration as per Part 3 condition, (iv) (a) of Council’s resolution which stated: *“the period of the use of the Brentham Street Reserve and the western side of Wavertree Place shall be for 12 months, effective from the date of the commencement of the construction, however may be extended with the approval of the City’s Chief Executive Officer”*

Also, in accordance with Council’s resolution Part 3 condition (iv) (c), the builder was required to pay \$1,000 per month for the use of the reserve. The full amount for 12 months was paid in advance.

Request from MDW Environmental Services (MDWES):

In March 2015 MDWES submitted an "Offsite Groundwater Disposal Plan" on behalf of the builder (Pindan) of the Rosewood redevelopment.

A number of approvals were requested from the City including a request, as a contingency measure, to install reinjection bores within Brentham Street Reserve and associated fencing and burial locations. No decision has been made regarding this particular request.

DETAILS:

Site History:

Redevelopment works for the Rosewood aged care facility include the construction of a three-storey building with a single level basement.

Piles have been installed around the footprint of the basement and a two metre thick insitu concrete "plug" has been injected along the entire length and width of the basement area. The plug was intended to prevent groundwater welling up into the basement during onsite excavation and construction works basically creating a 'bath tub' like structure. The proponent previously anticipated only limited dewatering would be required to remove the water contained within the excavated area. However, the insitu concrete plug method was unsuccessful and dewatering from below the concrete plug is now required to lower groundwater levels to enable construction to proceed.

Works at the site have been on hold since October 2014. To enable the works to proceed approximately 910,000kL of groundwater will need to be abstracted from the site over a nine month period.

Previously the Department of Water (DoW) granted a licence to abstract 742,089kL at the site and MDWES who are working with the builder are currently dewatering at a reduced rate under an interim licence, to maintain the status quo until the appropriate licences and additional approvals have been obtained.

Current Infiltration and Discharge Options:

It was MDWES's preference that disposal of dewatering be via a combination of onsite and offsite infiltration, as summarised below:

Onsite Infiltration

The Department of Environment Regulation (DER) recommend that wherever possible, dewatering effluent should be infiltrated as it reduces the net loss to the aquifer system and limits potential offsite impacts due to groundwater drawdown. Current infiltration is via two onsite infiltration trenches however due to the volume of water required to be abstracted, additional groundwater effluent disposal methods were, and are, being progressed.

Offsite Infiltration

Additional potential infiltration sites have been investigated by MDWES. An open swale managed by Main Roads WA (MRWA) was identified along the eastern side of the Mitchell Freeway. MRWA and the Town of Cambridge were contacted and approval was granted for the use of the swale to infiltrate dewatering effluent from the site.

Stormwater drainage maps provided by the City indicated a stormwater pipeline that runs westerly from the site, through Britannia Road Reserve, across the top of the Freeway drainage swale, and into Lake Monger.

Administration granted approval to MDWES to run a flexi dewatering hose through the stormwater pipeline via an access chamber located in the south-eastern corner of the site and brought back up to the surface near the swale via an access chamber located on the western edge of Britannia Road Reserve. From there, the pipework was buried and bored under the Freeway bike path, to the existing MRWA swale.

The MRWA swale overflows into Lake Monger at two locations. These outlets have been partially blocked by sand bags to prevent flow of the discharge water into the lake ensuring maximum infiltration, whilst still allowing for large rainfall events.

Discharge to Sewer

A current one-off discharge approval permits the discharge of dewatering water to sewer from the site at a maximum flow rate of 20L/sec.

Reinjection of Groundwater – Off Site:

It is the Department of Water's (DoW's) preference that as much groundwater as possible be returned to the aquifer as close as possible to the site of abstraction. DOW has advised that the best way to reduce any likely impacts is to infiltrate or reinject as much dewatering water, treated if necessary, back into the surrounding water table. Therefore, as part of the reissuing of the DoW licence to take water, the DoW has stipulated that MDWES, must consider and investigate reinjecting dewatering water into the area comprising Brentham Street Reserve or alternatively provide, clear reasons as to why this disposal option cannot be utilised as a preferred option rather than a contingency.

Reinjection within Brentham Street Reserve

The proposal submitted for the installation and use of reinjection bores within Brentham Street Reserve includes the following:

- Approximately 300 metres of 150mm discharge hose along the eastern edge of the reserve within a channel approximately two metres wide, predominantly along the tree lines, away from the higher use section of the reserve;
- Recharge wells at 10-15 metre spacing along the discharge line (up to 30 recharge wells);
- No recharge wells in the area behind the primary school (i.e. all wells to be installed south of Bennelong Place);
- Temporary fencing to be installed to limit the public access to the infrastructure for the duration of the works;
- Where required, temporary shallow burial of the discharge line to allow unimpeded pedestrian access to the reserve (Bennelong Place, Wylie Place, Bouverie Place and Muriel Place);
- Dilapidation monitoring of houses within the vicinity of the reinjection bores will be undertaken; and
- All surfaces to be re-instated to original condition at the conclusion of the project.

Extended builders compound area:

In association with the above proposal, MDWES have requested approval for an additional 100m² of land adjacent to the site to house an additional generator and water treatment unit.

At the Ordinary Meeting of Council 24 May 2011 Part 3 of Council's resolution, Clause (iii) stated "*the area permitted for the use of the builder's compound on the western side of Wavertree Place is approximately 5 metres wide by 100 metres in length area (approximately 500 square metres), as shown on the plan stamp dated 16 May 2011 (attachment 004) as approved by the Director Technical Services*".

The Director Technical Services, in discussion with the applicant at the time, negotiated a smaller area and therefore it is considered that the request for an extension of this area is covered under the previous approval and would be negotiated as a separate exercise under the previous approval.

MDWES has informed that there would be no noise or vibrations associated with the running of the reinjection bores, however there may be some noise from an additional generator but no more than what is currently associated with the site dewatering.

CONSULTATION/ADVERTISING:

If Council adopts Administration's Recommendation, public consultation would be undertaken regarding the proposal.

LEGAL/POLICY:

The area comprising the Brentham Street Reserve is owned by the City of Vincent in fee simple.

Ground water Extraction:

A licence from the DoW is required under the provisions of the Rights in Water and Irrigation Act 1914 to abstract water and, on this basis, an application for the extraction via dewatering of 910,829KL was submitted to the DoW.

The City's Administration was advised that that on 17 June 2015 the DoW issued the Builder, Pindan, with a '5C Licence' to take water from the development site conditional upon the extracted groundwater being reinfiltrated, via approximately 15 reinjection bores placed within the development site.

City's requirements:

To use the City's land, the applicant would be required to submit an application for Planning Approval and enter into a licence agreement with the City.

RISK MANAGEMENT IMPLICATIONS:

Medium: The DER and DoW encourage dewatering contractors to present a 'worst case scenario' regarding potential impacts of dewatering and therefore encourage contractors to present a range of different contingency options to manage any potential risks. As a large quantity of groundwater is proposed to be extracted during construction there are obvious benefits of reinjecting the extracted ground water near the source and this is being encouraged by the DoW.

In respect to any potential impact on surrounding dwellings as part of the reinjection proposal, the applicant would be required to arrange for a dilapidation report to be undertaken on all adjoining properties and would be required to undertake regular monitoring throughout the period of reinjection.

STRATEGIC IMPLICATIONS:

In accordance with the City's *Strategic Plan 2013-2023*, Objective 1 states:

"1.1 Improve and maintain the natural and built environment and infrastructure.

1.1.5: Enhance and maintain the City's infrastructure, assets and community facilities to provide a safe, sustainable and functional environment."

SUSTAINABILITY IMPLICATIONS:

As a large quantity of groundwater is proposed to be extracted during construction there are benefits of reinjecting the extracted ground water near the source and this is being encouraged by the DoW.

FINANCIAL/BUDGET IMPLICATIONS:

Not applicable at this stage, however should the proposal ultimately be approved the City would receive an income over the term of the licence period.

COMMENTS:

Construction works, at the Rosewood Aged Care Facility development on Lot 40, Britannia Road, Leederville, have been on hold for a considerable period of time pending approval from the Department of Water (DoW) for a new licence to extract groundwater from the site.

Recently the DoW issued the Builder, Pindan, with a Licence to take water from the development site conditional upon the extracted groundwater being reinfiltated, via approximately 15 reinjection bores placed within the development site.

DoW has indicated that as much groundwater as possible should be returned to the aquifer as close to the development site as possible.

Therefore the developer has requested approval to use a portion of Brentham Street Reserve to reinject dewatered groundwater from the Development in the Brenham Street Reserve.

It is recommended that Council advertise the proposal prior to making a determination on this matter.
