



SUSTAINABILITY STOCKTAKE RESULTS ARE IN

POSITIVE ACTIONS NOTED – NOW FOR THE NEXT STEPS



The results of a 'sustainability stocktake' have shown that Scotch has taken a variety of positive steps towards sustainability, but that more can be achieved with the introduction of a broader strategy, outlining short, medium and long-term plans.

The stocktake was conducted late last year by local firm Sustainable Development Consultants Pty Ltd, a large Melbourne sustainability practice.

'In general terms,' the report concluded, 'Scotch College has engaged in a range of initiatives and activities that make a positive contribution towards the College's sustainability performance. However, in most areas, these actions have been undertaken in the absence of any broader strategy.'

'Scotch College will now be able to determine... what steps can be taken to improve the College's sustainability

performance. This could benefit from the development of a high level sustainability commitment/vision.'

Among the many positive sustainability steps the report identified that Scotch has adopted include:

- The introduction of various initiatives to reduce water consumption and reliance on mains water, leading to a reduction in overall water use by almost 50 per cent since 2008 (69 megalitres to 35 megalitres).
- Redirecting stormwater into underground tanks – a 2.4 megalitre tank is installed beneath McKendrick Oval, a 3 megalitre tank is beneath Melville Oval and a 20,000 litre tank is beneath the Junior School Hall for toilet flushing.
- Adopting water saving measures in the Glenn Centre swimming pool.
- Synthetic surfaces on the Montgomery Field and the Junior School Oval, which help to reduce water usage.

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Editorial: David Ashton
david.ashton@scotch.vic.edu.au

Design: Lisa Sheard
lisa.sheard@scotch.vic.edu.au

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- Initiatives to reduce water demand, such as sowing drought-resistant couch grass on ovals, and installing drip irrigation, rain sensors for irrigation systems and water-efficient fixtures and fittings.

- Collaborating with Yarra Valley Water to gain a clearer understanding of where water is used on the campus.

- Installation of rain gardens in Hambleton Road and Morrison Street to treat water from the streets before it enters the Yarra River.

- Installation of three gross pollutant traps around the campus to collect loose material before it enters stormwater drains and underground rainwater tanks.

- A reduction of 1.33 million kilowatt hours in energy consumption between 2008 and 2020.

- Installing occupancy sensors in classrooms to ensure lights switch off when rooms are unoccupied.

- Installing LED lighting in various parts of the School, including the Glenn Centre, the Language Centre, the Randall Building, the Lithgow Building and the Junior School Art Room.

- Installing approximately 365 solar photo voltaic panels throughout the School, generating 110kw of power.

- The use of solar pre-heated water in the Sir Zelman Cowen Centre for Science.

- The School's participation in Earth Hour, during which all lights were turned off at a specified time for one hour.

- The establishment of an Environment Group mainly consisting of Year 12 boys, participating in a range of conservation activities.

- Planting more than 2000 native trees and shrubs on the Hawthorn campus and initiating a planting project at Elliott Lodge, Healesville (470,000 plants).

- Converting to the use of recyclable paper cups (110,000 used per annum at Scotch), and promoting their use, as well as making Keep Cups available and promoting their use.

- Composting food waste from the boarding house.

- Considerable reduction in the print run of *Great Scot*, by offering readers the option to receive an electronic version of the magazine.

Prior to the stocktake, Sustainable Development Consultants said that the results would enable the School to take the next steps towards sustainability. Now that the results are known, the School is in a position to develop short, medium and long-term actions towards sustainability, linking these actions with Scotch's strategic plan.





**OUR GROUNDS
PROVIDE VALUABLE
HABITAT FOR MANY
BIRD SPECIES**

BIRDLIFE ON THE SCOTCH CAMPUS

Scotch's magnificent 27 hectare campus, with its thousands of native and exotic trees and grassed areas, is home to a variety of birds, both native and introduced.

Before European settlement the site of Scotch's ovals was a boggy flood plain, a thriving, bustling home for birds and animals of many species. But settlement brought fundamental change to the area. Many native animals disappeared; some native birds stayed and thrived, while others vanished.

Records of birds which were published in some 1953 and 1954 editions of *The Scotch Collegian* show that many species noted as present on the campus in that era are no longer sighted. This includes various species of hawks, honeyeaters and quail. Honeyeaters and other small birds played an important ecological role in controlling insect pests that affect tree health.

But some species not listed in 1953/54 are now regular visitors to the campus, including sulphur-crested

cockatoo, pied currawong, yellow-tailed black cockatoo, little corella and rainbow lorikeet. These and some other species such as wood duck and tawny frogmouth have adapted well to urbanisation or have been moving in response to a changing climate.

To undertake an informal assessment of birdlife on the Scotch campus was the suggestion of Old Scotch Collegian, Andrew Wilson. Andrew's idea was enthusiastically taken up by Scotch Curator, Michael Smith. Andrew also consulted an Old Scotch Collegian from his own Class of 1978, Dr Mike Clarke, Emeritus Professor of Zoology in La Trobe University's Department of Environment and Genetics.

On a fine, cool morning in May, Andrew Wilson, Michael Smith and Mike Clarke, together with Scotch Bursar Ross Congleton, took a walking tour of the campus, after which Andrew compiled a discussion paper on birdlife issues which had arisen during the tour,



and in particular, what can be done to attract some of the species which development has driven away.

Although no formal plan has been instigated, steps have been taken towards attracting lost bird species back to the campus. For example, wrens have miraculously been seen on some of the ovals, but these tiny birds need the cover of dense understorey to protect them from predators and from common (Indian) mynas (exotic) and noisy miners (native), both of which drive other species out, as they compete for resources.

Michael Smith and his Grounds team have begun to establish small areas of dense understorey in some parts of the campus to provide habitat for wrens, honeyeaters and other small native birds; in particular to provide a refuge from predators and aggressive species such as the noisy miners.

One area of dense understorey is located on the north side of the Montgomery Sports Field. Other potential areas which could be considered are along the Gardiners Creek levee bank, on the Scotch side of the cutting along Glenferrie Road south of Monash Drive, and on the south side of the Hill, sloping towards Monash Drive.

An area of the riverbank near the Cardinal Pavilion could be planted with particular native grasses that are the food plants for the caterpillars of native butterflies; a missing component of the site's former wildlife. Insect larvae are a key source of food for a variety of native birds.

When trees approach the ends of their lives, instead of being removed they are considered for pruning by an arborist under Grounds staff guidance for retention as habitat, especially as nesting hollows, for birds and



SOME OF THE BIRDS SEEN ON THE SCOTCH CAMPUS. LEFT TO RIGHT: LITTLE CORELLA, EASTERN ROSELLA, PIED CURRAWONG, NATIVE WATER FOWL, YELLOW-TAILED BLACK COCKATOO

animals. But hollows suitable for nesting can take decades to develop. Installation of nest boxes can fast-track the return of hollow-dependent fauna. Designing and installing nesting boxes for younger trees across the campus might be a project for Scotch boys to consider in the future.

Scotch's grounds have the potential to act as a vital link in Yarra River and Gardiners Creek wildlife corridors, providing valuable environmental habitat for a wide variety of bird species which settle on the campus or as they simply pass through. Examples of the variety of bird species which have been seen on the Scotch campus are shown on this page.

While the reality is that Scotch's Hawthorn campus will inevitably remain within an urban environment, as an operating school it is hoped selective actions will cause the variety of birdlife to increase, and an important contribution will be made to the conservation of our precious birdlife within and beyond the boundaries of the campus.

GREAT ENVIRONMENTAL LEARNING OPPORTUNITIES

TACKLING THE ACTIVITIES WITH ENTHUSIASM

During several trips to Scotch's Healesville property, Elliott Lodge, our Year 3 boys have developed their focus on the environment. Their many activities at Healesville have included:

- Making natural water filters using materials from in and around the creek. The boys used natural materials to try to filter some 'dirty' water from the creek.
- Studying trees and leaves to better understand the process of photosynthesis;
- Digging up soil to investigate the organisms that were present in the soil, compared with the soil in one of the garden boxes at school (where only millipedes and ants could be found);
- Testing the temperature, pH and speed of the water in Chum Creek;
- Team-building activities, including making huts out of natural materials;
- Creating a collage, using natural materials to show their understanding of the water cycle; and
- Mindfulness sketching and writing, inspired by what students could see, hear, feel and smell around them; sitting in silence and taking in the natural environment around them.

The boys have taken on these interesting and stimulating activities with great enthusiasm and eagerness to learn. Davin Choi said: 'I enjoyed going through Chum Creek and going to Maroondah Dam and learning lots of different things. I built a fortress out of sticks and leaves, I made a diagram of the water cycle using natural materials,

THE BOYS USED CHUM CREEK AT HEALESVILLE FOR EXPERIMENTS AND DATA COLLECTION



THE BOYS INVESTIGATED ORGANISMS IN THE SOIL AT HEALESVILLE





MAKING A NATURAL WATER FILTER AT HEALESVILLE



ANOTHER FORM OF WATER FILTER CREATED BY THE BOYS

and I learnt how to use a compass.'

Nicholas Chilov also enjoyed the learning opportunities Healesville offers. He said: 'Each time we go to Healesville we learn lots of new things, like the process of photosynthesis, why leaves are green, and we also do a lot of investigating on Chum Creek that runs through Healesville.'



THE LUCKY WINNERS IN THE CAULIFLOWER DRAW

INTO THE DRAW FOR A CAULIFLOWER

UNUSUAL PRIZES FOR THE LUCKY WINNERS

'I loved going out into the garden and planting new things like broccoli, cauliflower, carrots and so much more,' said David Guo of Year 3. 'I was lucky enough to win a cauliflower in the amazing cauliflower draw, and I made cauliflower cheese at home. I also chopped up celery at home and fried it up. It was nice and crunchy!'

The garden boxes outside the Year 3 classrooms had stood empty and forlorn for a few years, left forgotten during lockdown, weeds growing tall.

Enter Year 3 Teacher Mr Brendan Frost with his green thumb, and the garden boxes have finally got some love and attention. Students were put to work weeding and watering to get the soil back up to scratch.

They then planted a range of vegetables and herbs including lettuce, bok choy, celery, broccoli, cauliflower, carrots (from seeds), coriander, basil, Thai basil, rosemary, mint, spinach and kale.

To protect the plants and minimise weed growth, they laid newspaper and straw on the beds. They cared for the garden by watering, weeding and eventually harvesting crops of beautiful crisp lettuce, bok choy and herbs.

And there was a bonus: as time went on, they noticed that the bok choy and lettuce were regrowing from where leaves had been cut off, so they got two and even three more harvests out of these plants!

In one of the vegie boxes outside the classrooms, the boys separated the carrots and planted some in the other vegie boxes to give them room to grow, and they remembered to continue their weeding and watering.

After the Term 2 holidays there were some beautiful cauliflowers ready for harvesting. They had to do a cauliflower draw, as there were more students wanting them than crops available!

Samuel Hu said he enjoyed the school-grown vegetables. 'The celery was extremely yummy in my salad at home,' he said. 'I really enjoyed planting the snow peas from the seeds and seeing them grow tall and wrap themselves around the string and poles.'

In week three of Term 3, the boys dug up the broccoli and cauliflowers to make room for new crops.



THE BOYS SEPARATED THE CARROTS AND PLANTED SOME IN ANOTHER VEGIE BOX TO GIVE THEM ROOM TO GROW



THE '9 Rs' OF SUSTAINABILITY

MORE TO SUSTAINABILITY THAN JUST RECYCLING



INVESTIGATING SOIL AT HEALESVILLE TO COMPARE IT WITH SOIL FROM ONE OF THE NEGLECTED VEGIE BOXES AT SCOTCH (NOW USED FOR COMPOST). THE BOYS FOUND WITCHETTY GRUBS, CLAY AND ANTS.

This year, the Year 3 boys have enjoyed many other teaching and learning experiences based on their work units. In Term 2 the focus was on sustainability. Students learned about the '9 Rs' of waste reduction and sustainability and how we can use these to take care of our environment and make better choices: rethink, refuse, reduce, reuse, repurpose, recycle, rot (compost), regrow, repair.

After a waste audit of our classroom rubbish bin, the boys realised that one big change they could make was simply to stop putting their fruit and vegetable scraps in the bin.

So they set about learning about compost. They used a spare vegie box to set up a compost bin. They tested the soil to see what organisms they could find in it (not many – no worms in sight!), and predicted changes they might see if they turned the vegie box into a compost bin.

The boys have been very good at putting their fruit and vegetable scraps in the compost, and our classroom bins have not been as full.

In another activity, the boys chose an area of sustainability that interested them and created a presentation on Google Slides to share their findings with the class.

In Term 3 the focus was still on sustainability, but the emphasis moved to water: the water cycle, and how humans manage water in urban environments. We will use Chum Creek at Healesville for some more experiments and data collecting.

Jenson Ooi said: 'We wrote about what we thought sustainability was, and then we went to Healesville and had other lessons in class where we talked about the 9 Rs. Later on in the term we wrote again about what we knew about sustainability. This time we knew that sustainability involved more than just recycling. It also involved reusing items, repurposing things and repairing things, rather than throwing them out.'

Noah Stubbs said: 'The 9 Rs of sustainability help the world refocus on the planet and its health, and make us rethink how humans have impacted the planet and its many ecosystems.'

CATHERINE SAKER – YEAR 3 CLASSROOM TEACHER



IMAGINATIVE SOLUTIONS TO ENVIRONMENTAL ISSUES IN LOCKDOWN

DES TECH STUDENTS GAIN INSPIRATION FROM ADVERSITY

LEFT TO RIGHT: VERTICAL GARDEN (CREATED BY EDWARD FINDLAY); INSECT HOTEL (BEN STRANG); BEE HABITAT (FINN LACEY); CONTEMPORARY BALCONY PLANTER (HAMISH PAINE)

Having spent extended periods in lockdown over the final two years of their schooling, Scotch's Year 12 boys were all too aware of the issues faced by those in lockdown situations.

Thinking positively, some of the 2021 VCE Product Design and Technology class elected to focus their design task on wellbeing issues around lockdown. Evidence was gathered from a range of publications, with findings centred on the positive impact being outside, around nature and caring for plant life, had on mental health and general wellbeing.

The boys recognised the importance of nature, and how those living in apartments were at a disadvantage

through lack of garden space, particularly in periods when Victorian residents were only allowed out for one hour each day. Student research also showed that during lockdown periods, people's interest in nature programs intensified, leading to an increased desire to assist nature in a variety of ways. One example was to provide insect or bee hotels in areas where bee populations are dwindling.

After much research, designing and computer-aided design modelling, the boys' solutions came to life, in the form of mini-gardens, planters designed for small apartment dwellers with limited balcony space, and insect and bee hotels, to support the bees during a time of diminishing habitat.

ENVIRONMENT GROUP'S SUSTAINABILITY CAMPAIGN



After two years of lockdowns, we forgot how much our daily lives and actions pollute our planet. In the year ended June 2021, Australia's carbon emissions were down 10.8 million tonnes from the same period in 2020. This clearly depicts the difference we make just by being out moving around every day, instead of staying home for the majority of our days.

Our Environment Group consists mainly of Year 12 boys. Its aims are to increase student awareness of waste management issues, and to alleviate some of the current issues around the School concerning sustainability and environmental impact.

This year the group focused on identifying areas of the School where we pollute the most, and how we can improve.

One of our first initiatives was the installation of the Simply Cups coffee cup recycling station. This station allows people to dispose of their coffee cups and lids into two separate tubes after which the cups are taken to a recycling facility.

Here the plastic lining that is usually inside of coffee cups and lids is taken out, allowing the material to be 'upcycled' and turned into different products such as Keep Cups, cup trays, outdoor furniture, air conditioner mounts, car park stops, roadside kerbing, recycled road surfacing and even lightweight recycled concrete slabs, all made from coffee cups and lids.

Since their installation the two Simply Cup stations at Scotch, located in the staff lounge and the Keon-Cohen Dining Hall, have helped to recycle over 11,000 coffee cups and lids.



In the week of World Environment Day, our Environment Group ran an educational campaign, in which each day boys were shown different small gestures we can take at home to be more sustainable, along with what in the School canteen is and isn't recyclable. We finished the week showing boys how the School itself is being sustainable, displaying its use of renewable energy and waste differing.

With the introduction of food organic bins, the School has been able to divert from landfill much waste from leftover food or food scraps in both the Boarders' Dining Hall and the Keon-Cohen Dining Hall. From the instalment of the bins in February 2022, Scotch has been able to divert 3.11 tonnes of organic waste from landfill, showing clear steps in the right direction by the School to help our community in the journey towards sustainability.

TOMMY LIVADARAS – SCHOOL CAPTAIN



SAVED FROM LANDFILL – OFF TO A NEW LIFE

Story overleaf...

At Scotch, a further 340 chairs and 340 desks have been saved from going to landfill. The furniture had become obsolete in 2020 when Scotch's English Department moved from the Language and Culture Centre into a magnificent new location in the Lithgow Building. To facilitate Scotch's Home Room project, the Language Department relocated to the top two floors of the language building. The 11 language study rooms were supplied with new student furniture to align with the rolling upgrade across the School, in the process making the 680 furniture items obsolete.

But a new and productive life awaited them. Rotary's Donations in Kind program collects and redistributes goods donated by various institutions and consigns them to destinations where acute need is identified. In January, under the program, the chairs and desks were packed into a container at Scotch and shipped to Timor Leste.

The photo below was taken months later in Dili, Timor Leste. It shows local students busily setting up their classrooms with the furniture. Note the old bench/ desks in the background which are being replaced by the repurposed chairs and desks.

Scotch donated all this furniture to the Rotary program, assisting with labour to remove all the original furniture out of the building and into the shipping containers.



THE KING PARROT (BELOW) IS OFTEN SPOTTED IN OUR GROUNDS

YOUR FEEDBACK

Please contact the Editor with comments on articles in this issue, or with story ideas for future editions of Environs. david.ashton@scotch.vic.edu.au

