



Environment Committee

Date of meeting: 26 April 2022
Location: Council Chambers
Time: 4:00 p.m.

BUSINESS PAPER

ENVIRONMENT COMMITTEE

Meeting Date: 26 April 2022

AGENDA

- **WELCOME**
- **APOLOGIES**
- **DECLARATION OF INTERESTS**
- **SECTION 1 - Confirmation of Minutes**
- **SECTION 2 - Reports for Determination**

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Environment Committee

Section 1

Confirmation of minutes

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SECTION 1 - Confirmation of Minutes

ROC - Environment Committee Minutes - 6 July 2021 - (151938)

Minutes of the Meeting of the Environment Committee held by Audio-Visual link, on 6 July 2021, commencing at 4:05pm.

ATTENDANCE

Present: Councillor Amanda Kotlash, Hawkesbury City Council (Chairperson)
Councillor Patrick Conolly Hawkesbury City Council (Mayor)
Councillor Sarah Richards, Hawkesbury City Council
Councillor Nathan Zamprogno, Hawkesbury City Council

Apologies: Nil.

In Attendance: Mr Andrew Kearns, Hawkesbury City Council
Mr Justin Murphy, Hawkesbury City Council
Ms Linda Perrine, Hawkesbury City Council
Ms Amy Birks, Hawkesbury City Council
Ms Melissa Simpson, Hawkesbury City Council
Ms Tracey Easterbrook - Minute Secretary, Hawkesbury City Council

Attendance Register of Environment Committee

Member	13/04/2021	6/07/2021
Councillor Patrick Conolly (Mayor)	✓	✓
Councillor Amanda Kotlash (Chairperson)	✓	✓
Councillor Sarah Richards	✓	✓
Councillor Nathan Zamprogno	✓	✓

Key: A = Formal Apology ✓ = Present X = Absent - no apology

DECLARATIONS OF INTEREST

There were no Declarations of Interests made.

CONFIRMATION OF MINUTES

RESOLVED on the motion of Councillor Conolly, seconded by Councillor Zamprogno that the minutes of the Environment Committee held on 13 April 2021, be confirmed.

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SECTION 2 - Reports for Determination

Item: 1 **Natural Environment Conservation and Restoration Strategy - Options Report - (151938)**

Previous Item: 113, Ordinary (15 June 2021)

Directorate: City Planning

Mr Eric Brocken and Mr Bill Sneddon addressed the committee, speaking for the recommendation in the Business Paper.

OFFICER RECOMMENDATION:

That the Environment Committee consider the options outlined in this report, and provide a recommendation and advice to Council.

COMMITTEE RECOMMENDATION:

RESOLVED on the motion of Councillor Conolly, seconded by Councillor Zamprogno.

That the Environment Committee receive a report characterising our natural environment. The report may include sub catchments, and should include a desktop analysis of our natural environment, including considerations such as:

- Koala habitat (SEPP)
- High-risk weed pathways
- Ecological endangered communities
- Biodiversity offset sites
- Riparian vegetation
- Remnant native vegetation
- Stormwater infrastructure
- Wetlands
- Platypus habitat
- Environmental groups
- Bushcare sites
- Frogwatch groups
- Bird watchers
- Indian Myna eradication sites
- Bee programs
- Natural environment monitoring by other agencies
- Zero litter to oceans work.

For the Motion: Councillors Conolly, Kotlash, Richards and Zamprogno.

Against the Motion: Nil.

Absent: Nil.

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Item: 2 **EC - Zero Litter to Ocean Policy - (151938)**

Previous Item: 004, Environment Committee (13 April 2021)

Directorate: City Planning

Mr Jarryd Faint and Mr Bill Sneddon addressed the committee speaking for the recommendation in the Business Paper.

Councillor Wheeler addressed the committee.

OFFICER RECOMMENDATION:

That the Environment Committee:

1. Receive and note this report.
2. Recommend to Council that any new grant programs and funding opportunities in terms of litter reduction and prevention be explored, and if appropriate grant applications submitted.

COMMITTEE RECOMMENDATION:

RESOLVED on the motion of Councillor Conolly, seconded by Councillor Richards.

That this item be deferred to the next Environment Committee Meeting to allow Council staff to consult the community on this matter as per the resolution from the 13 April 2021 Meeting, namely:

- a) What Council might have the capacity to do in the future to prevent litter going into our rivers and oceans.
- b) What future opportunities Council might have to partner with others to combat this problem.

For the Motion: Councillors Conolly, Kotlash, Richards and Zamprogno.

Against the Motion: Nil.

Absent: Nil.

The meeting terminated at 5:45 pm.

oooO END OF REPORT Oooo

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Section 2

Reports for determination

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SECTION 2 - Reports for Determination

Item: 1 **EC - Election of Chairperson - (79351, 151938)**

Directorate: General Manager

PURPOSE OF THE REPORT:

The purpose of this report is to outline the process for the election of a Chairperson of the Environment Committee.

EXECUTIVE SUMMARY:

Under the terms of the Council Committee Constitution, it is a requirement that at the first meeting of the committee, that a Chairperson be appointed from the members of the committee for a period of twelve (12) months, and then for each twelve (12) month period thereafter.

RECOMMENDATION:

That a Chairperson of the Environment Committee for the period from April 2022 to April 2023, be determined.

BACKGROUND

Clause 5(b) of the Council Committee Constitution adopted by Council on 25 January 2020, is in regard to the election of a Chairperson, and is as follows:

"b) Membership and voting rights of the Committee shall be as follows:

Community Services, Environment and Innovation and Partnerships Committees

The Committee shall, at its first meeting following appointment, and each twelve (12) month period thereafter, elect one of its Members from those appointed under Clause 5 to be the Chairperson of the Committee. The Chairperson is responsible for;

- o The management of the Committee functions and operations, including managing conflicts of interest.*
- o To ensure the Committee fully discharges its responsibilities under the Act, the Code of Conduct, and the Constitution.*
- o The good and orderly conduct of the Committee. The Chairperson may do all things necessary to fulfil this responsibility."*

At its Meeting on 11 January 2022 Council resolved as follows:

"That the following Councillors be appointed as Committee Members to the Environment Committee:

- Councillor Conolly*
- Councillor Kotlash*
- Councillor Lyons-Buckett*
- Councillor Reardon*
- Councillor Wheeler"*

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DISCUSSION

This meeting of the Environment Committee will be its first meeting following appointment of members. In accordance with Clause 5(b) of the Council Committee Constitution, the nomination and appointment of a Chairperson for the next twelve (12) months by Committee members from those appointed is to be carried out at this meeting.

ATTACHMENTS:

There are no supporting documents for this report.

oooO END OF REPORT Oooo

ENVIRONMENT COMMITTEE
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Item: 2 **EC - Cool Burning (Cultural Burning - (151938, 80093)**

Directorate: City Planning

PURPOSE OF THE REPORT:

The purpose of this report is to clarify the practice of 'Cool Burning' within the Hawkesbury local government area.

EXECUTIVE SUMMARY:

A Notice of Motion was considered by Council at its Ordinary Meeting on 20 April 2021 titled "Environment Committee Conduct Public Meetings on Cool Burning".

This report outlines the investigation into Cool Burning (Cultural Burning) and the key considerations as part of any planned action.

Council staff have consulted the Senior Land Services Officer- Aboriginal Communities, Greater Sydney Local Land Services in the preparation of this report, and it is anticipated that this Officer will be available to attend the Committee meeting to discuss these matters further.

RECOMMENDATION:

That the Environment Committee:

1. Council refer this matter to the Hawkesbury Bushfire Management Committee, Local Land Services, Rural Fire Service and NSW Fire and Rescue to determine how Cool Burning practices may be implemented in partnership with Council.
-

BACKGROUND

A Notice of Motion was considered by Council at its Ordinary Meeting on 20 April 2021 titled "Environment Committee Conduct Public Meetings on Cool Burning".

Following discussion on the matter, Council resolved to adopt the Notice of Motion as follows:

"That Council request the Environment Committee investigate and research the possible introduction of "Cool Burning" (Cultural Burning) trials within the Hawkesbury Local Government Area. The Committee is to:

- 1. Engage with the local Darug community to discuss cultural burning as practiced in the Hawkesbury.*
- 2. Prepare a short discussion paper with information from and liaison with Aboriginal representative groups and people who have knowledge and experience with respect to the matter, NSW Rural Fire Service, NSW National Parks and other relevant State and Commonwealth Departments.*
- 3. Hold an Environment Committee meeting to facilitate debate on the draft discussion paper and invite representatives from the above to participate in that meeting.*
- 4. If required hold a further Environment Committee meeting to continue the discussion, however if not required that the Committee members draft a report in conjunction with staff to submit to Council within four months."*

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Since the Council resolution the matter has been investigated following engagement with relevant stakeholders.

DISCUSSION

The Practise of Cultural Burning

When considering the use of fire in managing Country, commonly described as Cultural Burning, it is important to reflect as an overarching premise, the need for land management bodies such as Council to recognise that local Traditional Owners and First Nations people more generally, continue their deep connections to Country. As part of this, Council could investigate opportunities to integrate traditional land management practises, known as Caring for Country into Council's program delivery, such as through Cultural Burning. This must be done respectfully and in close collaboration with Traditional Owner and First Nations groups, viewed as a holistic cultural expression supported through a co-design approach. Ideally, these activities would be led by Traditional Owners and First Nations people and supported by Council, and would aim to achieve genuine cultural, social, spiritual, and economic outcomes for Traditional Owners and the First Nations community on Country.

Cultural Burning is a term used in describing the practice developed and maintained by First Nations people over innumerable millennia in the use of Traditional Fire Knowledge to manage the health of Country which in turn ensured the health of people. Cultural burning is an adaptive process used for various purposes, such as ceremony, the protection of important cultural and natural features, the management and regeneration of food, medicines and material resources, enhancement of plant health, animal habitat protection and more-over, the healing of Country. This practice looked after the land, waters, plants and animal within systems in Country, providing a highly productive source of food which underpinned abundant wildlife. This provided First Nations communities fulfilment of their needs while sustaining resources for future generations.

One element of Cultural Burning, also referred to as Cool Burning is where small blazes are set alight to clear the underbrush with an aim to manage native grasses and the diversity of other plants, often impeded by thick understories. This process generates and maintains patchy habitats, often the scrubby underbrush being preferred by small animals, and assists in preventing lightning and wildfires from consuming the land. It must be recognised that the use of Cultural Burning was intrinsically linked to Traditional Ecological Knowledge, informing when and how fire was used to manage the appropriate natural systems, and where fire was not commonly a management feature, such as in rainforest gully systems.

Since European settlement, the practice of Cultural Burning has diminished, especially in the Greater Sydney region. Early settlers viewed fire as a threat and were unable to perceive Cultural Burning as a landscape- management practice. This has since exacerbated ecosystem degradation and put much of our land at risk of wildfires.

The consequences of this shift in land management became apparent during the 2019/2020 bushfire season, which consumed more than 5.5 million* hectares of land in NSW. Across Australia a total of 19 million hectares were burnt and almost 3 billion animals were displaced or killed**. This catastrophic bushfire season has seen a national shift in consciousness about land management and bush fire prevention.

For most non-Indigenous, urban and even agricultural people, fire is perceived as a destructive force. However, fire, holds great spiritual meaning in First Nations culture, with many stories, memories and dance being passed down around the fire. Fire also connects First Nations people to Country, with children learning about the healing powers of fire for Country and its symbolic significance within culture.

The central idea of Cultural or Cool Burns is fire management using a 'cool' fire. An example of this may be night times and early mornings burns, which can be used in certain approaches, as nightly dew helps slow down the fire and the winds are often calm, moving the fire gently through the landscape. The practice involves lighting low fires in small areas on foot, with matches or, traditionally, with fire sticks.

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These fires are closely monitored, ensuring that only the right types of vegetation such as underbrush and regenerative grasses are burnt. Cool Burns not only clear areas of land, they also ensure that seeds and nutrients in the soil are not baked and destroyed. These fires assist in changing and maintaining vegetation structures by reducing the density of the mid-storey shrubs and volume of ground fuels, which left unmanaged, lead to extreme fuel loads.

Cool Burning or Cultural Burning is just one component of a broader suite of land management practices and does not have fuel reduction as its primary objective. It can reduce fuel, but it's considered only effective protection for moderate fires, so it needs to be done in conjunction with hazard reduction burns.

Cool Burning practise in the Hawkesbury Local Government Area

Council officers have been advised by Local Land Services that Cultural Burns within the Hawkesbury local government area are being planned. These burns are generally undertaken in National Parks located in the local government area, and in consultation with local Traditional Owners as First Nations peoples with a relationship to this Country.

In relation to Cultural Burn projects on the Cumberland Plain, initial planning work has been undertaken through Greater Sydney Local Land Services to connect with relevant Dharug organisations that hold connections, and where appropriate broader Aboriginal organisations in the Hawkesbury region. This includes Dharug Custodians Aboriginal Corporation, through the Chairperson, and Dharug Ngurra Aboriginal Corporation (active in this area at the Yellomundee Regional Park Aboriginal Place) along with Merana Aboriginal Association for the Hawkesbury and Muru Mittigar Ltd.

Cultural Burns are supported by the National Parks and Wildlife Service and funded through a number of different approaches which seek to acknowledge and assist the reclamation of this important cultural practice. National Parks and Wildlife Services have their own park fire crews which are present and provide support at all Cultural Burns. These crews are resourced with firefighting equipment aiming to ensure that the fire/s remain under control, in the event that this is required.

The resourcing levels required to support these burns is dependent on the size of the system in Country intended to be burnt. In most instances Cultural Burns are smaller in size compared to National Parks and Wildlife Services and Rural Fire Services hazard reduction burns, and led by an experienced Cultural Burning Practitioner who can identify the right conditions and know when to apply the right fire for that type of Country. The fire is slow moving and easy to manage.

If Council were to undertake a Cultural Burn, Fire and Rescue New South Wales or the local Rural Fire Service would need to be notified of the burns and invited to provide support if required, or be on standby in the event that things become unmanageable. It is essential that a knowledgeable and experienced Cultural Burning Practitioner is involved in Cultural Burns, to read Country (i.e. vegetation type, geology, moisture content, wind speed and directions plus much more) then conduct and coordinate the right fire to minimise the risk of the fire becoming unmanageable. If opportunities arise for Council to partner with Greater Sydney Local Land Service to support a cultural burn, all of the factors mentioned above, social and environmental would be properly addressed.

* [Understanding the effects of the 2019/2020 bushfire season](#), NSW Department of Planning and Environment

** [Impacts of the Unprecedented 2019- 20 Bushfire Season on Australian Animals](#), World Wildlife fund Australia, November 2020.

COMMUNITY ENGAGEMENT

Council staff have consulted the Senior Land Services Officer- Aboriginal Communities, Greater Sydney Local Land Services in the preparation of this report, and it is anticipated that this Officer will be available to attend the Committee meeting to discuss these matters further.

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FINANCIAL IMPACT

Council should seek advice from the relevant fire authorities as to any liability or financial aspects to consider when seeking to organise a Cool Burn. Council would need to ensure appropriate representation from emergency services is present at the time of the burn, and Council would need to determine any liability in regard to such a burn.

ATTACHMENTS:

There are no supporting documents for this report.

oooO END OF REPORT Oooo

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Item: 3 **EC - Zero Litter to River - Community Consultation - (151938, 80093)**

Previous Item: 004, EC (13 April 2021)
 002, EC (6 July 2021)

Directorate: City Planning

PURPOSE OF THE REPORT:

The purpose of this report is to respond to the recommendation of the Environment Committee for Council to consult with the community about a Zero Litter to River Policy, and outline future programs and partnerships that Council may be able to undertake to combat litter.

EXECUTIVE SUMMARY:

Council at its Ordinary Meeting on 10 November 2020 resolved that Council provide in principle support to the Zero Litter to Ocean Policy and request the Environmental Sustainability Advisory Committee investigate the introduction of a Zero Litter to River target by 2030.

Furthermore, Council at its Ordinary Meeting on 9 February 2021 referred the matter of Zero Litter to Ocean Policy to the newly formed Environment Committee for consideration.

The Environment Committee has received reports on this matter at its meetings on 13 April and 6 July 2021, and recommended that community consultation be undertaken to receive ideas from high school students and the community on this matter.

This report outlines the community consultation that was undertaken in August 2021 including a Mayoral video on Facebook and a Mayoral letter to all local high schools. The report includes the submissions that were received during this consultation.

RECOMMENDATION:

That the Environment Committee:

1. Consider the submissions received from high schools and the community with respect to this matter.
 2. Seek funding opportunities should new Commonwealth and/ or NSW State Government funding become available in the future.
-

BACKGROUND

In 2020, Stormwater NSW and Ocean Protect produced the Zero Litter to Ocean Policy Paper. These two organisations outlined why the Commonwealth Government as part of its COVID-19 economic recovery response should invest approximately \$5.7 billion over ten years to prevent litter and pollutants entering waterways and the ocean. To date, the Commonwealth Government and NSW State Government have not adopted the policy or provided additional funding to address litter entering waterways and the ocean.

At the Environment Committee Meeting on 13 April 2021, a report was presented that outlined the details of the Zero Litter to Ocean Policy Paper, and what Council currently does to reduce and prevent litter from entering our rivers and waterways.

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At the Environment Committee Meeting on 6 July 2021 a report was provided which outlined the recently released NSW Government's Plastics Action Plan and Waste and Sustainable Materials Strategy 2041, and specifically how these strategies would address litter. The report was deferred to the next Environment Committee Meeting pending community consultation on the matter.

Council conducted community consultation on this matter throughout August 2021. This included a Mayoral letter to all local high schools, and a Mayoral video on Facebook, asking students and the community to partner with Council to find innovative ways to prevent and reduce litter from entering the Hawkesbury River. A total of two submissions were received from high schools, and two submissions were received from community members which are detailed in this report.

Relevant Legislation

Waste Avoidance and Resource Recovery Act 2001 (NSW).

DISCUSSION

Community Consultation – August 2021

High Schools Submissions

A Mayoral letter was sent to the principals of all local high schools on 11 August 2021 (Attachment 1). The letter invited high school students to contribute their ideas on how Council, and the community can reduce littering in the Hawkesbury and prevent it from entering our waterways.

The key ideas provided within the two high school submissions were:

- A student film making competition
- Signage on stormwater drains
- Engage smaller businesses to stop using single use plastic bags
- Waste to Art using plastic waste
- More Return and Earn drop off points on northern side of the Hawkesbury River
- Regular Clean Up the Hawkesbury Days.

The full submissions from the two high schools are provided below:

- **Bede Polding College:**

"Dear Cr Connolly and Mr Murphy,

Bede Polding College has an environmental group called the Eco Group and we are very interested in participating in this project. We participate in Clean Up Australia Day each year and do a variety of projects to reduce the amount of waste going into landfill, but we have not focussed on the river yet in terms of litter (although we have, throughout the years, participated in tree planting along the river).

There are three projects that we are proposing:

- *Have a field trip with the Eco Group students to visit some sites where we can see the impact, film what we see and create an educational video for the school and wider community. Sites could include local stormwater drains, the points where Rickaby's and South Creeks enter the Hawkesbury, and any other hotspots that Council recommends. We also have a group of staff who are keen kayakers who will be able to reach some of the less accessible areas.*
- *Hold an improvised Clean Up Australia Day event on the river banks, because we weren't able to hold that this year. It may even be possible with parent help to have a boat and dip nets that could enable us to reach floating litter.*

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- *Paint signs on each of our stormwater drains in the College to remind students that we live in a catchment and that materials deposited on the surface ultimately wash into the river. This, of course, extends beyond litter and includes pesticide, fertiliser, oil, paint, detergent etc.*

We look forward to helping however we can in this important project.”

- **Colo High School:**

“Our SRC (Student Representative Council) suggestions are as follows:

- *More advertising/promotion through Council encouraging people to compost. Posters to schools and advertising on social media about the worm farms/composting bins available to the public.*
- *Encourage smaller local businesses to stop using single use plastic bags. They need to come in line with the larger chain stores.*
- *Encourage local artists to reuse plastic waste and other recyclable materials like the Windsor Remakery currently do.*
- *10C Earn & Return needs to be more accessible for those people who live across the river (North Richmond, Kurmond, Kurrajong etc.). People might also be more inclined to use these facilities if they thought the 'earn' was going to a worthwhile local charity e.g. mental health.*
- *Create a mascot/log that is linked to the Hawkesbury and use it to advertise the need to reduce litter.*
- *Counsel to hold regular 'Clean up the Hawkesbury' Days (maybe in river catchment areas) and promote the importance of keeping our local area litter free. Need to advertise the importance of Hawkesbury residents taking ownership of their community. Invite schools to participate in a film making competition for any future 'clean up' campaigns (possibly Year 7-10 or Environmental Committees).*
- *More recycling bins for schools, especially classrooms.”*

Mayoral Video on Facebook

On 19 August 2021, Council shared on its Facebook page a Mayoral video inviting the community to partner with Council and provide suggestions on how to address litter entering the Hawkesbury River. The Mayoral video also featured Sam Bonus, 2021 Hawkesbury Young Australian of the Year and open water swimming champion who trains in the Hawkesbury River.

The video was viewed by more than 1,400 residents.

Facebook Post:

“HELP US KEEP OUR RIVER CLEAN

The Hawkesbury is the lifeblood of our community - both in the water it provides to farms, homes and the environment, and as a place for residents and visitors to enjoy.

It is critical we keep it clean, for the health of the river and the ocean it runs into. We are asking the community to partner with us in finding innovative ways to keep rubbish from entering this important river.

Watch the video below and leave your suggestions at yourhawkesbury-yoursay.com.au/ccn”

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Resident Submissions

The key ideas provided within the two resident submissions were:

- “Hawkesbury Helper” Shirts for residents that conduct their own litter clean ups
- Map of “Hawkesbury Helper” locations
- Address litter along arterial roads such as Bells Line of Road:
 - More public bins
 - Litter campaign targeting tourists such as signage
 - Rest Areas: maintenance and cleanliness to encourage more tourists.

The submissions received from the community included:

- **Resident Submission #1**

“Hi Council,

All street drains led to creeks to rivers and the sea. Yes, there are trapping/collection systems that collect some items, but plenty still makes it to the ocean.

Somehow there has to be a way to make it "cool", responsible, and attractive to people, the current litterers, such that casting aside any item is offensive to the land. The land includes our roadsides, cycleways, open spaces, and reserves. These should be kept free of man-made detritus of all sorts to maintain natural beauty.

Here are some thoughts:

- *Supplying a high vis shirt (and a decent pick-up grabber?) to people who collect rubbish from parks and reserves with "Hawkesbury Helper" printed onto the shirt. Give the helpers recognition and to obtain a shirt applicants could supply the area that they regularly "patrol/walk".*
- *Over time a map could be created to show how the areas being patrolled are spreading across the whole LGA. It could become a good news story of Hawkesbury and the land would become pleasanter in the eyes of all people. (There are already some active retired guys regularly picking up rubbish on the Bell's Line of Road and beyond. These are commendable activities. This sort of work will keep some active people mentally healthy while serving the whole community. I'm positive that any mental health expert would endorse this sort of community serving activity)*

So, education, positive recognition, a "Hawkesbury" team vest, and a growing map of "land being patrolled" may help to change our culture to help to keep our environment cleaner."

- **Resident Submission #2**

“This is feedback for the zero litter to the river program. Residing in Bilpin, all of the roadside litter enters the national park, then slowly proceeds to either the Grose River, Colo River, then flows into the Nepean and Hawkesbury. I have tried to conduct Clean Up Australia days in Bilpin to pick up litter along Bells Line of Road each year for the least three years, but without encouragement from HCC, due to Bells Line Road being an arterial road.

I would suggest that Hawkesbury Council consider how to combat litter along these large arterial roads that see a lot of litter from non residents.

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Some suggestions are:

- *increased public bins along Bells Line of Road,*
- *a program whereby tourists are encouraged to recognise where their waste ends up, and to encourage them to put it in a bin at their destination (this could be as simple as a sign when you enter Bilpin, and on when you enter Bell).*
- *Also, keeping rest areas tidy and presentable encourages visitors to keep them presentable, so I would suggest staying on top of maintenance and cleanliness in these areas.*

I would like to stay informed about the progress of this program. Thank you."

COUNCIL'S LITTER MANAGEMENT PROGRAMS

Council currently has several programs that are focused on reducing litter in our environment, and preventing litter from entering waterways and rivers. These programs include:

- Public Place Litter and Recycling Bins.
- Community and School Waste Education Programs.
- Enforcement (including issuing warnings and fines for littering).
- Stormwater Quality Management for New Development.
- Council Stormwater Treatment Assets: Gross Pollutant Traps.
- Western Sydney Regional Litter Plan

Council's *Draft Waste and Resource Recovery Strategy* currently being developed will consider how litter can continue to be addressed by Council and the community submissions received as part of the Zero Litter to River consultation will inform this process.

Council will continue to partner with various stakeholders including Keep Australia Beautiful, Clean Up Australia and the Western Sydney Regional Organisation of Councils (Regional Litter Plan) on programs to address litter entering rivers.

Council will also look to partner with high schools and community groups where possible on initiatives that require no or minimal resourcing and budgetary commitments from Council. For example, Council is already addressing some of the ideas raised in the submissions:

- Council advocates to State Government for increased Return and Earn Collection Points.
- Council using EPA Funding will be holding workshops in June for businesses and residents regarding avoiding single-use plastics.

As reported to the Environment Committee on 13 April 2021 and 6 July 2021 there is limited to no capacity to increase the existing Council programs listed above within Council's current budget constraints. However, should funding and grants become available in the future, these will be assessed and if appropriate Council could submit grant applications.

COMMUNITY ENGAGEMENT

Community engagement was undertaken throughout August 2021, including a Mayoral letter to all local high schools, and a Mayoral video on Facebook, asking students and the community to partner with Council to find innovative ways to prevent and reduce litter from entering the Hawkesbury River.

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CONFORMANCE TO THE HAWKESBURY COMMUNITY STRATEGIC PLAN 2017-2036

The proposal is consistent with the following Focus Area, Directions and Strategies within the CSP.

Our Environment

- 3.1 The natural environment is protected and enhanced - Value, protect and enhance our unique natural environment
 - 3.1.1 Encourage effective management and protection of our rivers, waterways, riparian land, surface and ground waters, and natural eco-systems through local action and regional partnerships.
 - 3.1.2 Act to protect and improve the natural environment including working with key agency partners.
 - 3.1.3 Minimise our community's impacts on habitat and biodiversity and protect areas of conservation value.
 - 3.1.4 Use a range of compliance measures to protect the natural environment.
- 3.2 To live sustainably and reduce our ecological footprint - Identify and make best use of our local resources and awareness of contribution to the environment
 - 3.2.1 Our community is informed and acts to reduce our ecological footprint.
- 3.3 We reduce, reuse and recycle - Identify ways for our community to reduce, reuse and recycle waste
 - 3.3.1 Develop and maintain active partnerships that will result in the innovative management of our community's waste, with an emphasis on resource recovery and waste minimisation.
- 3.4 The sustainability of our environment is improved - Encourage and enable our community to make sustainable choices
 - 3.4.1 Work with businesses and tourism operators to promote good practice and sustainability principles.

FINANCIAL IMPACT

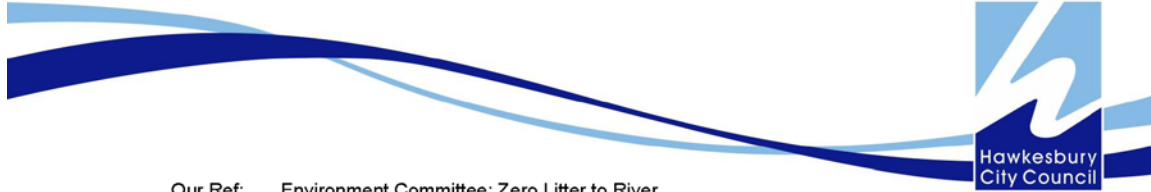
The suggested actions raised by the submissions to address litter to rivers have direct financial implications if Council were to undertake these actions.

ATTACHMENTS:

- AT - 1** Example Mayoral Letter to Local High School: Environment Committee: Zero Litter to River.

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AT - 1 Example Mayoral Letter to Local High School: Environment Committee: Zero Litter to River



Our Ref: Environment Committee: Zero Litter to River

11 August 2021

Principal
[Redacted]
[Redacted]
[Redacted]

Dear [Redacted],

Environment Committee: Zero Litter to River

The Hawkesbury River is central to our community, our environment, and our identity. It is something Council wants to protect for current and future generations.

However, the Hawkesbury River continues to be impacted by litter which can injure and harm our aquatic wildlife. It also results in a financial cost to Council and the community.

Council's Environment Committee is currently considering a Zero Litter to River Policy and would like to invite local high school students to contribute their ideas and suggestions on how Council and the community can reduce littering in the Hawkesbury and prevent it from entering our waterways.

Students may already have been involved in activities that address littering. They may have participated in Clean Up Australia Day, completed a school project on littering, seen litter hotspots, reduced their use of single use plastics, and they may be passionate about our river and aquatic wildlife.

I would encourage students that are interested in protecting the environment from littering to submit their ideas to Council's Environment Committee. The Committee will consider their suggestions and ideas at a future meeting. Students may also wish to speak on this issue at that meeting.

Students can submit their ideas to Council through the Your Hawkesbury Your Say website: <https://www.yourhawkesbury-yoursay.com.au/ccn> or email council@hawkesbury.nsw.gov.au making reference to "Zero Litter to River".

I look forward to seeing the responses from your students and working together with schools, youth and the community to reduce littering and protect our river.

Yours faithfully



Clr Patrick Conolly | Mayor of Hawkesbury | Hawkesbury City Council
☎ (02) 4560 4410 | 📠 (02) 4587 7740 | 🌐 www.hawkesbury.nsw.gov.au

366 George Street (PO Box 146) WINDSOR NSW 2756 | Phone: (02) 4560 4444 | Facsimile: (02) 4587 7740 | DX: 8801 WINDSOR
Hours: Monday to Friday 8:30am - 5pm | Email: council@hawkesbury.nsw.gov.au | Website: www.hawkesbury.nsw.gov.au



Interpreter Service available, call 131 450 | 131 450 تلفون خدمة الترجمة، اتصل به | 可提供口譯服務，請撥 131 450 | Hamm servizz tal-interpretu, cempel 131 450

oooO END OF REPORT Oooo

ENVIRONMENT COMMITTEE
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Item: 4 **EC - Hawkesbury City Council Electric Vehicle Scoping Paper- (151938, 80093)**

Previous Item: 4, EC (13 April 2021)
 2, EC (6 July 2021)

Directorate: City Planning

PURPOSE OF THE REPORT:

The purpose of this report is to present the Hawkesbury City Council Electric Vehicle Scoping Paper.

EXECUTIVE SUMMARY:

Council has prepared the Hawkesbury City Council Electric Vehicle Scoping Paper to assist Council in determining if, how or when it will engage in the provision of electric vehicle charging infrastructure, and in assessing the viability of transitioning its own fleet to electric vehicles.

RECOMMENDATION:

That the Environment Committee:

1. Council adopt the Hawkesbury City Council Electric Vehicle Scoping Paper, whilst noting that staff are already working on projects that are addressing this transition within the Hawkesbury Local Government Area within current resources.
 2. Council staff continue to review the opportunities available to transition Council fleet to electric vehicles.
 3. Council staff consider public electric vehicle charging infrastructure as part of the Hawkesbury Town and Village Place Plans.
 4. Council staff pursue opportunities that meet Council's requirements and resourcing capacity, to assist in the facilitation of this transition.
-

BACKGROUND

Mov3ment, specialists in this matter were engaged to prepare the Hawkesbury City Council Electric Vehicle Scoping Paper, which has been included as Attachment 1. The Scoping Paper was developed to assist Council in determining if, how or when it will engage in the provision of electric vehicle charging infrastructure, and in assessing the viability of transitioning its own fleet to electric vehicles. Mov3ment were provided with links to relevant Local and State Strategies and access to fleet data.

DISCUSSION

The purpose of the Scoping Paper is to:

- Advise on how Council can develop an Electric Vehicle Strategy or Roadmap
- Advise on how to link local targets with State/ Regional and National Plans
- Demonstrate the importance of electric vehicles in reducing emissions, but also ensuring Council has the correct information to determine a suitable electric vehicle pathway.

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The Scoping Paper is included as Attachment 1, but the highlights include:

- Supporting electric vehicle transition in Councils fleet is the most direct and influential path to electric vehicle uptake
- Electric vehicle charging for Councils fleet provides an opportunity to control energy and emissions
- Transition to electric vehicles is accelerating and becoming more mainstream
- There are barriers to the adoption of electric vehicles, however, barriers can be overcome with enough will and resources
- Council should assess national, state, and regional electric vehicle resources before embarking on installing its own electric vehicle public charging infrastructure
- The cost of electric vehicle charging equipment is less than people assume
- Consideration of the provision of public charging infrastructure; noting this is not necessarily Council's role
- Council should decide on the trajectory for the transition and not rely on strategic objectives and targets alone
- Current fleet and procurement policies may not support a switch to electric vehicles
- Engagement of staff is crucial to a successful electric vehicle transition
- Potential actions have been grouped in four themes - Foundations, Council Fleet, Charging and Advocacy.

The Scoping Paper highlights three main areas for Council to focus on:

1. Transition the Council fleet

Council's road vehicle fleet is split into:

- **Operations vehicles:** - used to carry out a task, often light or heavy commercial vehicles.
- **Leaseback vehicles:** - available to senior staff and double as pool vehicles in working hours providing transport to council staff as required.
- **Pool cars:** - Council doesn't have dedicated pool cars.

Highlights and barriers associated with transitioning Council's fleet to electric vehicles include:

- Consider adoption of electric trucks to provide hard waste and parks maintenance services. Benefits include lower carbon emissions, no tailpipe pollution, and quieter operation
- New electric truck models for waste compactors are expected to expand in the future
- Electric vehicles can have a lower total cost of ownership, especially when vehicles travel many kilometres per year or have very high fuel consumption or maintenance costs
- Having a clear understanding of the 'leadership appetite' and the barriers provides an integrated view of what needs to be done and what the organisation is prepared to do to transition to electric vehicles. This ensures that operational policies are aligned with strategic intents and targets
- True enablers of electric vehicles in fleets include substituting vehicles from other segments, adjusting price limits, redefining fit-for-purpose, incorporating externality costs like a company carbon price, making good models eligible, and changing fleet retention periods
- A framework has been created to assist Council in the decision-making process for transitioning Council's fleet to electric vehicles. The framework outlines seven areas to consider before adding electric vehicles to Council's fleet. The areas include model availability, vehicle use, environment, financial, charging infrastructure, workforce, and maintenance
- Model availability for Operational vehicles (electrification of some vehicles is possible depending on their tasks and use case)
- Sweepers are not suitable for electrification
- Fringe Benefits Tax has a significant impact on the total cost for electric vehicles (the Fringe Benefits Tax applied to a leaseback vehicle may be reduced where kilometres are driven for business purposes)
- For Plug in Hybrid Vehicles if users don't plug them in regularly, benefits are lost and often fuel costs twice that of a typical petrol model

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- Review the current Leaseback Operational Management Standard. Specifically, leaseback periods, available low emissions variants of vehicles, electric vehicle options and the total cost of ownership.

2. Analyse demand for charging

Highlights and barriers related to analysing the demand for charging:

- There is a lot of public charging infrastructure already available. Australia has seen a rapid increase in charging infrastructure, enabled by significant investment by government and charging providers
- In the wider Sydney area, direct circuit fast charging is mostly aligned to trunk roads. Most are provided by National Roads Motorists' Association or Tesla (only available to Tesla vehicles). Cost of use varies from free to more than 50c/kWh
- In the wider Sydney area, there are many alternating current slow chargers available, often in places such as shopping centres, hotels, and other sites where electric vehicles can be left overnight to charge
- Public charging options are limited in the Hawkesbury Local Government Area
- The Hawkesbury Local Government Area has just three chargers. All are privately owned; all are the slower type and <11kw and 2 of the 3 are Tesla only (August 2021)
- There are no fast chargers in the Hawkesbury Local Government Area. (August 2021)
- A direct circuit fast charger is proposed for the Western Sydney University campus at Richmond (August 2021)
- The NSW Government's Electric vehicle fast charging master plan identifies Bilpin as an optimal zone for future fast charging (August 2021)
- Match charging infrastructure to demand: spend wisely as there are few electric vehicle owners in the LGA. Use data to decide on where to fit chargers
- Most people live in detached houses so charging can occur at home
- 44% of residents work in the Hawkesbury Local Government Area and have a short commute, reinforcing the fact that charging at home or work could suffice for most electric vehicle owners.

3. Building and infrastructure guidance

Highlights and barriers related to building and infrastructure include:

- Electric vehicle infrastructure policy and guidance is already a well serviced focus area with many resources and publications available
- Developing specific electric vehicle infrastructure policy and guidance actions will require a detailed analysis of Council's current position and opportunities.

Linking and supporting:

- NSW Government Electric Vehicle Strategy:

The NSW Government released their Electric Vehicle Strategy in early 2021 along with a commitment to support it with \$490 million. The strategy seeks to: overcome the barriers to EV adoption, unlock the benefits of electric vehicles, support the Net Zero commitment, and ensure future road funding is sustainable.

- Western Sydney Electric Vehicle Roadmap:

The Western Sydney Regional Organisation of Councils roadmap identifies that most councils in the Western Sydney Energy Program group do not have electric vehicle policies. This is an important first step.

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Actions and recommendations:

The Scoping Paper outlines the below four themes to guide Council action. The proposed themes are provided in order of importance/urgency (detailed from pages 37- 42 of the Scoping Paper).

- **Foundations: build knowledge and commitment**
 1. Define the level of ambition or commitment on the leadership spectrum
 2. Better defined targets
 3. Review policy/strategy suite and revise to support electric vehicle adoption.
- **Own fleet transition: the most direct route and greatest area of influence**
 1. Review Leaseback Operational Management Standard
 2. Consider electric vehicle pool cars
 3. Improve current fleet data
 4. Fleet fit for purpose policy
 5. Develop robust total cost of ownership
 6. Leaseback vehicle Fringe Benefits Tax
 7. Fleet electric vehicle transition plan
 8. Fleet electric vehicle charging – location assessment
 9. Public electric vehicle charging (fleet use)
 10. Engage staff.
- **External EV charging: eyes open, evidence based**
 1. Public electric vehicle charging
 2. Collaboration with Western Sydney Energy Program councils
 3. Learn from others (review publications)
 4. Progress actions to make new development electric vehicle ready
 5. Electric vehicle ready developments.
- **Linking & advocacy: leveraging yours and others' good work**
 1. Collaboration with Western Sydney Energy Program councils
 2. Learn from others (review publications)
 3. Get connected, stay connected
 4. Grid capacity
 5. Public information.

Actions being undertaken:

Following a review of the Hawkesbury City Council Electric Vehicle Scoping Paper by Council staff and Councillors, the following actions are currently underway:

- Council officers are reviewing the opportunities available to transition the Council fleet to electric vehicles, including engagement with staff.
- Public electric vehicle charging infrastructure is being considered as part of Hawkesbury Town and Village Place Plans.

ATTACHMENTS:

- AT - 1** Hawkesbury City Council Electric Vehicle Scoping Paper, August 2021 - *(Distributed under separate cover).*

oooO END OF REPORT Oooo

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Item: 5 **EC - Increasing Tree Canopy - (151938, 80093, 124414, 126363)**

Previous Item: 5 ESAC (10 December 2018)

Directorate: City Planning

PURPOSE OF THE REPORT:

The purpose of this report is to respond to Council resolutions regarding increasing tree canopy, the most recent of which was at Council's Ordinary Meeting on 22 February 2022.

EXECUTIVE SUMMARY:

The report outlines that there are a number of actions that are being undertaken to increase tree canopy within the Hawkesbury local government area including actions identified within Council's adopted Net Zero Emissions and Water Efficiency Strategy.

RECOMMENDATION:

That the Environment Committee:

1. Recognise the number of the projects and opportunities already being undertaken and pursued by staff to increase tree canopy within the Hawkesbury local government area.
2. Recommend that Council staff continue to identify opportunities and/or partnerships to increase tree canopy cover within the Hawkesbury local government area in accordance with the actions identified within the adopted Net Zero Emissions and Water Efficiency Strategy, and existing resourcing capabilities.

BACKGROUND

On 12 December 2017 Council resolved:

"That Council receive a report on policy and methods of increasing the tree canopy in residential areas including but not limited to:

1. *Review of Blacktown's "Cool Streets" program and its relevance to the Hawkesbury LGA, and the work done by Penrith City Council in conjunction with The University of Technology Sydney.*
2. *Development of a recommended species list in conjunction with the Hawkesbury Environment Network.*
3. *Specific actions to increase tree canopy on Council controlled land, especially footpaths and car parks.*
4. *Actions to maintain and improve existing and mature canopy.*
5. *Clarification of the Greater Sydney Commission's canopy cover calculations."*

A report titled- "*Increased Tree Canopy*" (Attachment 1), was considered at the Environmental Sustainability Advisory Committee Meeting on 10 December 2018. Subsequently the matter was considered at Council's Ordinary Meeting on 26 February 2019.

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DISCUSSION

Since Council's previous consideration, a number of actions have been undertaken to address increasing tree canopy within the Hawkesbury Local Government Area, including:

Hawkesbury Local Strategic Planning Statement

Council received advice from the Greater Sydney Commission on 8 February 2021 that the Commission supports Council's draft Local Strategic Planning Statement as being consistent with the Greater Sydney Region Plan and Western City District Plan under Section 3.9(3A) of the Environmental Planning and Assessment Act.

Council then adopted the Hawkesbury Local Strategic Planning Statement at its Ordinary Meeting on 23 February 2021.

Planning Priority 10 of the adopted Local Strategic Planning Statement is:

An aware and resilient city that can adapt to natural hazards of flood, bushfire and climate change.

A key action in terms of delivering on that priority is Action 10.7:

Prepare and implement an Urban Tree Strategy including connections to the green grid.

Council staff have submitted an application for funding under the Greener Neighbourhoods Grant to undertake this Urban Tree Strategy, as detailed later in this report.

Net Zero Emissions and Water Efficiency Strategy

Council adopted the Net Zero Emissions and Water Efficiency Strategy in March 2021. This Strategy includes tree canopy targets in line with the NSW Government Architects Draft Greener Places Design Guide:

- 15% CBD
- 25% medium to high density areas
- 40% in low density areas.

The sections of the Strategy addressing greener suburbs, better design, and drought resilient, green centres, highlight the importance of increasing tree canopy and provides examples in which tree canopy can be increased. Staff are working through these actions as resourcing and opportunities arise.

Greening Our City Grants

Recently, Council successfully obtained grant funding to plant trees to increase canopy cover within the Local Government Area and mitigate the impacts of urban heat. This funding was provided by the NSW Government to address the Premiers Priority of Greening Our City. The Premiers Priority acknowledges the impacts of urban heat within the Sydney Metropolitan Area, and identifies that increasing tree canopy is a step towards mitigating the impacts of urban heat within our communities.

The adoption of the Net Zero Emissions and Water Efficiency Strategy along with the Liveability Project - Town Centres Masterplan, both highlighting the impacts of urban heat on our community, contributed to Council successfully obtaining these funds. These strategy documents show Council's commitment to addressing the issue and alignment to our Integrated Planning and Reporting Framework, and the Greater Sydney Region Plan and Western City District Plan.

In the past, these grants have required matched funding by Council, however this was not required in the last funding round. It is important to note that tree planting has been possible within the Local Government Area in recent years due to grant funding, either through the Greening Our City and 5 Million Trees Grant Programs or the Liveability Project funds.

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Mapping Data

Urban Heat and Urban Canopy mapping has been provided to Council by the Department of Planning and Environment. The data is provided for each Sydney Metropolitan Council for the years 2016 and 2019. The Department of Planning and Environment has committed to updating this data set every two years. When applying for the previous round of Greening our City Grants, this data assisted Council staff in determining the suburbs most affected by heat, and in most need of an increased tree canopy.

Tree Management Procedure

Through Council's membership of the Department of Planning and Environment's, Sustainability Advantage Program, a consultant has been working with staff on the development of a Tree Management Procedure. The purpose of this procedure is to provide clear and transparent direction regarding the management of all trees that are the responsibility of Council.

Tree Inventory

The Parks and Recreation Team have an existing budget allocation to undertake a tree inventory, targeting the trees located in the main town centres. The inventory will provide staff with information such as location, number of trees per street/ suburb, species, age and health etc. In order for Council to adequately manage its existing tree canopy, the first step is knowing and understanding our existing canopy.

Greener Neighbourhoods Grant

Council staff have applied for funds under the Greener Neighbourhoods grant program. If successful, the funds will be used to engage a suitably qualified consultant to develop an Urban Forest Strategy for the Hawkesbury Local Government Area. The Development of an Urban Forest Strategy is an action contained within Council's adopted Local Strategic Planning Statement. The Strategy will provide strategic alignment to both internal and State Government policies. It will also assist to coordinate Council's current cross-organisational projects that contribute to increasing canopy cover.

WSROC Urban Heat Planning Toolkit

Council staff were involved in the development of WSROC's Urban Heat Planning Toolkit. The Toolkit was finalised last year and focuses on strategies within the context of local planning provisions that can be implemented in new development and redevelopment in order to reduce urban heat. Landscaping provisions impact on the ability of these types of developments to provide green space and canopy.

The recommendations within the Toolkit are being considered as part of Council's review and update of the Local Environment Plan and Development Control Plan.

ATTACHMENTS:

AT - 1 ESAC Report – Increased Tree Canopy – 10 December 2018.

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AT - 1 ESAC Report – Increased Tree Canopy – 10 December 2018

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AT - 1 Environmental Sustainability Advisory Committee Report responding to the Notice of Motion of the 12 December 2017 Council Meeting

ENVIRONMENTAL SUSTAINABILITY ADVISORY COMMITTEE
Meeting Date: 10 December 2018

Item: 5 **ESAC - Increased Tree Canopy - (124414, 126363)**

Division: City Planning

PURPOSE OF THE REPORT:

The purpose of this report is to provide an update on actions being undertaken in response to a Notice of Motion raised at Council's Ordinary meeting on 12 December 2017 regarding the creation of a policy and methods of increasing the tree canopy in residential areas.

RECOMMENDATION SUMMARY:

That the information is received, and the Environmental Sustainability Advisory Committee provides advice to Council on the matter prior to a report being prepared for consideration by Council.

REPORT:

Context and Background

A Notice of Motion from Councillor Wheeler in terms of increasing tree canopy for the Hawkesbury Local Government Area was raised at Council's Ordinary Meeting on 12 December 2017. Following consideration of the Notice of Motion, Council resolved the following:

1. *Review of Blacktown Council's "Cool Streets" program and its relevance to the Hawkesbury LGA, and the work done by Penrith City Council in conjunction with the University of Technology Sydney.*
2. *Development of a recommended species list in conjunction with the Hawkesbury Environment Network.*
3. *Specific actions to increase tree canopy on Council controlled land, especially footpaths and car parks.*
4. *Actions to maintain and improve existing and mature canopy.*
5. *Clarification of the Greater Sydney Commission's canopy cover calculation.*

Since the adoption of the resolution, research and discussion has been undertaken, with the following comments made in respect of each item:

Resolution # 1

Review of Blacktown's "Cool Streets" program and its relevance to the Hawkesbury LGA, and the work done by Penrith City Council in conjunction with the University of Technology Sydney.

Relevant officers from Council's Parks and Recreation and Strategic Planning Sections have attended a number of meetings to discuss ways of responding to the requirements of the above resolutions of Council.

From these meetings, input has been received from all relevant staff, and a summary of these comments is as follows:

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Relevance of the Cool Streets Program to the Hawkesbury

Blacktown City Council's Cool Streets project aims to tackle the Urban Heat Island Effect with street trees.

As with much of Western Sydney, Blacktown already experiences high temperatures during summer. Large-scale developments that are changing farmland into medium density suburbs in the North West of the LGA are expected to have a significant impact on heat in the region.

Street trees are a simple and effective way to mitigate urban heat, as well as providing shade to residents and increasing street appeal. Research also shows that well-selected, well-placed street trees can reduce household energy bills.

Blacktown faced two challenges. Needing to ensure any plan addressed the occasionally conflicting requirements of authorities, service providers and residents and the common community perception that all trees are messy, dangerous, difficult to maintain and ruin kerbs and guttering.

The latter was a legacy of poor tree species selection in former decades.

The Cool Streets program sought to tackle these issues through intelligent streetscape design, good species selection and greater community participation in street tree design and planting.

Blacktown engaged consultants and landscape architects to develop street tree designs that reduce both average ambient temperature and residential energy consumption.

They included passive climate control through the strategic placement of tree species including taller trees in the West to cut hot afternoon sun, smaller trees in the east to let in morning light, and deciduous trees in areas that required more warmth in winter.

Once these designs had been developed, Blacktown City Council began the second part of the program; community engagement and implementation.

The program started with a series of community consultations in two treeless Blacktown streets.

The consultation began by holding a weekend barbecue in each of the selected streets to start the conversation about street trees with local residents.

An initial survey confirmed Council's anecdotal knowledge:

- some residents have concerns about safety and leaf litter;
- new street trees were often damaged or removed by residents;
- formal applications to remove trees were often prompted by unfounded concerns that branches may fall; and
- residents were typically informed about plantings in their street but not consulted.

Council officers also took the event as an opportunity to explain the benefits of street trees and why they wanted to increase tree cover in the area. Residents were shown images of a number of planting scenarios (including small trees, medium trees and large trees) and asked for feedback.

The consultation showed that after the benefits of well-selected street trees were explained, residents were keen to have trees planted in their street – with some commenting it was unfair other streets would have trees while theirs didn't.

By combining feedback from the consultation and the research, Blacktown City Council brought a final street scape design back to the residents to explain why it was chosen.

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Once the design was approved, the residents got involved in a planting event with the Mayor of Blacktown City, Councillor Stephen Ball.

Council found that not only were residents more positive about street trees following the program, but there was less vandalism of the newly planted trees.

Residents reported a greater sense of ownership for their street trees, and some actively engaged in taking care of them through watering.

Pros:

The approach that Blacktown Council used in engaging with the community to participate in the design of their streetscape as well as the actual planting of the street trees is commendable. This is a great way of empowering the community, not only giving the community a sense of ownership of the project but it also helped them to better understand and value the role that street trees can play. The program provided an added benefit of improving social interactions between neighbours and developing a sense of community.

If this program was adopted in the Hawkesbury, it is proposed that this approach be taken on each street that is part of the program, rather than just the streets used in the pilot program. (It seemed that once Blacktown developed a series of streetscapes then these were used in other areas, but it wasn't clear whether the community participation and decision making continued).

The engagement of consultants and landscape architects to develop the street tree plan ensured that the design could maximise the environmental outcomes. The Cool Streets Model can test a variety of layouts and rank the options based on their effectiveness in reducing Co2 emissions and maximising shade.

Cons:

The Cool Streets Model seems to only focus on shade and Co2 emissions. It is important to also consider biodiversity values, stormwater treatment, heritage and aesthetic values when designing a streetscape. These may be included elsewhere in the design process but don't seem to be included in the ranking process.

Street tree planting designs also need to consider the amount of natural light that is needed to make dwellings inviting/comfortable and also allow for solar access for warmth and/or energy production if solar panels are installed. There is not enough information about the program/model that indicates any of these issues have been considered.

The Cool Streets Model claims that changes to layout and species used could provide 7 times the environmental benefits of a standard design, however there is no data to back this claim or explain what a standard design is.

Consideration:

The Cool Streets Model is very simplified, however it could be adapted to be more holistic and consider broader factors such as biodiversity, heritage, street character. Incorporation of other vegetation layers should also be considered, not just trees. It is suggested that a more strategic plan is developed in the first instance that identifies the role/function of certain streets, and then the Cool Streets model could be applied to streets that have a general access role. Streets that have a higher biodiversity role or transport role may require a different model.

This model is one tool that can be used to mitigate the effects of Urban Heat, however it needs to be used in conjunction with other strategies.

Relevance of the work done by Penrith City Council in conjunction with The University of Technology Sydney:

Penrith City Council has a Cooling the City Strategy that considers multiple strategies for mitigating the effects of urban heat. The specific project that Hawkesbury Councillors were interested in was aimed at

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re-designing bus shelters to maximise thermal performance (be cooler). It was a grant funded project run in conjunction with the University of Technology Sydney and involved a design competition. A prototype was produced and installed next to an existing bus shelter to allow direct comparison (November 2017). Key features of the design include a distinctive roof that provides greater overhang to provide more shade and include cross flow ventilation to remove heat that accumulates under the roof which is also insulated to minimise heat gain. It was found that the shelter demonstrated it was possible to influence radiation, temperature and user thermal comfort within the shelters. The shelter was 4°C cooler than the older style bus shelter. The results provide Council's with solid evidence to consider in the design of future bus shelters to maximise protection from heat. There is no information to indicate that further designs will be undertaken by anyone.

Installation of specially designed bus stops could have a significant effect on the comfort and health of users and reduce the effect of heat stress on vulnerable members of the community, particularly the elderly, the mobility, vision and hearing impaired, as well as the very young and economically disadvantaged.

Some of the other strategies mentioned with the Cooling the City Strategy include very general programs for increasing tree canopy cover that would not necessarily be recommended as the results would be very random and may not yield desired long term results e.g. general plant giveaways, One Tree per Child program, etc.

Some strategies that would be worth considering are the inclusion of Water Sensitive Urban Design, increased shade and use of Cool materials in the design of community spaces e.g. parks, civic places, car parks etc. Also, training of staff on water sensitive urban design and green engineering to build skills and capacity within Council is another idea that is considered to be worth exploring.

Another factor raised is that Penrith have a street tree inventory. This is something that Hawkesbury currently does not have. If Council is serious about street trees and their necessary ongoing maintenance and management, it is really important that street trees are included in our Assets Register. Street Trees cannot be properly valued nor have appropriate budgets assigned to their management if they are not on the asset register.

Another important fact that was raised in the strategy is that low income households are regularly concentrated in the parts of Australia's cities with the highest land surface temperatures which means that people most vulnerable to heat related health impact are often living in areas with the highest heat exposure and the lowest levels of vegetation.

WSROC – Turn Down the Heat Program

It should also be noted that officers are attending the WSROC Turn Down the Heat Strategy and Action Plan session at The Ponds on 5 December. Outcomes from that session will be highlighted at the Committee Meeting in order to assist further discussion by the Committee.

Resolution # 2

Development of a recommended species list in conjunction with the Hawkesbury Environment network (HEN)

Council has already developed a tree species list of suitable trees for the Hawkesbury Local Government Area which is being reviewed and updated where required.

Also, the "Which Plant Where" program is currently being developed by Macquarie University which will generate an interactive online data base to identify the plants best suited to cope with the environment changes forecast for the next 50 years offering more reliable ways of greening our cities. (see Attachment 1 - <https://www.whichplantwhere.com.au/>)

Under the 5 Million Trees for Greater Sydney Program there is currently an interactive web based tool that is available which gives a species list by entering a postcode which then produces a suitable list of species

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for that area based on other criteria such as, frost tolerance, sun positioning, native or exotic etc. (see Attachment 2 - <https://5milliontrees.nsw.gov.au/search>)

It is proposed that an updated species list that is specific to the Hawkesbury Local Government Area be developed using a combination of the above three resources. Once developed, the species list can be referred to the Hawkesbury Environment Network (HEN) and to the wider community for comment.

Resolution # 3

Specific actions to increase tree canopy on Council controlled land, especially footpaths and car parks.

And

Resolution # 4

Actions to maintain and improve existing and mature canopy.

One of the key issues surrounding any street tree management plan across the board is that these trees in the urban environment have a finite lifespan and as such should be treated like any other asset. They have a life expectancy and will need replacement, some in 20yrs, others 30yrs depending on the location and species. This needs to be factored in and over time and costed into any future program.

In addition, if such a program is commenced and 5,000 trees are planted each year over the next ten years, Council would then have 50,000 additional trees that require ongoing maintenance and the cost implications will require careful consideration.

Council has a number of streets with heritage listed trees, which will need to be addressed in the project as well. Again, Council has some large trees that are coming to the end of their life in the urban environment, which will need to be replaced. Given the significance of some of the streets, Council needs to start planning now for a program of renewal and replacement of these trees to maintain the streetscape that has been generated. Community consultation on this matter could be particularly difficult. An expert arborist will need to be engaged to undertake the assessment and develop the project. In these situations Council may need to look at the entire streetscape including the pavement and create supersized planter boxes underground and use structural soils to allow for the development of the tree. Again experts will be needed to address these issues.

What is clear is that in the absence of an overall Urban Forest Strategy that provides a clear direction and processes to follow in this respect, Council will only be dealing with such matters on an individual piecemeal basis. It is considered that the development of an Urban Forest Strategy should be considered in the 2019/2020 budget process.

Resolution # 5

Clarification of the Greater Sydney Commission's canopy cover calculations.

The following is an extract from the Greater Sydney Commission's web site:

Urban Tree Canopy Cover Is Increased

Objective 30

The urban tree canopy is a form of green infrastructure providing shade, which reduces ambient temperatures and mitigates the heat island effect. The urban heat island effect is where large amounts of hard and dark-coloured surfaces like roads and roofs cause localised warming.

Every 10 per cent increase in tree canopy cover can reduce land surface temperatures by 1.13 degrees Celsius.

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The urban tree canopy also has environmental benefits. It provides habitat, helps protect the health of waterways and removes fine particles from the air to improve air quality. Recent research shows that urban tree canopy is greatly valued by communities. A 10 per cent increase in street tree canopy can increase the value of properties by an average of \$50,000.

Urban tree canopy along streets and in the public domain contributes to the Greater Sydney Green Grid and makes walking and cycling more appealing. Greater Sydney's urban tree canopy is made up of trees along streets, in parks and other public spaces, and on privately owned land including front and backyards. It includes native vegetation and exotic and deciduous trees.

As Greater Sydney grows and urban areas become denser, extending urban tree canopy is one of the most effective ways to improve amenity. A target has been set to increase tree canopy cover to 40 per cent, up from the current 23 per cent. Urban tree canopy can be complemented by green ground cover, rain gardens, green roofs and green walls.

Challenges to extending urban tree canopy include the lack of sufficient space within existing street corridors, and the competition for space with other forms of infrastructure both above and below the ground. Opportunities to relocate powerlines underground or bundle them may be explored at a local or precinct scale, particularly in areas experiencing urban renewal, to provide space for the urban tree canopy and enhance the public domain. Extending urban tree canopy should be balanced with the need to allow sunlight into homes and onto roofs for solar power.

The NSW Department of Planning and Environment has prepared the draft Greenfield Housing Code, which will help to provide more space for trees in both front and backyards in new residential areas. To complement this, up to 5,000 trees a year will be provided over the next three years, under the Free Tree Initiative, to owners of new homes approved under the complying development code in Greater Sydney's greenfield areas.

Urban Green Cover in NSW Technical Guidelines provides practical information for planning and expanding urban tree canopy and green ground cover. The NSW Department of Planning and Environment is preparing an urban tree canopy manual, as part of a green infrastructure policy framework, to support the expansion of urban tree canopy.

Planning and designing new neighbourhoods, including urban renewal, should prioritise expanding urban tree canopy in the public realm. Setting neighbourhood benchmarks for tree canopy cover is a useful approach. Planning controls need to protect urban tree canopy on privately owned land and provide incentives for residents to develop green roofs and green walls.

Councils can play a major role in recognising and reporting on urban tree canopy alongside other local infrastructure assets.

Several councils have developed innovative strategies, such as Sutherland Council's Greenweb program, to enhance and extend the urban tree canopy.

Proposed Future Actions

Based on the information gathered and the comments from relevant officers who have an active role to play in the rolling out of any future policy/strategy or methodology that may be developed in relation to Urban Heat Islands and increasing tree canopies in the Hawkesbury Local Government Area, it is suggested that a strategy be developed using the existing research that has been undertaken by Penrith and Blacktown Council's as these areas are very similar to the Hawkesbury area in relation to temperatures experienced during our summer periods.

Such a strategy could then feed into Council's DCP review process for new urban developments, as well as addressing increases in tree canopies in established parts of our city as part of the revitalisation of public places currently being undertaken by Council.

The following is a list of possible recommendations that the Committee may wish to consider as part of advice to Council:

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Proposed Recommendations:

- Council develop a strategy for dealing with Climate Change which includes multiple strategies to reduce the impact of Urban Heat which can include increasing urban tree cover to 40% as well as bus stop design, use of reflective surfaces e.g. roofing and roads, permeable paving etc.
- Council develop a Streetscape Design Guideline that is holistic and that consider regional objectives as well as local objectives e.g. green corridors that link towns, public transport and residential areas. Guidelines should also balance extending the urban tree canopy with the need to allow sunlight into homes and onto roofs for solar power.
- Develop a plan for the progressive improvement of urban canopy on streets, car parks, parks and other public spaces to focus effort and achieve the greatest impact.
- Apply for grant funding to develop the above strategies as well as for on-ground works to increase shade cover particularly in areas where the most vulnerable members of the community reside or work – senior living areas, schools, less economically advantaged areas, car parks, commercial and industrial areas. (The Five Million Trees initiative provides funding and is being considered by the Committee separately).
- Use the Cool Streets Model when developing and implementing the streetscape plan to bring the community on board as well as to ensure maximum environmental benefits from the plan.
- The recommended species list needs to be developed in conjunction with specialists as well as all members of the community, not just special interest groups. Species lists may be needed on a suburb by suburb or street basis and be orientation specific (e.g. east-west or north-south) as well as include shrub and ground layer plants.
- Ensure that all relevant planning documents consider appropriate strategies for reducing the impact of the urban heat island effect and that green infrastructure is integrated into design e.g. LEP, DCPs.
- Consider a tree replacement policy where any approvals granted for the removal of a mature tree on private property requires a replacement tree to be planted.
- Council include street trees in Council's Asset register. It is important to consider that Green Infrastructures is just as crucial as transport, cultural and communications infrastructure.

Prior to reporting the findings of this research and proposed future actions to Council, this report is presented to the Environmental Sustainability Advisory Committee for discussion and comment and formulation of advice to Council.

Consultation

The issues raised in this report concern matters which do not require community consultation under Council's Community Engagement Policy.

Conformance to the Hawkesbury Community Strategic Plan 2017-2036

The proposal is consistent with the following Focus Area/s, Direction/s and Strategies within the CSP.

Our Environment

3.1 The natural environment is protected and enhanced

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- 3.1.1 Encourage effective management and protection of our rivers, waterways, riparian land, surface and ground waters, and natural eco-systems through local action and regional partnerships
- 3.1.2 Act to protect and improve the natural environment, including working with key agency partners
- 3.1.3 Minimise our community's impacts on habitat and biodiversity, and protect areas of conservation value

Financial Implications

Should the Committee resolve to provide advice to Council based on the proposed recommendations there will be financial implications to Council that will need to be considered in further detail.

Fit For The Future Strategy Considerations

Does not align with a Fit for The Future Strategy.

RECOMMENDATION:

That the information is received, and the Environmental Sustainability Advisory Committee provide advice to Council on the matter prior to a report being prepared for consideration by Council.

ATTACHMENTS:

- AT - 1** "Which Plant Where" program currently being developed by Macquarie University information (distributed under separate cover)
- AT - 2** Five Million Trees for Greater Sydney interactive web based tool information (distributed under separate cover)

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Environment Committee Meeting

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