



the bushland shire

creating a living environment

SUPPLEMENTARY BUSINESS PAPER

ORDINARY MEETING

**Wednesday, 21 September, 2011
at 6.30pm**

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26 APPRAISAL OF VARIOUS TREE VALUATION METHODS

EXECUTIVE SUMMARY

This report outlines two methods for determining offsets associated with the removal of a tree or group of individual trees. The first method covers the cost of replanting trees to offset the loss. The second method calculates the underlying value of a property occupied by a tree's canopy and assumes that this value reflects the value of the tree.

The offset values for the first option are expected to be in the order of \$6,000-\$12,000 depending on the specific species of tree and its maturity. Based on the examples provided the offset values under the second option range from \$75,000 to \$130,000. These could be reduced by applying a discount factor. The magnitude of any discount is a matter for the Council. Nonetheless a 75% discount would bring the costs down to about \$18,800 to about \$50,000. Other discount rates are possible.

It is proposed that **both** methods would be suitable to determine the value of a tree. In the case of a tree application (TA) on private property, where the replacement tree(s) cannot be planted on the same property, the first method could be applied. The second method would apply in the case of development applications (DAs) that proposed the removal of significant canopy trees. The methods are explained in more detail in the body of the report.

The Green Offsets Code requires some amendment to incorporate the proposed tree valuation methods. An outline of the proposed amendments to the Green Offsets Code is presented as Attachment 1. Critical to these amendments will be decisions on the application of the valuation methods. A significant consideration is whether an offset valuation should apply to tree applications on private property, particularly where the tree is diseased dying or dangerous and/or imposes a risk to the structural integrity of a dwelling or structure. Under these circumstances the Council might only impose a requirement to replace a tree of an approved species on site on a one-for-one basis. In circumstances where Council's expert arborist does not agree that the tree is diseased dying or dangerous or likely to cause property damage the only remaining grounds are social or public interest matters. Whether the public interest would be best served by raising the possibility of allowing trees to be removed where grounds to do so are not strong, and where a tree offset fee is a factor in the decision, is a matter for consideration. The proposed amendments do not make provision for such options.

PURPOSE/OBJECTIVE

The purpose of the report is to enable Council to determine suitable tree valuation methods for offsetting tree loss and include these in the Green Offsets Code.

DISCUSSION

At the Ordinary Meeting of 15 June 2011, it was resolved in part:

“THAT:

- 1. That further investigation of the most suitable methods of tree valuations be conducted and the preferred method be incorporated into an amended Green Offsets Code through a further report.*

2. *The adopted Tree and Vegetation Chapter of the proposed Comprehensive Development Control Plan be amended to make all tree applications Development Applications and to incorporate the Green Offsets Code as the instrument for the setting of fees to offset the loss of trees and vegetation from private land.*

Offsets Code

Offsetting is a mechanism by which the negative impacts at one site can be offset by positive actions elsewhere, if not on the site then generally within the vicinity of the site or within the region.

Council has adopted an Offsets Code to address the loss of valuable native vegetation across Hornsby Shire through the impacts of development. The Policy does not make provision for its use to applications other than development applications. In other words removal of trees through the issuing of tree permits is not covered by the Offsets Code.

The purpose of the Code is to ensure that significant vegetation in the Shire is protected, balance the negative impacts of some development and provide for environmental enhancement and restoration.

In order to maintain the integrity of the Code, offsets can only be applied where damage to native vegetation due to a development is unavoidable and all options to minimise impacts have been exhausted. The area of vegetation to be removed is offset usually by protecting and enhancing another area of native vegetation to 'replace' the native vegetation removed from the development site. Offset actions can include:

- regeneration of bushland with significant vegetation
- planting local provenance trees, shrubs and grasses to link up isolated patches of bush on previously cleared land
- fencing off an area of bushland to exclude grazing and other damaging activities, and
- entering into a conservation agreement, property agreement or covenant to protect vegetation or include areas of vegetation in a conservation reserve

The Green Offsets Code provides a criteria and method for calculating the costs of any green offset on public land. The calculation includes determining and applying an offset multiplier as well as determining the size of the area to be cleared in hectares.

It is considered that this method cannot be applied to the removal and offsetting of a single tree as the size of the area affected is likely to be negligible when expressed as hectares (or a percentage of hectares).

Individual tree loss

Individual trees are authorised for removal under the following circumstances:

- a. Through the issue of a permit generally on private property when no development is proposed.
- b. Through a consent issued following a successful determination of a development application.
- c. Through an appeal process to the elected Council body.

In the former instance trees are generally authorised for removal where it can be demonstrated that they are:

- a. Dead, dying or diseased, and/or
- b. Posing a threat to the structural integrity of a dwelling or other structure on an allotment.

In the second case trees are generally identified for removal to facilitate a subdivision of a property or facilitate a certain dwelling design.

In the later case individuals rely on the elected body of the Council considering the unique circumstances of the case against the public interest.

Methodology to value remnant trees

There are basically two methods available to value an individual tree.

1. A method that basically covers the cost of replanting trees to offset the loss of a tree.
2. A method that places a value on a tree irrespective of replanting costs.

Attachment 2 to report EN21/11 contains information on various tree valuation methods. It noted that the methods varied in complexity and scope, but more importantly, that there are concerns that a number of the methods include subjective assessment criteria that are capable of producing variable results, even when used by trained professionals.

To date, no one method has been accepted as a standard in New South Wales.

Further investigation and evaluation of tree valuation methods has been undertaken by the Parks and Landscape Team. These methods are outlined below.

Newcastle City Council Method

The Newcastle method is essentially based on the cost of planting trees to offset the loss of a tree. It does not consider the condition, quality and social value of the tree. The Newcastle method establishes a rate for the cost of purchasing, planting and establishing a 45 litre replacement tree for 12 months. This rate is applied for every 20m² of retainable crown that is removed. The formula accounts for the necessary time and resources required to achieve future canopy. The formula is not based on the traditional approach of replacing one tree with another tree. Such an approach does not adequately address the value of an existing mature tree (Urban Forest Technical Manual, Newcastle City Council).

Hornsby Council's Tree Management Coordinator has established that the cost for purchasing, planting and establishing a 45 litre tree for 12 months in Sydney would be \$1,000. On this basis if 60m² of canopy was to be removed that would require compensation equivalent to three (3) standard trees, which would be \$3,000.

The average canopy size for the five (5) common species in Table 1 suggests that compensation is likely to range from \$6,000 - \$12,000 for each tree removed.

Table 1: Average compensation for selected trees: tree planting method

Tree name	Average canopy size	Compensatory planting	Compensation
	m ²	No. of trees	\$
<i>Angophora costata</i>	162	8	8,000
<i>Eucalyptus saligna</i>	237	12	12,000
<i>Eucalyptus pilularis</i>	232	12	12,000
<i>Eucalyptus haemastoma</i>	116	6	6,000
<i>Syncarpia glomulifera</i>	162	8	8,000

Source: Hornsby Shire Council

Tree Value - Relation to Land Value Method

This method values the tree on the basis of the underlying land value of the property. In essence the method calculates the proportion of the property (m²) occupied by the tree canopy multiplied by the Valuer General's (VG) valuation of the property (\$/m²). The method acknowledges that a removal of a tree allows an applicant to realise the underlying value of a property by providing sufficient unencumbered area to construct a dwelling and that this benefit reflects the value of a tree.

Table 2: Typical compensation for selected trees: land value method

Tree name	Location	Canopy size	Land Value	Compensation
	Suburb	m ²	\$/m ²	\$
<i>Eucalyptus sp.</i>	Mount Colah	248	350	86,800
<i>Eucalyptus saligna</i>	Normanhurst	155	485	75,175
<i>Angophora costata</i>	Pennant Hills	110	772	84,920
<i>Eucalyptus saligna</i>	Beecroft	275	470	129,655

Source: Hornsby Shire Council

The application of the land value method suggests that compensation in the order of \$70,000-\$130,000 is possible for each tree removed. However, compensation of these magnitudes is likely to be resisted by applicants. They could be discounted, but the magnitude of the discount would be arbitrary and would be a matter for the Council to determine. For example a 75% discount could be applied yielding values ranging from \$18,794 to \$32,413 whereas a 60% discount would yield values ranging from \$30,070 to \$51,862.

Application of compensatory planting methodologies

An applicant can approach Council and put forward a proposal to voluntarily enter into a planning agreement (VPA) under the Environmental Planning and Assessment Act to offset an impact associated with the loss of trees, as a result of a development proposal, that cannot be offset as a condition of consent applying to the subject property. The offset could be a cash value or works in kind, either on public or private land.

Voluntary Planning Agreements (VPAs) provide a mechanism for Council and an applicant for a development application to contractually agree to a developer committing to contribute funds and/or undertake works to offset the impact of the removal of vegetation as part of a new development.

The above situation is **not currently** available for residents that are granted approval to remove trees through a permit process. However, there is nothing to stop a resident agreeing to enter into a common law agreement for an offset provision. Of course the resident must voluntarily enter into such an agreement. This was the mechanism used prior to the

introduction of the voluntary planning agreement provisions in the Environmental Planning and Assessment Act.

The Offsets Code would need to be amended if Council wished to enter into agreements which would allow compensatory planting due to the loss of individual or small groups of “canopy trees” which are removed as a result of a development application or the issuing of a permit to remove a tree.

Methodologies

This report canvasses the possibility of two (2) methods to value the offset associated with the removal of trees.

It is possible that **both** of the methods could be incorporated into the Green Offsets Code, and either applied to determine the value of an offset, depending on the type of application involved. In the case of a tree application (TA) on private property, where the replacement tree cannot be planted on the same property, the Newcastle method could be applied. In the case of a development application (DA), the tree value in relation to land value (TVLV) method could be applied. Alternatively Council could adopt only one (1) method to determine an offset value.

However, if all tree applications become development applications as required by Council’s resolution of June 15 2011, the distinction between the two methods becomes less important and it may be that only the second method (relating tree value to land value) is used in most cases.

Irrespective of the above decision Council will need to consider whether offsets should be applied to individual residents that have gained approval through the permit process to remove a tree that is dead, dying or dangerous or poses an unacceptable risk to a dwelling or other structure. Under such circumstances is it fair to recover a monetary offset or should Council seek to **only** have an approved replacement tree (e.g. one for one) planted on the residential property or on the nature strip in front of the property?

If this assessment is made, it is doubtful whether Council has any discretion to withhold approval for the tree’s removal and therefore doubtful whether an agreement would be entered into for the tree’s replacement. Rather, replacement would be on the subject property, to the extent of the property’s spatial capacity to grow additional trees to maturity.

The next most likely grounds to remove a tree likely to gain approval (if supporting evidence is robust) is where a tree imposes a substantial risk to the structural integrity of a dwelling or structure, where the damage caused would be very expensive to repair and where the removal of the tree is the only remedy against the risk of recurrence. Again, having accepted the existence of such a substantial risk, Council’s discretion to refuse consent would be constrained, as would the likelihood of entering into an agreement.

That may leave Council in the position of attempting to enter into agreements only in cases where the grounds for consent for tree removal are less clear, where what may be termed social reasons are brought into consideration.

Whether the public interest would be best served by raising the possibility of allowing trees to be removed where grounds to do so are not strong, and where a tree offset fee is a factor in the decision, is a matter for consideration.

Planting strategy

If the removal of the tree is unavoidable and all options to minimise impacts have been exhausted and planting within the development/property site cannot be achieved, tree planting on public land must be considered.

Options for planting on public land include:

- Planting in the street at the front of the development site (or elsewhere in the same street or a nearby street), or
- Planting in a suitable public park or reserve determined by Council, or
- Planting in another priority area as determined by Council

Council has been presented with reports dealing with a schedule of existing parks throughout the Shire, considered to be surplus to open space requirements. Council had resolved to progress the proposal and receive a further report before proceeding to the necessary reclassification process.

This project has been on hold for some time pending the outcome of the rate variation application, now successful. There is a new question of whether any of this land should be retained to fulfil an environmental objective through Council's Green Offsets Code. If the use of green offsets is to be expanded, Council may need to retain a reserve of suitable receiving lands for offset plantings.

Council may review its strategy to dispose of open space land surplus to open space requirements and consider how much of it could be used for green offset requirements.

Further, it is possible that Council will have to establish a position on planting on nature strips. At issue is whether Council will give residents any discretion to say no to any planting on nature strips. Such a scenario significantly reduces options available to offset loss of individual trees.

Notwithstanding the above the following will need to be taken into account:

- Relevant Hornsby Shire Council policy documents
- The physical constraints of the site (i.e.: is there adequate space for the tree at maturity)
- The growth habitat of the proposed species
- The implications for neighbouring properties

BUDGET

An increase in income may result if the offset policy is amended to allow compensatory planting arising from the loss of trees through the various approval processes. It is difficult to determine the magnitude of any income

POLICY

The report recommends changes to adopted Offsets Code.

CONSULTATION

The Bushland and Biodiversity Team and Planning Division were consulted in the preparation of this report.

TRIPLE BOTTOM LINE SUMMARY

Triple Bottom Line attempts to improve Council decisions by being more accountable and transparent on social, environmental and economic factors. It does this by reporting upon Council's strategic themes.

Working with our community

The valuation methods proposed are equitable and take into account varying circumstances. Council's preferred option(s) will be included as an amendment in the Green Offsets Code and exhibited for public comment.

Conserving our natural environment

The recommended process will assist Council to ensure that significant vegetation in the Shire is protected, balance the negative impacts of some development and provide for environmental enhancement and restoration by collecting funds to plant trees on public land.

Contributing to community development through sustainable facilities and services

Additional tree planting on public land will provide significant environmental, social and financial outcomes including improved:

- aesthetics and streetscapes
- water cycle maintenance including groundwater levels and quality
- prevention of soil erosion
- microclimate benefits
- habitat and corridor values
- carbon uptake and storage
- nutrient uptake
- energy fixation and oxygen production through photosynthesis, which is the basis for all life
- property values

Fulfilling our community's vision in planning for the future of the Shire

The recommended process will ensure Hornsby Shire remains as "the Bushland Shire" well into the future.

Supporting our diverse economy

The provision of a network of open space and healthy environment enhances the quality of life for a community and this is often a prime consideration for new businesses wishing to relocate. Development of new facilities involves capital investment and subsequent engagement of suppliers and contractors.

Maintaining sound corporate and financial management

The proposed process will provide an alternative non rate base funding source for tree planting.

RESPONSIBLE OFFICER

The responsible officer is Peter Kemp, Parks and Landscape Manager, telephone 9847 6792, between 8.30am and 5pm, Monday to Friday.

RECOMMENDATION

THAT:

1. Council determine whether an offset valuation approach should apply to tree applications (TA) on private property.
2. Subject to recommendation 1, Council adopt the necessary amendments to the Green Offsets Code outlined in Attachment 1 and that these be publically exhibited for a period no less than 28 days.
3. A report be provided to Council on the submissions received during the public exhibition.
4. A report be provided to Council reviewing the strategy to dispose of surplus open space land and consider how much of it could be used for green offset requirements.

ROBERT STEPHENS
Executive Manager
Environment Division

Attachments:

1. Attachment 1 - Amendments to Offsets Code

File Reference: F2010/00633

Document Number: D01691183

27 NATURE STRIP TREE AT 23-25 GRANTHAM CRESCENT DANGAR ISLAND

EXECUTIVE SUMMARY

This report recommends the effective removal one (1) locally indigenous, remnant *Eucalyptus pilularis* (Blackbutt) that forms part of a group of trees that is listed under Schedule D (Heritage Items) of the *Hornsby Shire Local Environmental Plan (HSLEP) 1994*. Due to a history of large branch drops onto Grantham Crescent, Council arborists assessed the tree as hazardous and, in consultation with The Bushland and Biodiversity Team and the Planning Division, recommend removal of all the tree's branches and foliage to retain the hollow barrel of the tree for habitat together with appropriate replacement planting.

Some members of the community have expressed opposition to the proposed tree removal and Council has placed temporary safety fencing around the tree pending a decision. The fence partially blocks Grantham Crescent.

Independent arborist advice has been sought on the matter; and alternative responses and the attendant levels of risk are discussed in the report. Both independent arborists recommend the retention of the tree, with measures to reduce risk, such as fencing, path redirection and cable-bracing. This would constrain public access in Grantham Crescent. Ongoing testing for the soundness of hollow limbs is recommended, however there is no standard measurement for concluding whether the limbs are sound or not.

The measures recommended by the consultant arborists are considered impractical and costly, and are not supported. Instead, the report recommends the removal of all branches and foliage of the tree, retaining the trunk for wildlife habitat and replacing it with new trees.

PURPOSE/OBJECTIVE

To allow Council to decide whether or not to remove one (1) *Eucalyptus pilularis* (Blackbutt) tree containing hollows and a history of large diameter limb loss, located on the nature strip at 23-25 Grantham Crescent, Dangar Island.

DISCUSSION

The tree, a locally indigenous, remnant *Eucalyptus pilularis* (Blackbutt) is located on the nature-strip outside 23-25 Grantham Crescent, Dangar Island. (See Attachment 1: Photo of *Eucalyptus pilularis* 23-25 Grantham Crescent, Dangar Island)

The tree is part of a larger group of trees within Grantham Crescent road reserve and adjacent properties that are listed as a heritage item (*Blackbutt trees*) of local significance under the provisions of Schedule D (Heritage Items) of the *Hornsby Shire Local Environmental Plan (HSLEP) 1994*. Clause 18(2) of the *HSLEP 1994* permits the alteration of heritage items without development consent if the Council is of the opinion that the proposed development would not adversely affect the heritage significance of the heritage item. Accordingly, Council's Planning Division assessed the impact on the heritage item (some thirty trees) and has determined that development consent is not required for the proposed work under Clause 76(1) of the *Environmental Planning and Assessment Act 1979*.

All parties agree that there have been many failures of large diameter scaffold limbs (large branches that form the framework of the tree) over the years and that further failures are likely if action is not taken.

The community is divided regarding the removal of the tree. As a demonstration of due diligence, advice from two expert consulting arborists has been sought. Reports were obtained from The Sugar Factory (TSF) prepared by Dennis Marsden and from The Arborists Network (TAN) prepared by Mark Hartley on the tree and the Arborists were each asked to provide a recommendation. Both independent reports recommended fencing and either crown modification or cable and bracing for the tree and ongoing re-assessment. (See Attachment 2: The Arborists Network - Tree Report 23-25 Grantham Crescent, Dangar Island and Attachment 3 – The Sugar Factory - Tree Report – 23-25 Grantham Crescent, Dangar Island)

However, further reading of TAN report reveals the following:

*‘Again whilst there have been (3) failures in recent times it is unreasonable to assume that this **rate** of failure will continue. It is in fact more likely that the failure rate will subside and that the average rate of (1) major failure every 5 years is more likely to be realistic (this is particularly the case given that a number of weakened limbs have already failed and therefore cannot fail again). This is in direct contrast to peer reviewed literature from Matheny & Clarke (1994 that ‘trees that have failed in the past are likely to do so again.’*

Many of the limbs are hollow and the trunk of the tree is also hollow but the **entire** tree is highly unlikely to fall. Instead, the risk is from the further loss of large, heavy limbs.

There is also consensus that the failure of hollow limbs from the tree appears to be the result of the load placed on the limb exceeding the capacity of the holding wood.

TSF state that hollowness or decay has been an apparent factor in branch failure at most observable points and that the tree has had major branch failures from the lower to mid crown and other possible failures from the upper crown. The pattern of scaffold limb failure is consistent with over-maturity in eucalypts (Florence, 1996). The further failure of large branches can be expected, though there is disagreement about the future rate of failures.

TAN goes on to state that because of the history of failure it is reasonable to conclude that the probability of failure associated with this tree is elevated and therefore the Risk of Harm associated with this tree is elevated when compared with an identical tree without a history of such limb failures. TAN then states that an elevated Risk of Harm does not necessarily mean an unacceptable Risk of Harm.

It seems reasonable to assume that further large diameter limb loss from this tree is likely to occur in any conditions if the limbs are not reduced. TSF also references Matheny & Clarke (1994) ‘trees that have failed in the past are likely to do so again’ and given this likelihood, the tree presents an unacceptable risk of harm or injury in its current condition. TAN also deduces that this elevated pattern of limb failure is likely to continue.

An excerpt from TSF report states:

‘The patching up of a mature Eucalyptus crown by the development of dormant buds from the shaping of branches may go on for a long period in the life span of a tree. All this time fungal attack is weakening the inside of the trunk and branches alike. The shaping branches (scaffolds) are the first to fail because their horizontal position makes them liable to break. They break from the trunk and their place is taken by branches which develop from dormant

buds on the trunk. These new branches are never as efficient as the branches of the primary crown. They may live for a few years, or even a decade or two, break and be replaced. This process may be repeated several times as the tree becomes old and decrepit' (Florence, R G 1996).

Both independent arborists have recommended one of the following three options –

- (1) Leave the tree as is
- (2) Retain the tree and modify the crown
- (3) Remove the tree

TAN has recommended 'Given the Risk of Harm, retaining the tree "as is" would seem appropriate. In this scenario the Risk of Harm could be further reduced by undertaking one or more of the following.

- Reducing the target, by redirecting the path and diverting pedestrians via the use understorey planting or fences.
- Reducing the probability of failure onto the path by installing a bracing system.
- In this scenario TAN offers the option of keeping the residents and visitors informed that this is a natural environment and care should be exercised when venturing under the tree. "With the exception of a couple of adjacent properties, all other traffic can find an alternative route to any other place on the island without passing under the canopy of the tree."
- TAN also comments on the ongoing problems of significant crown modification including the risk of the tree dying and increased structural problems if the tree survives.

Although the fencing is recommended to be at 6 metres from the trunk, this is well inside the drip line of the tree. In the opinion of the Parks and Landscape Team the Protection Zone around the tree needs to be at the drip line (more than 12 metres diameter) and would involve fencing off private land and realigning the public path which would also impact on other trees nearby.

The suggested installation of a bracing system onto what appears to be a hollow barrel/trunk of the tree appears to be an unsound solution. The function of the braces is to catch a falling branch. However the forces applied to the barrel where the brace is attached to the tree is directed to one specific point on a hollow tube. Placing direct forces onto a tube then makes that point on the tube at elevated risk of failure.

TSF recommends 'Retain the tree and modify the crown'.

- Reduction and remedial pruning to shorten limbs and reduce end weight, combined with testing of wood soundness on main scaffold branches and trunk.
- Exclusion fencing installed at 12m from the tree.
- Annual inspections.

There are no standard quantitative parameters for assessing the structural strength of hollow branches. As stated by TSF the approach would be experimental.

The protection zone around the tree would be at the drip-line and would have the unintended effects mentioned above. The modifications to the crown include the risk of the tree dying and increased structural problems if the tree survives. This will also mean that repeated pruning will be necessary. Annual inspections would more than likely involve the expensive

use of specialized equipment to re-assess the many hollows located within the tree and the assessment of lateral hollows would be experimental.

Council has in the past undertaken works on this tree to try to retain the tree. However the recent live limb losses over the public road have increased the potential for failure of further limbs throughout the canopy.

Branches act as mass dampeners and energy dissipaters allowing the tree to cope with heavy wind loads throughout the tree. The loss or removal of large lower limbs results in changes to a tree's dynamics and can have (and has had) several negative effects on the trees structure. In other words, further pruning of the tree cannot be a guaranteed to greatly prolong the tree's safe, useful life expectancy.

To add to this it is apparent that the trunk and primary branches (attached to the trunk) contain cavities which also decrease the tree's structural integrity.

Councils' Tree Management Officers in consultation with Councils' Bushland & Biodiversity Team made a proposal to the community to have the canopy of the tree removed so that only a 12m - 16m barrel remains for habitat.

Replacement trees, *Eucalyptus pilularis* (Blackbutt) and *Angophora floribunda* (Rough-barked Apple) are being grown at Council's Community Nursery from locally sourced seed collected from the island, with a view to planting in April 2012.

Residents within close proximity to the tree were notified in writing advising them of the proposed works.

Temporary fencing has been placed around the tree as a short term safeguard, at a distance of eight metres (8m) from the trunk. At this distance it blocks the public road and has been relocated by persons unknown and unauthorised, on at least one occasion. Both independent arborists recommend some form of fencing for the tree, which will impede usage of the public road, however resistance to permanent fencing is apparent and some vandalism may result.

It should be remembered that trees are dynamic living and dying organisms. The value of the forest as a whole should be carefully considered in relation to the individual tree. Beneath the existing canopy of this tree are two early-mature trees and an existing seed-bank which will benefit from the tree's removal. The retention of the barrel and hollows as habitat with the existing early mature trees under the drip-line and the replacement plantings proposed by the Bushland and Biodiversity Team will retain the value of the forest and the future of the forest will be ensured.

Options

Options available to Council in result of this tree include:

Option A

The Arborists Network recommendation to retain the tree "as is".

- Reducing the risk in the 'target' or branch drop zone, by redirecting the path and diverting pedestrians via the use understorey planting or fences.
- Reducing the probability of failure onto the path by installing a cable bracing system.

Option B

The Sugar Factory recommends 'retain the tree and modify the crown'.

- Reduction and remedial pruning to shorten limbs and reduce end weight, combined with testing of wood soundness on main scaffold branches and trunk.
- Exclusion fencing installed at 12m from the trunk.
- Annual inspections.

Option C

Councils' Parks and Landscape Team recommends that the canopy of the tree is removed and treated to prevent re-growth, so that only a 12m - 16m tall dead trunk remains for habitat. This option will not require fencing.

Tree details

Tree 1	Species - <i>Eucalyptus pilularis</i>	Common Name – Blackbutt
	Height – 38m	Age – Over-Mature

BUDGET

There are budgetary implications arising from this decision.

Option A: The cost of cable and bracing could be approximately \$15,000. There may be additional maintenance cost to the cable and bracing system, particularly when branches fail. No estimate of the maintenance cost can be made. Added to this would be \$6,670 for the cost of annual resistograph testing for the remainder of the tree's life.

Option B: The cost for resistograph testing and a report on the Blackbutt is \$6,670 (including GST). This would be an annual cost for the remaining life of the tree

Option C: The estimated cost for the removal of the tree is \$5,000.

The above costs do not take in to account the cost of maintaining the security fence and any diversion of Grantham Crescent.

POLICY

There are no policy implications arising from this decision.

CONSULTATION

Consultation has been undertaken between Councils' Parks and Landscapes Team, Bushland and Biodiversity Team, Town Planning Services Branch, The Dangar Island League and Dangar Island's bushcare volunteer group.

TRIPLE BOTTOM LINE SUMMARY

Triple Bottom Line attempts to improve decisions by being more accountable and transparent on social, environmental and economic factors. It does this by reporting upon Council's strategic themes.

As this report provides Council with information and does not propose any actions which require a sustainability assessment, no Triple Bottom Line considerations apply.

RESPONSIBLE OFFICER

The responsible officer is Robert Woodward, Tree Management Officer, Parks and Landscape, telephone 9847 6991, between 8am and 4pm, Monday to Friday.

RECOMMENDATION

THAT the canopy of one (1) *Eucalyptus pilularis* (Blackbutt) tree located on the nature strip outside 23-25 Grantham Crescent, Dangar Island be removed and treated to prevent re-growth, so that only a 12m - 16m trunk remains for habitat.

ROBERT STEPHENS
Executive Manager
Environment Division

Attachments:

- | | |
|-------------------------------------------------------------------------------------------------------|-------------------------------|
| 1. Attachment 1 - Photo - Eucalyptus pilularis - 23-25 Grantham Cr Dangar Island | Included under separate cover |
| 2. Attachment 2 - Env 43 The Aborigines Network- Tree Report - 23-25 Grantham Crescent, Dangar Island | Included under separate cover |
| 3. Attachment 3 - Env 43 The Sugar Factory - Tree Report - 23 - 25 Grantham Crescent, Dangar Island | Included under separate cover |

File Reference: F2009/00081-13
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28 REDEVELOPMENT OF HORNSBY AQUATIC CENTRE. REVIEW OF IMPACT ON CWA ROOMS

EXECUTIVE SUMMARY

The Crown Lands Division has requested Council as the Reserve Trust for Hornsby Park to review the need to demolish the building currently occupied by the Country Women's Association (CWA), in order to provide vehicular access to the proposed new Hornsby Aquatic Centre. Consideration is given to the material supplied by the Crown Lands Division. The history of Council's consideration of this matter is detailed and seven options for access that have been considered by Council are detailed in this report. Information regarding current actions to provide accommodation for the CWA in the short and long term is provided. It is recommended that, following this review, Council adhere to its previous decision regarding access, and proceed to lodge a development application for the project.

PURPOSE/OBJECTIVE

The purpose of this report is to advise Council of correspondence received from the Crown Lands Division requesting that Council, as the Hornsby Park (R52588) Reserve Trust, review the need to demolish the CWA Rooms (in order to provide vehicular access to the new Hornsby Aquatic Centre). The report provides Council with information to assist in its review.

DISCUSSION

Council has received correspondence from the Crown Lands Division (Attachment 1) advising of the National Trust listing of the CWA Rooms in Hornsby Park. In particular, the Crown Lands Division writes "*Whilst I understand that consideration has previously been given to alternative access for the proposed redevelopment, given the National Trust listing, it would be appropriate for the Hornsby Park (R52588) Reserve Trust to review the need for the CWA rooms to be demolished*".

Council has been separately advised by the National Trust in identical terms to those contained in the above-referenced correspondence, regarding the Trust's action. Noted in the Trust's listing advice (Statement of Significance) is the information that the building has been listed by the Institute of Architects. While this advice is noted, Council has no record of receipt of correspondence from the NSW Institute of Architects.

Council has also been advised that the building has been identified by the Twentieth Century Heritage Society of NSW (affiliated with the National Trust), as warranting retention.

Previous Consideration by Council

Council has previously considered options for access to the new Hornsby Aquatic Centre.

At its meeting of 17 March 2010 (Report WK20/10), Council was advised of heritage constraints associated with the site, the desirability of providing parking on site for the proposed new Aquatic Centre, and of four options to provide access for such parking. The

provision of access from opposite Coronation Street was identified as the preferred option at this time, and was further pursued following Council's resolution WK20/10 to proceed with planning for the centre.

At its meeting of 27 April 2011 (Report WK26/11), Council considered a report on design options identified for consideration in the deliberative forum that had involved the community in March and April 2011. That report addressed the issue of parking and alternatives to avoid an impact on the CWA Rooms. Council resolved to obtain further information to assist in this consideration.

At its meeting of 20 July 2011 (Report WK39/11), Council gave further consideration to concerns raised at the 27 April 2011 meeting regarding the potential impact of the proposed access on the CWA Rooms. This report further discussed options for access from Dural Street and the northern driveway of Hornsby Park. The competing heritage considerations in Hornsby Park (which included the CWA Rooms) were considered by Council. At that meeting, following further consideration of the options identified, Council resolved that access from opposite Coronation Street should proceed.

It can be seen that, in an attempt to avoid impact on the CWA Rooms, Council has considered alternative options for access on a number of occasions. Other than the correspondence now under consideration, there has been no new development or other action that would lead to a recommendation from staff that Council's previous decision to demolish the CWA Rooms not be pursued.

NATIONAL TRUST LISTING REPORT

The National Trust is a non-government, community organisation which promotes the conservation of both the built and natural heritage. The Trust maintains a 'Register' of landscapes, townscapes, buildings, industrial sites, cemeteries and other items or places which the Trust determines have cultural significance and are worthy of conservation. There are approximately 12,000 items registered on the Trust's Register.

The Trust's Register is intended to perform an advisory and educational role. The listing of a place in the Register has no legal force and listing does not imply a right of access by the public, nor that the owner should open the property for inspection. The Trust does not contribute towards the repair or maintenance of buildings listed. The Trust recognises that the powers to protect heritage places are vested in local councils, which consider various criteria when they determine development applications.

In May 2011, The Trust listed the CWA building on its Register. The Trust did so without prior consultation with Council and did not seek Council's advice regarding its expertise of local heritage items. The CWA building is not included within the approximate 800 items of local, regional and State heritage significance under Council's Hornsby Shire Local Environmental Plan.

Whilst the Trust recognises the architectural merits of the building, the primary basis of the Trust's listing of the CWA building appears to be its recognition of the CWA movement generally. Council is responding to this by ensuring that the CWA branch has a future in Hornsby and within the general location of the existing building.

Review of the National Trust submission in the context of existing heritage studies of the Park generally, as well as the CWA Rooms in particular, and the other considerations

outlined in this report do not, in the opinion of Council staff, provide new information that would warrant Council changing its decision.

OPTIONS FOR ACCESS

Council is now provided with information regarding the options considered for access to the site.

In this report seven (7) options are being considered with additional information added to assist in the review of Council's previous decision to provide access via the intersection of Pacific Highway and Coronation Street into Hornsby Park.

The Seven (7) options for access investigated are:

- Option 1 - Access into Hornsby Park opposite Coronation Street.
- Option 2 - Access to north of CWA building.
- Option 3 - Northern end of Hornsby Park – widen existing roadway
- Option 4 – Access through TAFE carpark
- Option 5 – Access through private property (4 Dural Street)
- Option 6 - Access through No 6 Dural Street, (“Norwood” - Montessori preschool)
- Option 7 - Access via fire trail off Quarry Road

Two (2) strategic decisions previously made by Council regarding the Centre are also identified for review:

- Option A – No on-site parking – use existing on-street parking together with Dural Street carpark
- Option B – Relocate Aquatic Centre out of Hornsby Park

Plans and sections for the seven options are included as Attachments 2 and 3 to this report.

Option 1 - Access into Hornsby Park opposite Coronation Street

1. Vehicles can enter from all directions – Access at Aquatic Centre frontage preferred (easy for patrons to find)
2. Vehicles can leave in all directions
3. Access is easy and safe via signalised intersection, dedicated right turn bay on highway would be required in order to prevent blocking of through movements when a vehicle is waiting to turn right into the site, and safe pedestrian access provided via the signalised intersection
4. No loss of on-street parking
5. Grades for medium rigid vehicle (MRV) easily achieved
6. Turning path for MRV easily achieved
7. Access located away from residential area and allows for the main Aquatic Centre building and pools to be further away from residential properties
8. Good access for construction traffic
9. Provides for easy access to proposed construction site compound area in southern section of Hornsby Park
10. On Crown Land for which Council is the Reserve Trust
11. Minimal impact on Hornsby Park and maintains access to Old Mans Valley via heritage stairs at the northern end of the site.
12. Moderate heritage impact - Requires the demolition of the CWA building. CWA to be relocated in Aquatic Centre redevelopment or at the northern end

of the park if further funding becomes available. Temporarily relocate CWA to a mutually agreed site during construction

13. Other issues include the demolition of the main public toilets in the park, however, the accessible toilet near the Pacific Highway is to remain, and if not considered sufficient, additional toilet facilities will be provided
14. Cost – approximately \$800K including adjustments to intersection and traffic signals, together with the additional cost of providing a room in the proposed Aquatic Centre for use by CWA

This option is recommended for consideration

Option 2 - Access north of CWA building.

1. Entry only from the south - majority of Aquatic Centre patrons come from the north – Access at Aquatic Centre frontage preferred (easy for patrons to find)
2. Exit only to the north.
3. Unsignalised intersection making manoeuvres difficult. Cannot be linked to traffic signals – potential traffic conflict and safety issues. Requires RTA concurrence on issues of proximity to signalised intersection. Locating driveway in accordance with AS2890.1 'Parking Facilities – off-Street car parking', will fail a road safety audit as vehicles turning left into the site will need to stop immediately after signals to give way to pedestrians, risking rear end collision. New aquatic centre will attract more pedestrians. Even if no pedestrians present, vehicles will be slowing to enter driveway when following vehicles will be accelerating away from green signals, which is known to result in increased rear end crashes. Conflict with median separation provided for police vehicles on the Pacific Highway opposite this entry/exit
4. Loss of on-street parking due to relocation of bus stop
5. Grades for medium rigid vehicle (MRV) easily achieved
6. Turning path for MRV easily achieved
7. Access located away from residential area and allows for the main Aquatic Centre building and pools to be further away from residential properties
8. Difficult access for construction traffic and greater impact on park users during construction
9. Minimises available space for proposed site compound area in southern section of Hornsby Park. Other land not available in close proximity
10. On Crown Land for which Council is the Reserve Trust
11. Significant impact on Hornsby Park with greater intrusion into the park and removal of curved pathway, together with a number of trees
12. Significant heritage impact due to access road intrusion into park, removal of curved pathway, pergola, bus shelter, and alienation of CWA building
13. Other issues include CWA amenity compromised with close proximity of access road, and the demolition of the main public toilets in the park, however, the accessible toilet near the Pacific Highway is to remain, and if not considered sufficient, additional toilet facilities will be constructed at the northern end of Hornsby Park
14. Cost – approximately \$500K

This option is not recommended for consideration mainly based on traffic safety and heritage impact on Hornsby Park

Option 3 - Northern end of Hornsby Park – widen existing access

1. Vehicles can enter from all directions – Access at Aquatic Centre frontage preferred (easy for patrons to find) – poor sight distance turning right with central garden light posts and palm trees in centre median. This would require modification (heritage impact)
2. Exit only to the north
3. Due to traffic conditions, vehicles turning right into and if permitted, out of the site would experience delay as they have to give way to traffic on the main road. Sight distance issues with parked cars to the south, would require kerb and gutter realignment. Conflict with TAFE entrance immediately to north. Unsignalised intersection making manoeuvres difficult. A dedicated right turn bay on the highway would be required in order to prevent blocking of through movements when vehicles are waiting to turn right into the site
4. No loss of on street parking, however, loss of overflow carpark to north of existing pool
5. Grades for medium rigid vehicle (MRV) cannot be achieved without major impact. Road entry level at Highway is approximately 2.3 metres higher than option 1. Access road starts to go below existing surface level approximately 15 metres into park and 4m below existing level approximately 65metres into park, requiring safety fences and significant retaining walls
6. Turning path for MRV easily achieved
7. Access located away from residential area, however, to permit northern access the main Aquatic Centre building and pools will be closer to residential properties to the south of Hornsby Park
8. Difficult access for construction traffic and impact on significant trees (heritage)
9. Minimises available space for proposed site compound area in Hornsby Park, with reasonable access
10. On Crown Land for which Council is the Reserve Trust
11. Significant impact on Hornsby Park with existing entry wall and gardens requiring partial demolition, two (2) mature Turpentine (heritage trees) require removal and potential impact to the root system of many others. Impact on existing sandstone retaining walls. Isolates playground and BBQ area. Play area would need to be relocated elsewhere in park. Would be difficult to optimise the use of this area of the park. Pedestrian bridge in park over road for access to Old Mans Valley required. Significant visual impact of road through park requiring fencing
12. Significant heritage impact due to access road intrusion into park, removal of mature Turpentine trees and potential impact on others, impact on existing retaining walls, and existing entry wall and gardens requiring partial demolition. Access to heritage stairs to Old Man Valley compromised, and would require a bridge from the park over the proposed access road. Modifications to Pacific Highway centre median to improve sight distance.
13. Other issues include – possible impact on utility services
14. Cost approximately \$1.4M

This option is not recommended for consideration mainly based on limited egress from site, traffic safety, heritage impact on Hornsby Park and Pacific Highway, and cost

Option 4 – Access through TAFE carpark

1. Entry only from the south - majority of Aquatic Centre patrons come from the north – Possible confusion with access to TAFE. Disbenefit to TAFE with no right turn imposed
2. Exit only to the north.
3. Due to traffic conditions, vehicles turning right (if permitted) into and out of the site would experience delay as they have to give way to traffic on the main road. Unsignalised intersection making manoeuvres difficult. The existing access is one-way and controlled with a boom gate. Requires reconfiguration of TAFE internal access road. If a right turn was permitted from the highway, a dedicated right turn bay would be required in order to prevent blocking of through movements when vehicles are waiting to turn right into the site. The right turn bay median will impact on the operation of Council carpark access
4. No loss of on street parking without a right turn bay, however, loss of overflow carpark to north of existing pool
5. Grades for medium rigid vehicle (MRV) cannot be achieved without major impact. Road entry level at Highway is approximately 2.4 metres higher than option 1. Access road would require proposed pool to be raised by 2.8 metres for clearance under pool.
6. Turning path for MRV easily achieved
7. Access located away from residential area, however, to permit northern access the main Aquatic Centre building and pools will be closer to residential properties to the south of Hornsby Park
8. Difficult access for construction traffic
9. Minimises available space for proposed site compound area in Hornsby Park, with reasonable access
10. Land owned by Dept Tech & Further Education requiring owners consent to use land which may involve lengthy negotiation with uncertain outcome
11. Detrimental impact on the visual amenity of the park as the Aquatic Centre would need to be raised significantly to provide for the necessary clearance for vehicles under the Aquatic Centre
12. Significant heritage impact due to access road intrusion into park, removal of mature Turpentine trees and potential impact on others. Access to heritage stairs to Old Man Valley compromised, and would require a bridge from the park over the proposed access road. Significant impact of raising Aquatic Centre by 2.8 metres.
13. Other issues include the loss of potential to extend carpark under the pool, compromises Stage 2 (WOW factor) and the link with Old Mans Valley, and impact on mature Lemon Scented Gum in TAFE property.
14. Cost approximately \$900K (excludes additional cost for raising pool 2.8 metres)

This option is not recommended for consideration mainly based on (visual) impact on pool development levels, limited egress from site, traffic safety, heritage impact, and ownership of property

Option 5 - via No 4 Dural Street, privately owned land.

1. Currently with no right turn into Dural Street during peak hours (7am-9am and 3pm-6pm) restricts access for vehicles from the north during the key time for Aquatic Centre patrons - majority of Aquatic Centre patrons come

- from the north – Access not at Aquatic Centre frontage making access more complex.
2. Exit to north and south possible. Poor sight distance to west when exiting access road onto Dural Street
 3. Unsignalised intersection at highway making manoeuvres difficult. Significant loss of parking on Pacific Highway to allow right turn into Dural Street during peak hours. Delays for vehicles turning right out of Dural Street during peak hours, which may force these drivers to consider exiting via William Street putting more traffic through residential area. Would attract vehicles that currently turn right at Dural Lane or William Street during peaks due to the peak period right turn restriction. The redistributed traffic may increase delays and queue length of vehicles wishing to turn right into Dural Street. Signalising Dural Street intersection not viable due to network implication of having four closely spaced signal sites – William St, Station St, Dural St and Coronation St.
 4. Some loss of on-street parking in Dural Street as well as approximately 12 parking spaces lost on Pacific Highway for right turn lane. If parking was retained and vehicles were permitted to turn right into Dural Street during peak periods, the queue length on Pacific Highway north approach would be in excess of 130 metres. This would impact on the operation of the signalised intersection of Pacific Highway with Coronation Street
 5. Significant modification of road verge/footpath to get acceptable grades.
 6. Turning path for MRV very difficult because of narrow roadway – requires realignment of kerb and gutter
 7. Access located in residential area, however, allows for the main Aquatic Centre building and pools to be further away from residential properties
 8. Difficult access for construction traffic
 9. Minimises available space for proposed site compound area in Hornsby Park, with reasonable access
 10. Land not owned by Council - Cost of land acquisition or easement for access high and time to complete unknown
 11. Minimal impact on Hornsby Park
 12. Minimal heritage impact
 13. Other issues include compromises Westside Masterplan which provides potential for outdoor dining on Pacific Highway, steep footpaths/steps required in Dural Street to meet new levels, significant level difference to adjacent property to the west to allow suitable grading for truck access, stormwater drainage issues on Dural Street footpath and low point in the property requiring regrading, acoustic wall(s) may be required, impact on utility services including overhead cables. This option requires the demolition of the main public toilets in the park, however, the accessible toilet near the Pacific Highway is to remain, and if not considered sufficient, additional toilet facilities will be constructed at the northern end of Hornsby Park
 14. Cost approximately \$2M

This option is not recommended for consideration mainly based on limited access to the site from the north along the Pacific Highway, potential impact upon on-street parking, traffic safety and delays, cost and ownership of property

Option 6 - via No 6 Dural Street, the Montessori preschool site (Norwood).

1. Currently with no right turn into Dural Street during peak hours restricts access for vehicles from the north - majority of Aquatic Centre patrons come from the north. – Access not at Aquatic Centre frontage making finding access more complex
2. Exit to north and south possible. Poor sight distance to west when exiting access road onto Dural Street
3. Unsignalised intersection at Highway making manoeuvres difficult. Significant loss of parking on Pacific Highway to allow right turn into Dural Street during peak hours. Delays for vehicles turning right out of Dural Street during peak hours, which may force these drivers to consider exiting via William Street putting more traffic through residential area. Would attract vehicles that currently turn right at Dural Lane or William Street during peaks due to the peak period right turn restriction. The redistributed traffic may increase delays and queue length of vehicles wishing to turn right into Dural Street. Signalising Dural Street intersection not viable due to network implication of having four closely spaced signal sites – William St, Station St, Dural St and Coronation St.
4. Some loss of on-street parking in Dural Street and approximately 12 parking spaces lost on Pacific Highway for right turn lane. If parking was retained and vehicles were permitted to turn right into Dural Street during peak periods, the queue length on Pacific Highway north approach would be in excess of 130 metres. This would impact on the operation of the signalised intersection of Pacific Highway with Coronation Street
5. Significant modification of road verge/footpath to get acceptable grades.
6. Turning path for MRV extremely difficult because of narrow roadway – given close proximity of adjacent steep driveway, realignment of kerb and gutter is not considered feasible
7. Access located in residential area, however, allows for the main Aquatic Centre building and pools to be further away from residential properties
8. Difficult access for construction traffic
9. Minimises available space for proposed site compound area in Hornsby Park, with reasonable access
10. Council owned land
11. Minimal impact on Hornsby Park
12. Significant heritage impact. Requires demolition of listed heritage building “Norwood”
13. Other issues include relocation of Montessori preschool and the time to complete relocation unknown, compromises Westside Masterplan which provides potential for outdoor dining on Pacific Highway, steep footpaths/steps required in Dural Street to meet new levels, significant level difference to adjacent property to the west to allow suitable grading for truck access, stormwater drainage issues on Dural Street footpath and low point in the property, acoustic wall(s) may be required, requires removal of two mature trees on footway area, pedestrian access difficult to achieve due to narrow (10m) block, impact on utility services including overhead cables.
14. Cost approximately \$700K

This option is not recommended for consideration mainly based on limited access to the site from the north along the Pacific Highway, potential impact upon on-street parking, traffic safety and delays, and heritage impact

Option 7 - Access via Old Mans Valley

1. Currently with no right turn into Dural Street during peak hours restricts access for vehicles from the north - majority of Aquatic Centre patrons come from the north. – Access not at Aquatic Centre frontage - Access is circuitous and not direct particularly for vehicles approaching from areas north of Hornsby
2. Exit to north and south possible
3. Unsignalised intersection at Dural Street making manoeuvres difficult. Significant loss of parking on Pacific Highway to allow right turn into Dural Street during peak hours Delays for vehicles turning right out of Dural Street during peak hours, which may force these drivers to consider exiting via William Street putting more traffic through residential area
4. Some loss of on-street parking in Dural Street and approximately 12 parking spaces lost on Pacific Highway for right turn lane. If parking was retained and vehicles were permitted to turn right into Dural Street during peak periods, the queue length on Pacific Highway north approach would be in excess of 130 metres. This would impact on the operation of the signalised intersection of Pacific Highway with Coronation Street
5. Very steep grades
6. Turning paths for MRV very difficult because of hairpin bends
7. Access located in residential area, however, allows for the main Aquatic Centre building and pools to be further away from residential properties
8. Difficult access for construction traffic
9. Minimises available space for proposed site compound area in Hornsby Park, with reasonable access
10. On Crown Land for which Council is the Reserve Trust
11. Significant impact on Hornsby Park with the extensive loss of bushland and wildlife habitat. Compromise of planned mountain bike trail.
12. Minimal heritage impact.
13. Other issues include, approximately 400 metres of road construction required through very steep terrain (extensive cut and fill and approx 25 metre rise), requires upgrade of fire trail off Quarry Road
14. Cost approximately \$3M

This option is not recommended for consideration mainly based on limited access to the site from the north along the Pacific Highway, potential impact upon on-street parking, traffic safety and delays, cost, the circuitous route to access the carpark and significant impact on Hornsby Park bushland

Option A – No on-site parking (use of Dural St carpark approx 300 metres away together with on-street parking).

The decision to provide parking on site arose from consideration of patron needs and marketing considerations as outlined in report WK20/10. This was a key decision. Other matters for consideration in the event that Council wishes to re-visit this decision include:

1. Increased congestion on Pacific Highway and surrounding streets
2. Poor access for less able bodied people.
3. Difficult to access in wet weather
4. Reduced patronage as parking is difficult resulting in reduced income and increased cost of operation
5. Access for construction traffic needs to be provided together with site compound

6. Undesirable road safety outcome where parents with children parking on east side of Pacific Highway attempting to cross a busy road
7. Road safety issues in crossing Dural Street
8. Increased demand for public carparks in Dural Street and William Street may impact on parking availability for shoppers
9. Dural Street carpark does not lend itself to extension – inefficient layout
10. Deliveries would use existing northern access road
11. Reduces cost to construct aquatic centre
12. Loss of current design expenditure
13. Council would be treating itself differently to other applicants

This option is not recommended for consideration based on the issues raised above

Option B - Relocate Aquatic Centre out of Hornsby Park

The decision to locate the centre in Hornsby Park arose from consideration of options as outlined in report WK20/10. This was a key strategic decision that took into account the history of the Park, location in relation to public transport as well as other considerations relating to its location in Hornsby generally. Other considerations are listed for Council to consider in the event that it may wish to re-visit this decision:

1. Costs to walk away including demolition and basic site rehabilitation approximately \$2M, as well as loss of current design investment
2. Pool construction delayed for more than one year
3. New site need to be found
4. Cost of new site if not on Council owned land approximately \$6M to \$10M depending on area required for parking
5. Time required to find a new site
6. Source of additional funds not known

This option is not recommended for consideration based on the issues raised above

Intersection and Road Network Modelling

In order to determine the impact of the Coronation Street Option and the Dural Street Option on the operation of the Pacific Highway particularly at the intersections with Coronation Street and Dural Street, traffic modelling was undertaken.

Pacific Highway/Coronation Street Junction

Intersection modelling was carried out by an external consultant using SIDRA software and Paramics, a micro-simulation software. The modelling tasks completed included a base model calibrated and validated to 2010 AM, Business and PM peak traffic data. The base model was subsequently used to model the 2010 and 2021 scenarios.

Attachment 4 shows the intersection layout used to model traffic conditions at the intersection of Pacific Highway with Coronation Street with the new link road to Hornsby Aquatic Centre.

The new phasing arrangements coded for the intersection are also shown in the attachment. Vehicles from the north accessing Hornsby Aquatic Centre are controlled by signalised dedicated right turn movements in order to eliminate conflict with south bound vehicles thereby optimising safety for road users. A filter turn is not possible because when large

vehicles, particularly buses, use the opposing right turn bay, sight distance is extremely limited for motorists attempting to turn right into the aquatic centre.

Following are the results of the Coronation Street Option analysis:

- Overall, the network modelled for the study operates satisfactorily with no significant areas of congestion with Hornsby Aquatic Centre development in place.
- There are no significant impacts on the intersection of Pacific Highway/Station Street/William Street in terms of increased queue lengths or delays with the additional Hornsby Aquatic Centre traffic demands.
- Queues on Pacific Highway/Coronation Street intersection are of short duration only and generally clear in one cycle for both northbound and southbound vehicles on Pacific Highway.
- The short 15 metre right turn bay into Hornsby Aquatic Centre from Pacific Highway generally stores 2 vehicles (sometimes 3 depending on vehicle size) per cycle. In instances where there are more than 3 vehicles on the right turn storage bay, the queue encroaches onto the median lane, but causes no significant queuing or delay to the southbound through traffic because the volumes turning are relatively low hence queues are short and do not extend up to the 15 minute parking zone adjacent to the post office. It is also observed that there are generally no queues on the left turn lane into Coronation Street which will enable southbound through traffic to pass any right turn queued vehicle by doing a 'S' manoeuvre.
- Pacific Highway/Coronation Street operates at a Level of Service B for all peak periods with and without the development traffic in place. Average delays for the intersection during peak periods do not exceed more than 30 seconds for the modelled scenarios.

Pacific Highway/Dural Street Junction

Intersection modelling was carried out by Council's Traffic and Road Safety Branch using SIDRA software and VISSIM, a micro-simulation software.

The modelling was based on existing traffic conditions during the morning and afternoon peak periods for the following scenarios:

- Existing arrangement allows kerbside parking along the eastern side of the carriageway between Coronation Street and Dural Street. Currently right turn vehicle movement from Pacific Highway north approach into Dural Street is not permitted during peak periods;
- A dedicated right turn bay would be required in order to prevent blocking of through movements when a vehicle is waiting to turn right into Dural Street. This would require removal of kerbside parking along the eastern side of the carriageway between Coronation Street and Dural Street. Approximately 12 car parking spaces will be lost as a result of this option.

Following are the results of the analysis:

- If current parking is retained and vehicles are permitted to turn right into Dural Street during peak periods, the queue length on Pacific Highway north approach will be in excess of 130 metres. In addition to increased delays at the Pacific Highway/Dural intersection, the operation of the signalised intersection of Pacific Highway with Coronation Street will also deteriorate.

- Delays at the Dural Street/Pacific Highway intersection may result in traffic using residential streets (William Street, Frederick Street) to access the signalised intersection of William Street and Pacific Highway. This will result in additional total traffic on the road network, and contribute to a reduction in the level of service at this intersection.
- A dedicated right turn bay would improve the intersection Level of Service. This will come at the expense of the loss of kerbside parking which may have a detrimental impact on business viability and therefore should not be supported.

Conclusion

On the basis of the above analysis, confirmation of the key strategic decisions to locate the centre in Hornsby Park and to provide parking on site is considered appropriate. Access to the centre via a new link located south of the Hornsby Pool directly opposite Coronation Street is the preferred and recommended arrangement.

ACCOMMODATION OPTIONS - CWA

The building occupied by the CWA was constructed by Council in 1958, and was used as a women's rest centre from that date. While today's lifestyles and travel preferences have meant that this need is decreasing, the building continues to provide a space that is used by the Hornsby CWA and other community groups. Council is aware that the CWA members have expressed a desire to stay on the western side of Hornsby, and in particular, to remain in Hornsby Park.

Council's decision to provide access to the new Aquatic centre from opposite Coronation Street means that this building will be demolished. At its meeting of 20 July 2011, Council resolved (WK39/11) to terminate the current Licence with the CWA as at 1 March 2012. At this meeting, Council also resolved to offer the use of a facility within the new aquatic centre, and subject to funds being available at the conclusion of the project, will consider the construction of a new facility at the northern end of Hornsby Park.

Subsequent to this decision, Council staff have met with the CWA to discuss interim accommodation options for the group whilst the Hornsby Aquatic Centre is being constructed. At the time of writing this report, it is understood that the CWA are considering a range of interim accommodation options put to them by staff. The CWA have been asked to nominate a preferred option to officers by the close of business on 14 September 2011. Once this preference is known, the allocation of funding to this option will need to be considered by Council. The funding of interim accommodation options for the CWA was not considered by Council in Executive Manager's Report No. WK39/11.

It is noted that the interim accommodation options that have been developed by staff have taken into account the CWA's expressed preference of remaining on the west side of Hornsby, for continuing to operate the Tea Rooms and for continuing to provide hireable space to the existing hirers of the Tea Rooms whilst the Hornsby Aquatic Centre is built. Officers can confirm that one option discussed with the CWA allows all of these goals to be achieved. It is not yet clear as to whether the CWA membership will vote to allow Council to consider this re-accommodation option or whether the group will choose to remain in the Tea Rooms until their licence for use of the premises ends on 1 March 2012. In the event that the latter option is taken by the CWA, officers cannot guarantee that the current interim accommodation options will still be available.

While this action in itself will not result in the retention of the current building, it demonstrates Council's commitment to assisting the organisation to retain its links (a social heritage consideration) to the Park.

PLANNING CONSIDERATIONS

Notwithstanding the statements in the correspondence under consideration, Council is reminded that a formal decision regarding this matter will follow from the submission of a development application for the project. The development application will seek consent for the demolition of a number of improvements within Hornsby Park (including the CWA building), as well as the construction of a new centre. The application will be accompanied by a supporting Statement of Environmental Effects (SEE) that will provide information to assist in consideration of the impact of the proposal. A report by an independent heritage consultant will form part of the SEE. This report will be separately circulated to Council immediately on receipt, as it may assist in the re-consideration that is the subject of this report.

As Council is the proponent, and the proposal has a value in excess of \$5 Million, the application will be determined by the Sydney West Joint Regional Planning Panel following assessment by an independent planning consultant. The report now under consideration (WK59/11) is not to be construed as fettering Council in the exercise of any of its planning functions.

BUDGET

Council's resolution WK20/10 authorised planning to proceed on the basis of a budget allocation for the project of \$20 Million. In the intervening period, an Architect has been appointed and extensive community consultation has taken place via public information sessions and a deliberative forum. The consultation identified a range of additional features for inclusion in the project that were not envisaged when planning commenced. These additional features have been incorporated in the design that will form part of the development application to be considered by Council, and will result in the need for Council to review the budget allocation for the project. Council will be further advised following finalisation of the cost report to be submitted with the development application.

POLICY

There are no policy implications.

CONSULTATION

Staff of all Divisions have been consulted as necessary in the preparation of this report. Consultation has also taken place with Council's appointed heritage consultant and the Architect for the pool redevelopment project, Michael Cook of Peter Hunt Architect. Specifically, the Executive Manager Environment, as Council's representative in respect of Reserve Trust matters, has endorsed the recommendations that follow under.

TRIPLE BOTTOM LINE SUMMARY

Triple Bottom Line is a framework for improving Council decisions by ensuring accountability and transparency on social, environmental and economic factors. It does this by reporting upon Council's strategic themes.

Working with our Community

The proposal to construct an Aquatic Centre reflects strongly held community expectations that such a Centre is required, that it be located in Hornsby Park, and that parking be provided on site. Provision of the Centre will demonstrate that Council is working with the community to provide these facilities. The proposal promotes social equity by providing enhanced access to recreational swimming, learn to swim activities, competitive swimming and aqua exercise facilities at a reasonable cost at a central location for the community. The opportunity will exist for social equity to be promoted in the programs that will be operated at the Centre.

Conserving our Natural Environment

The proposed location is adjacent to a natural area and will incorporate the area used by the existing closed facility. Preparation of a development application in accordance with the relevant planning instruments will ensure that any adverse impact on the natural environment is identified. Initiatives that minimise the quantity of energy and water to be used by the facility have already been considered and will be further considered during the design phase. Where possible, the recovery, reuse and recycling of waste materials is being actively promoted. Water consumption will be minimised by the use of appropriate technology. Impact on adjacent bushland or biodiversity has been considered throughout the initial design stages and will continue to project completion.

Contributing to Community Development through Sustainable Facilities and Services

Previous studies indicated that a facility at Hornsby is supported by the community. Public Information sessions and a Deliberative Forum process have been undertaken by Council and have resulted in demonstrated strong community support for the project. The proposal submitted for consideration will require a significant capital investment. Care has been taken and will continue in the design to ensure that the use of new technologies will reduce the carbon footprint for this type of facility. The facility will be able to be accessed by all sectors of the community.

Fulfilling our Community Needs in Planning for the Future of our Shire

The proposal has been designed to be consistent with the existing built and natural environment. Care has been taken to ensure that the character and features of the existing area are maintained. The impact on items identified as being of heritage significance has been assessed and where possible, action taken to address such impact. The proposal will promote the well-being of the area's current and future population by providing quality swimming and leisure opportunities and providing the opportunity to participate in Learn to Swim or exercise programs.

Supporting our Diverse Economy

The proposal is expected to have a small positive effect on economic development in that it is expected to provide additional part time jobs and a number of casual positions when in operation. Local contractors will have the opportunity to tender for work opportunities that may arise from construction and operation.

Maintaining Sound Corporate and Financial Management

Council will ensure that funding for the construction of the facility is available prior to any commitment being made to proceed with the project. When operating, it is expected the centre will generate revenue to allow it to break even or provide a small surplus. A new asset will be created which will require maintenance and therefore any surplus can be used to offset any future building maintenance costs.

RESPONSIBLE OFFICER

This report has been prepared by Maxwell Woodward, Executive Manager Works. The responsible officer is the Manager Design and Construction, Rob Rajca, who can be contacted on 9847 6675.

SUMMARY AND CONCLUSIONS

In planning for the redevelopment of the Hornsby Aquatic Centre, Council has agreed that the Centre should remain in the Hornsby Park. Council has also agreed that parking should be provided on site. A review of these decisions has shown that there is no other suitable site available to Council that meets the criteria of location and convenience to public transport. Other considerations flow from these strategic decisions.

Options to provide access to under pool parking have been reviewed. Consideration has been given to the competing considerations of heritage, road safety, local amenity, parking, access and cost. After consideration of the information available, access from opposite Coronation Street (option No 1) remains the preferred option. It is acknowledged that, if approved, this decision will result in the demolition of the building currently occupied by the CWA.

Review of the action taken by the National Trust to include the CWA Rooms in its register is noted, as is the Trust's advice that the action does not have any legal force. The Trust's statements of significance are noted, as is Council's commitment to provide new accommodation in Hornsby Park, thereby respecting the link of the CWA to Hornsby Park. Council has considered the National Trust's action in the context of other features of the Hornsby Park, the built and social heritage contained therein, and the need to provide a new facility that will serve the needs of the community in the years to come.

This report is now submitted to Council for its consideration and review.

RECOMMENDATION

THAT

1. Council confirm its decision to reconstruct the Hornsby Aquatic Centre in Hornsby Park, and to provide access for parking via an access road opposite Coronation Street,
2. The development application currently in preparation to this effect be submitted in due course,
3. The Division of Crown Lands be advised accordingly,
4. The Minister for Primary Industries be advised in the terms of this resolution and requested to support Council's decision.

MAXWELL WOODWARD
Executive Manager
Works Division

Attachments:

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| 1. Correspondence from Division of Crown Lands | Included under separate cover |
| 2. Hornsby Aquatic Centre- Access Options 1-7 - Plans | Included under separate cover |
| 3. Hornsby Aquatic Centre- Access Options 1-7 - Sections | Included under separate cover |
| 4. Intersection and Road Network Plans | Included under separate cover |

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