

SAGE 2018 report to SMG

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Key to all that Lincoln University does is an awareness of, and care for, the environment.

As New Zealand's specialist land-based university, our mission "for the world" and "live well" is always with the aspiration to "protect the future".

Lincoln University recognises that healthy ecosystems and environments are necessary to the survival of humans and other organisms and that the economy is a subsystem of society within the bio-physical environment. There are limits within which human economies and societies must operate if we are to function in a sustainable way. These limitations are the constraints placed by the natural systems of our planet.

Sustainability Action Group for our Environment

In 1990 the student run group Lincoln Environmental Organisation (LEO) was established. Three years later the University Council adopted an Environmental Charter. This quickly led to the adoption of an Environmental Policy in 1993 (a first among New Zealand tertiary institutions). In 1999 the University agreed to establish an Environmental Task Force with the aim of implementing the Environmental Policy. The University now has an Environmental Sustainability Policy which has been rewritten and updated (2017) and a Sustainability Action Group for our Environment (SAGE). SAGE is an active group with staff and student members who promote sustainability campus wide. The Sustainability Action Group for our Environment (SAGE) has recently reconvened after a hiatus of a few years.

The 2017 policy states Lincoln University's commitment to be an international and the national leader in promoting and achieving ecologically, socially and economically sustainable development. This commitment is aligned with Lincoln's strategic direction and will be implemented by the whole University community, in all aspects of the university's activities: research, curricula, extension, building design, facilities management and operational practices, including all university properties and farms.

Main achievements:

Promotion of SAGE and environmental sustainability:

This has been one of main foci for 2018

The promotion has been on the Internal web site, SAGE tips on screens and significant progress made on, and launching of, the Sustainability Seminar series (see below).

Work on an implementation strategy (to carry out the LU Environmental policy)

Work on the strategy has been divided into sections between our various sub-groups, who have made variable progress. The progress on waste reduction has been hampered by the changes happening with Lincoln Hospitality and the non recyclable containers used by the Grounded café have resulted in a number of critical comments and emails from various people.

The transport strategy group have carried out a transport survey. The resulting data will be useful when the University comes to decide on how to make transport more sustainable

Draft Implementation plans:

1. SAGE Website/ Promotion Strategy

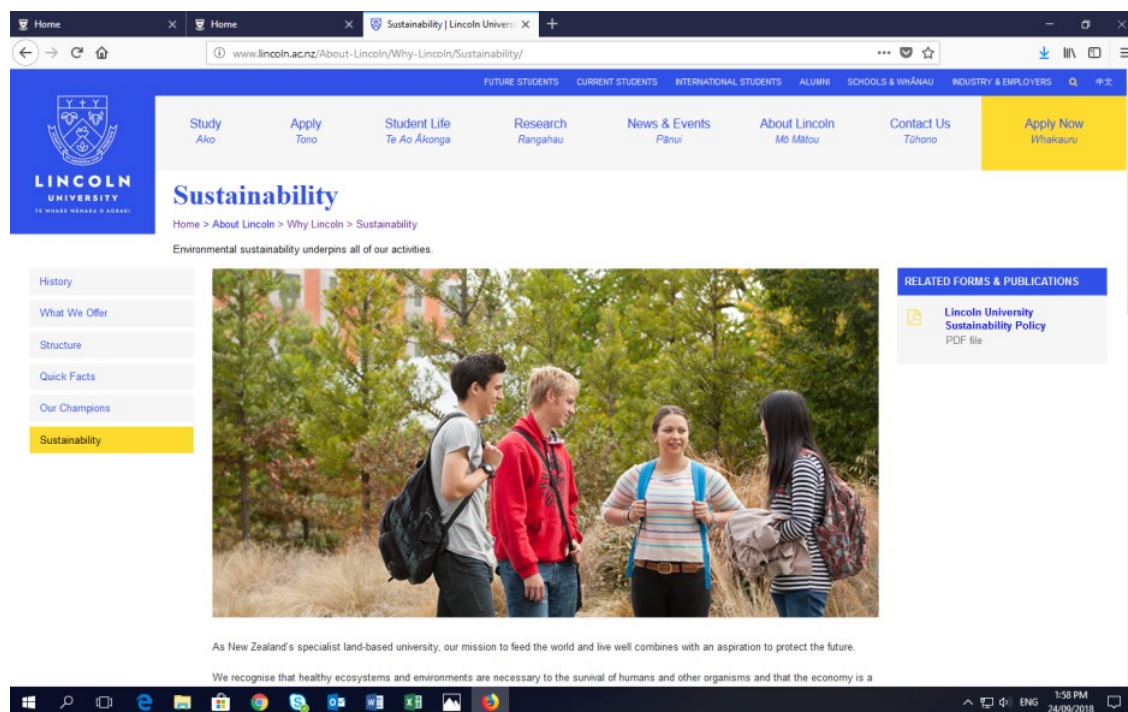
Report from Website subcommittee for SAGE for 2018

Website subcommittee: Jayne Smith, Sally Price and Tracey Shields (help from Brenda Mills, Gillian Blandford, Andrea Innes, and many other staff who have distributed our messages)

This sub group has been promoting SAGE and sustainability.

Website

This was an initial activity we worked on with Andrea Innes as the contact and Rebecca Doyle. The “Sustainability” section on the external Lincoln University webpage has had the Lincoln University Sustainability Policy added so that it is accessible both internally and externally (See screenshot below).



(Screenshot of the sustainability section on Lincoln University external webpage, including the Lincoln University Sustainability policy)

We are still working in this space as there are going to be changes with the website. We would like the sustainability information more readily accessible on the external site as this could be a *valuable drawcard for prospective students*. Our subgroup have asked to be involved and to make sure we have staff on campus writing the information so that it is correct and relevant and up to date with the latest research and evidence.

Hub (Internal web site for Lincoln University staff and postgrads)

This was our initial push to bring awareness of SAGE to the campus and we have done this with weekly tips about the environment and sustainability (see below). At times it has been challenging to get the information up where it can be seen. However with Brenda Mills help, we have managed most weeks to have our information available for people to see on the TV's in Forbes (main reception and near Grounded).

Tips were also around the secretaries for their weekly newsletters and in the later part of the year we have had them up on the library TV and have sent to LUSA to place on MyDay.

SAGE Tips of the Week - Preserving Part II

Tracey Shields

15/05/2018

☆☆☆☆☆

- **Vacuum Packing:** Preserves food by excluding oxygen. Due to reduced oxygen, fish, meat and vegetables can last five times longer and it helps retain quality in freezing.
- **Fermentation:** for the production of alcohol or vinegar is another way of using excess produce. Examples are yoghurt, cheese, sauerkraut, kimchee, fermented corn. By fermenting these products it extends their life and can be consumed in winter months when fresh veges are scarce.
- **Preserving with sugar:** jams and marmalades are stewed fruit with sugar and cooked until set. Jellies - clean, clear, set fruit syrup. Use grapes, guava, elderberry, mint or parsley jellies are delicious.
- **Preserving with acid:** pickles, chutneys, relishes and sauces use acid to preserve. Pickles are often soaked in salt water first to draw out water. Relishes are sour with vegetables finely chopped. Chutneys are sweet using fruits and veges. Sauces are similar to chutneys but are sieved or strained.
- **Preserving in alcohol:** any fruit can be used. Use clean and unblemished fruit and spirits such as brandy, gin, vodka, rum, you can add sugar.

Source: Lisa Loveday's preserving tips. <http://www.lisaloveday.co.nz>



I Like It Tags &

(Example post on the Hub)

SAGE Sustainability Seminar series

The following have been the seminars we have held this year:

- 18th July: Responding to climate change by Anita Wreford
- 15th August: EECA's role at the coal face: helping NZ's large energy users reduce energy and carbon emissions by Glenn Wellington
- 19th September: Restoring the dawn chorus to the campus by Mike Bowie
- 17th October: From their place to yours by David Syme from Meridian Energy
- 22nd November: Flip the Fleet - How to accelerate the uptake of electric vehicles by Dr Daniel Myall and Prof. Henrik Moller, on behalf the Flip the Fleet team

In addition, Global Challenge students came to the October SAGE meeting and presented their work on establishing a community herb garden.

Training

Brenda provided training on hub posting to the website subcommittee early this year and so we have been able to do all the hub posting ourselves and make the slides for the weekly tips.

Marketing and logo

We have developed our own logo (green feet) so that we can be identified on campus and are using it on all our internal promotions. This logo may be redesigned for external use to fit with the new branding.

Prospectus

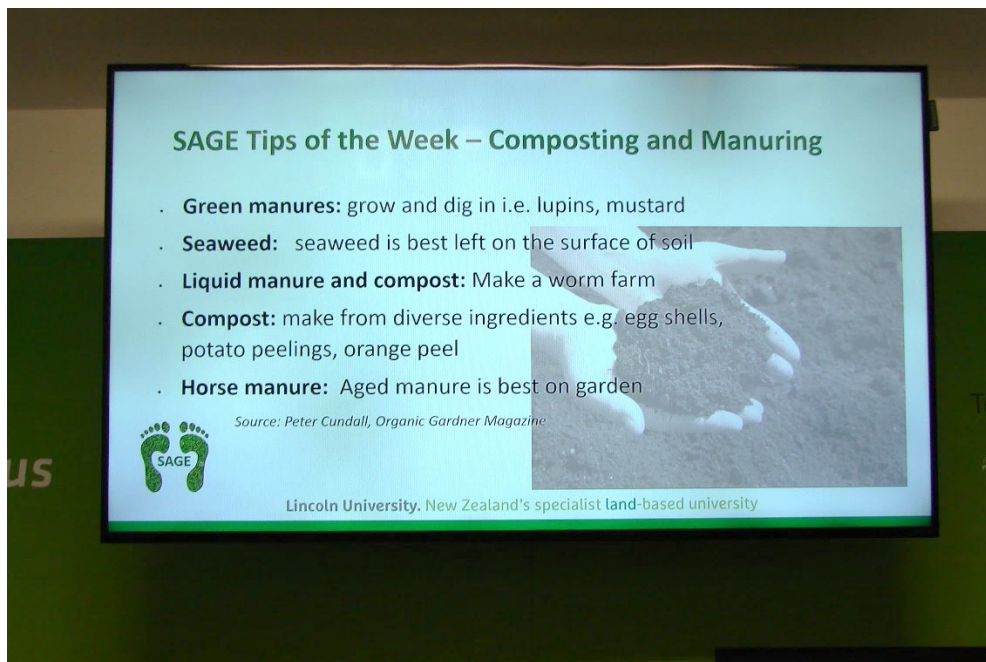
A conversation has been had with Andrea Innes regards being involved in the 2020 prospectus so we can provide the information for this important piece of marketing material.

Sustainability Map or information boards

This is an idea brought to the table by Lin Roberts and has now moved to being part of information boards that will be located around campus. We would like to provide information on biodiversity, birds, important areas of sustainability etc. There are a lot of sustainability initiatives around campus, but most students and staff are unaware of them. To that end, we promoted the EV charging stations on campus by posting internally on the Hub with a photo (October 2018).

TVs with weekly messages

This is occurring weekly (See below).



(Example Tips on the TV's, photo: Sally Price).

Promotion of various SAGE activities

We promote via the hub and weekly newsletters all the various activities we are involved in and make sure the monthly SAGE seminar series is promoted.

Overall the SAGE website subcommittee feel that we have helped to make SAGE more “front of mind” to staff on campus but need to continue to work with students to get their support for ongoing sustainability initiatives. Once a logo is finalised this will give greater visibility to the SAGE group as a whole on campus and social media.

2. Native Biodiversity Group of SAGE

Mike Bowie, Jayne Smith & Jess Rae

Native Biodiversity Strategy

Key actions: Advocate, Inform, Facilitate & Connect

The relevant section of the Lincoln University Policy that this draft plan relates to is: "4.2.3.3 Land Use and Native Biodiversity". It states, the University will:

- Maximise regional scale native biodiversity on University lands.
- Ensure Lincoln University supports sustainable land use on its campus and farms by staff and students, and within the wider community.
- Ensure Lincoln University lands are designed to demonstrate an aesthetic that encourages sustainable land use while supporting Lincoln's scenic resources and heritage.
- Enhance amenity and ecological values, especially indigenous biodiversity, on campus and all university properties.

Definition: Significant Natural Areas (SNA) are those areas that are a significant plant / planted areas or object in an area or a collection of plants in an area SNA would be categorised on their recreation, native biodiversity, aesthetic, historical, ecological, and cultural significance values.

Short-medium-long term plans

Short term plans – next 12 months

(Purpose is to get a very good catalogue with species and maps in the catalogue, set up a monitoring programme)

- Identify plants, insects, birds and pests on campus
- Monitor fauna, using various entomological methods including weta motels, wooden discs that will be installed in larger native areas on campus. Five minute bird counts, lizard, insect surveys and pest monitoring will be carried out by students (predominately ECOL293).
- Native regeneration on campus will also be monitored by ECOL293
- Contact Roy Edwards to discuss ID & protection of historical plants, areas and things.
- Map SNA on campus – Don Royds key person to help with mapping (CADE)
- Planting – planning towards planting in amenity area or the like. Obtain funding for eco-sourced trees.
- Connect – introduce the ideas to Lincworks, the gardeners, students and staff through presentations, stories in VC news, HUB, etc
- Encourage campus community to record biodiversity on campus using iNaturalist app.
- ECOL293 students will produce ecological restoration plans for campus

Medium term plans – next 3 years (2019- 2021)

- Planting – eco-sourced trees in the ground (planting Season in July-August 2019)
- Monitoring update on what we have found, this is then present in various outlets, hub, the VC newsletter, etc.
- Investigate apps, maps with IT that will allow interactive ability to identify biodiversity
- Working towards Predator Free NZ 2050 – which means removing at least rats, possums & stoats (but should include hedgehogs, cats, mice, ferrets & stoats). Important to include education to our campus community.
- By end of three years complete a thorough review

Long term plans – next 5 years (2021-2024)

- Expand to the periphery of our campus and onto the Dairy Farm Planting & around drains

- Publish the campus initiative in some way (maybe work with marketing i.e. predator free and eco-campus) producing popular and possibly scientific stories

Progress on the Short term plans – 2018

(Purpose is to get a very good catalogue with species and maps in the catalogue, set up a monitoring programme)

- Identify plants, insects, birds and pests on campus
- Monitor fauna, using various entomological methods including weta motels, wooden discs that will be installed in larger native areas on campus. Five minute bird counts, lizard, insect surveys and pest monitoring will be carried out by students (predominately ECOL293).

These are happening now – students & staff are recording these during the semester from 30 locations

- Native regeneration on campus will also be monitored by ECOL293
- Contact Roy Edwards to discuss ID & protection of historical plants, areas and things. **You need to ask Jess about these 2 ones**
- Map SNA on campus – Don Royds key person to help with mapping (CADE)
- Planting – planning towards planting in amenity area or the like. Obtain funding for eco-sourced trees.
- Connect – introduce the ideas to Lincworks, the gardeners, students and staff through presentations, stories in VC news, HUB, etc **Mike Bowie has been talking to Paul Dryden (LincWorks) about this – planning a walk around campus of problem areas.**
- Encourage campus community to record biodiversity on campus using iNaturalist app.
- ECOL293 students will produce ecological restoration plans for campus – **will have these at end of semester**

3. The SAGE Sustainable Transport Sub-committee

John Gould (Lead), Josh Waterman, Sue Jarvis, Kirsty Hurnen, Richard Moreham, David Miller

Sustainable Transport Strategy

The new government has recently committed Aotearoa New Zealand to reaching carbon neutrality by 2050 to ensure we play our part in countering the growing threat posed by climate change. To ensure such targets are met it is essential for tertiary institutions like Lincoln University to help lead by example.

The SAGE sustainable transport sub-committee is consequently exploring a number of short and long term options to improve on our present transport practices which are still dominated by single occupancy (diesel or petrol powered) car travel to campus and account for estimated annual emissions of 1997 tons CO₂ or almost 25% of the campuses carbon footprint.

To address this, we are collaborating with stakeholders across the University to develop a Sustainable Transport Strategy which promotes more carpooling, biking, walking and greater use of public transport while, where ever possible, discouraging single occupancy car travel.

In the long-term, we would encourage the introduction of electric vehicle (EV) charging stations for the increasing use of electric vehicles (a trend that has already started), the conversion of the Lincoln fleet to 100% electric vehicles and the purchase of one or more, Lincoln branded electric shuttle buses to facilitate the commute to campus from locations not on regular bus routes.

Short-medium-long term plans

Short term plans - 2018

- Finalize and undertake the Transport survey
- Analyse and share the results and on the basis of these develop and propose a Transport strategy for Lincoln University (LU)
- Focus on advocacy and education of the campus community. The aim would be to raise awareness regarding the urgent reasons for changing the current transport paradigm at LU dominated by single occupancy (petrol/diesel) vehicle use while also proposing greater use of viable alternatives such as carpooling, busing, cycling, walking.

Medium term plans 2019-2020

- Consider how the introduction of paid parking on campus might be used both as a catalyst to encourage the greater use of some of the more environmentally friendly, cheaper, healthier and more sociable alternatives, listed above and a spur for LU to promote the use of EV's by providing charging points (with perhaps initially free or cheap electricity supply).
- Work with Environment Canterbury (ECAN) regarding improved bus services and explore possibilities such as subsidizing student/staff fares (using funds generated from parking fees)
- Promote carbon offsetting by staff and students when travelling by car and air by encouraging planting trees and regeneration of native bush as a way to mitigate climate change
- Support a Zero Emission Vehicle policy on campus through writing a plan and supporting a procurement project for future fleet cars to be zero emission vehicles.

Long term plans – 2020-2023

- Encourage LU to support more of its research and teaching on the area of Sustainable Transport
- Advocate and promote increased use of electric vehicles (bikes, cars and buses) including the purchase of an LU branded electric bus as evidence of our commitment to a more sustainable future.



Progress for 2018:

The Transport Survey has been carried out.

SAGE TRANSPORT SUB-COMMITTEE PRESENTS:

**2018
TRANSPORT
SURVEY**

17–31 July 2018





Help influence future Transport planning for Lincoln

BY EMAIL/MYDAY LINK

What do you think about Transport options around Lincoln? Can the bus service be improved? Could biking be safer? Could we car pool more? Whatever you think, complete the 2018 Transport Survey to let us know your opinions/ideas!

FIND SAGE FOR MORE INFO:
WWW.LINCOLN.AC.NZ/ABOUT-LINCOLN/WHY-LINCOLN/SUSTAINABILITY



Statements from Results of Transport Survey

Those who live with 3km of campus predominantly **walk** (41%), but are fairly evenly spread over the 4 other options.

Those who live mid-distance away (15-30km) have a larger proportion of carpool use – especially as primary use. (*Students living in town???* – can we differentiate between students and staff?)

Those who live mid-distance away (15-30km) have the slightly higher **bus usage**.

Overall, 43% of respondents commute as a **single occupancy driver** as their primary source, but drops to 20% as a secondary source.

Overall, the secondary source of commuting is spread fairly evenly across the 5 options (14-23%).

On average, the **time spent on commuting** is 21mins (primary) and 23mins (secondary), and ranges between 15 and 39mins. *Does this mean we prefer to minimise the length of time travelling?*

Students **commute via carpool** more than staff. Students @ 52%, staff at 20%. Although staff are less likely to give carpooling a go (39% say no), there is still 21% staff and 23% students who would consider it.

49% of staff will not consider the **bus as a commuting option**, and only 10% already do use the bus.

30% of students will consider **using the bus more**, but 28% won't consider this option.

44% of staff currently **use a bike** to commute (already use and YES), with 20% further considering this option.

43% of students currently **use a bike** to commute (already use and YES), with 19% further considering this option.

51% of students **currently walk** (already use and YES) compared to 25% of staff.

Bus Transport

44% of staff and 58% of students own a **Metrocard**.

Students will use a bus more often (55%) if the **bus was half price**.

Staff only 21%. But if the **bus was free**, it would be 70% and 29% respectively.

If the **bus route was better**, we would get 58% more usage (students 63%, staff 44%).

If the **bus route had a higher frequency**, we would get 50% more usage (students 55%, staff 35%).

If the **university charged for parking**, we would get 29% more bus usage (students 34%, staff 18%).

If the **bus had free wifi**, we would get 35% more usage (students 44%, staff 12%).

Electric Vehicles and Bikes

There is 36% interest in **purchasing an EV**, and 16% interest in **purchasing an Ebike**. Staff having a higher interest in this than students.

48% will be more interested if there was a **free or subsidised charging station** on campus.

45% of respondents are interested in **EV bike info**.

On the day the respondent completed the survey (July), the majority came in a single occupancy vehicle (44%), 20% via carpool, 18% walked.

The top 5 reasons for choice of transport are the same for staff and students. All reasons in order are:

For staff	For students
1. Convenience	1. Convenience
2. Time	2. Time
3. Cost	3. Cost
4. Environmental	4. Environmental
5. Health	5. Health
6. Enjoyment	6. Weather
7. Weather	7. Enjoyment
8. Personal Safety	8. Personal Safety
9. Social Company	9. No alternatives
10. Family Reasons	10. Social Company
11. No alternatives	11. Habit
12. Habit	12. Family Reasons
13. Unfamiliar with alternatives	13. Unfamiliar with alternatives

4. Sustainable Design/Master Plan Joint Facility/Energy and Resource Use efficiency Group

Key actions: Advocate, Inform, Facilitate, Connect

The relevant sections of Lincoln University policy that this draft plan relates to are:

- 4.2.3.1 Energy Transport & Climate Change
- 4.2.3.2 Water
- 4.2.3.3 Land use and native diversity
- 4.2.3.4 Procurement and purchasing
- 4.2.3.5 Te Tiriti o Watiangi
- 4.2.3.6 Comply with all relevant local and central government environmental legislation

Short-medium-long term plans

Short term plans – next 12 months

- Continue to advocate the sustainable agenda and outcomes for the LUAGR Joint Facility Project
- Continue to develop the sustainable agenda in Lincoln University master planning processes
- Continue to integrate sustainable thinking and outcomes in capital and campus development projects
- Continue to pursue pragmatic sustainable solutions in property operations
- Continue to pursue energy efficiency options through LU relationship with EECA
- Continue to develop operating relationship with Meridian Energy

Medium term plans – next 3 years 2019-2021

- Continuation of short terms plans
- Delivery of LUAGR JF
- Introduction of sustainable facilities operating processes within LUAGR JF
- Development of LU energy strategy and pathway to the future
- Installation of more EV charging points
- Installation of PV array on LU land in partnership with Meridian Energy
- Support to improve bio diversity on LU Campus

Long Term Plans – next 5 years 2021- 2024

- Continuous improvement LUAGR JF operations
- Implementation of LU energy strategy
- Conversion of LU boilers to sustainable energy source
- Diversification of LU energy sources

Progress on short terms plans-2018

- LU Campus master plan completed including alignment with sustainability policy
- Ongoing Liaison with LU AGR JF build and change programme managers
- Ongoing consultation with stakeholders in respect of Campus redevelopment programme
- Initial planning for EV charging and PV array underway

5. Waste reduction

Tbc

Short-medium-long term plans

tbc

6. Procurement

Tbc

Short-medium-long term plans

Tbc

7. STENZ

SAGE has a representative on the Sustainable Tertiary Education New Zealand (STENZ) Group. This group meets monthly via Skype and annually or bi-annually in person, hosted by one of the 8 other universities. A joint paper has gone to the Universities of NZ on sustainability...

Working with developers:

It came to our notice that there was a housing development planned adjoining University land. We contacted a rep from Verdeco (Shane Kennedy) who is developing the land for housing. (the original consent was under Denwood) We have put him in touch with Chris Stevens from Lincworks, as they had made no recent contact with the university.

We have made suggestions about their perimeter planting – one metre is too narrow - needs to be at least 3 metres. The species list includes non local species. We suggested eco sourced species. Mike Bowie commented:

"In terms of species in an ecological context, I would prefer to see true, local species i.e.

Is it Golden totara? which are sterile!

What's wrong with Phormium tenax? "dark delight" will not provide food for bellbirds etc

Why not a local Pittosporum rather than Stephens Island one?

Why not Coprosma propinqua? More useful for native birds and lizards!"

Once the university tracked down the original consent document - they found that the consent said a 1.8m high fence along the boundary by the paper road/rail corridor, which now belongs to the University and if the University. Verdeco wanted to put a 1.2m post and perhaps a 5 metre strip of planting (using the paper road??) but this doesn't seem possible without serious discussion and changes in the consent. So Shane has suggested that possibly at a later date have the fence changed to the 1.2m post and rail. We presume Verdeco will need to use their own land to increase the width of the planting strip.



-  Podocarpus totara
-  Phormium Dark Delight
-  Pittosporum Stephens Island
-  Chionochloa flavicans
-  Coprosma kirkii

LINCOLN UNIVERSITY SUBDIVISION – PERIMETER PLANTING



Community Garden:

Lincoln University Community Garden

Goal - To reduce food miles, generate less food waste, and provide a sustainable food resource

Plan - Develop a community garden on campus which can provide some fruit, vegetables, or herbs for café; Mrs O's and Grounded.

Mentor/contacts - Kirsty Hurnen, Nicola Furlong, Chris Stevens; Lincworks, SAGE, LUSA, Sue Jarvis; Lincoln Envirotown, David Kennedy; LHL (Annabel Langbein), UC Okeover Garden

Project Management Steps:

1. Define objectives - plan/establish a community garden on campus
2. Identify risks - money, volunteers, setting bed
3. Define/assign roles - group collaboration at this stage
4. Develop timeline/plan - make contact about community garden/propose
5. Gather resources/meet with stakeholders - after meeting with people
6. Execute plan - aim for opening of student café if not then first food in time for spring
7. Monitor progress - weekly meetings, site checks
8. Communicate - meetings with group once a week

Group members - Hugh, Mitch, Braydon, Max, Darshil

October Update:

We have now completed our project with the planter boxes in place alongside the pathway to Mrs O's. The planter boxes were donated by the gardening team at LincWorks. The soil and compost came from the BHU and HPCC. The seeds used and watering can for garden care were kindly donated by WOW.

We have included basil, chives, parsley coriander and mint with various varieties of each.

Our team would really like to thank everyone that contributed towards getting this project up and running. We are stoked that something physical is finally in place so that it be used the Lincoln community.

Going forward:

- Work with LHL to decide what kind of quantities of produce they will be using.
- Ensure that the plants are well watered and looked after.
- Establishment of a club with keen gardeners/horticultural students to maintain and develop existing project.
- Promote Lincoln University as a tertiary institute using sustainable food sources grown on campus by the university community.