ECOVILLAGE RESIDENTS' BULLETIN

16 February 2024

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WHAT'S HAPPENING IN THE ECOVILLAGE COMMUNITY?

Be part of Sustainable House Day on 21 April

by Clara Fischer

Sustainable House Day is an event from Renew magazine that provides the opportunity to explore some of Australia's most inspiring homes, and learn from the people who designed them, built them, and live in them.

Have you heard about Sustainable House Day (SHD) on Sunday, 21 April 2024? Would you like to get involved? **Online applications close on 23 February 2024.** If you're interested you don't need to worry about filling in all your home's details in the application as you can always edit it later. The important thing ist just to get registered.

Knowing how important it is to share the sustainable building and lifestyles we're all creating at WEV, we feel the time is right to showcase our wonderful and incredibly sustainable community. As such we've decided to go all out this year as a Silver Sponsor of the event. We're also in the early stages of planning a Community Partnership event at the Ecovillage Community Centre. We plan to open up the sales office for a presentation on the Ecovillage and invite our key builders and designers to set up

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information stalls / tables / displays to promote their sustainable business and their involvement with the Ecovillage. We are looking into hiring a marquee for the nature playground site in front of the office to enable us to host talks, workshops, and demonstrations that showcase Ecovillage life. We are currently deciding on which kinds of workshops and creative program points we can offer to our visitors. If you have any great ideas and would like to contribute beyond opening up your home, please let us know!

However, SHD is all about people coming to look at cleverly designed, beautiful and sustainable homes, and that's where you come in. We would like to encourage you to take part in this event and consider featuring your home as part of the main event.

To do this you need to sign up with an account on the SHD page, create an optional video (I'm happy to help) and be prepared to invite / host people in your home on the day. The SHD team will provide all the info, scheduling and support needed to run the event. We have also encouraged builders and designers to reach out to their homeowner clients with support to assist in taking part in this event.

If we are able to coordinate numerous homes, the WEV office, and builders / designers to all take part on the day, it would be a fantastic event promoting sustainable lifestyles and homes. SHD is all about providing inspiration, information and setting an example for others wanting to live a more sustainable life. We have such an amazing story to tell here at the Witchcliffe Ecovillage and we'd love others to hear about what we're doing and why.

We're hoping to get a range of timber framed, hempcrete, strawbale and reverse brick veneer homes, in various shapes and sizes.

We're thinking it will be best to co-ordinate all of the homes and talks to be spread over no more than 4-5hrs. With something like an hour of presentations under the marque, and 45-60 minutes of homes open in each cluster, in the hope that there are 3-4

households that are keen to participate in each cluster.

If you'd like to take part in SHD 2024, please let us know in the WEV office by either calling our office on (08) 9757 6688 or send Clara / Mike a message via clara@ecovillage.net.au / mike@ecovillage.net.au.

If you'd like more information about the event, we encourage you to visit the SHD website https://sustainablehouseday.com/

"Our program in 2024 will be back in homes across the country, allowing for the peer-to-peer information sharing that makes Sustainable House Day so special. Alongside these in-person events we will deliver a comprehensive program of online events, offering a deep-dive into a range of sustainability topics led by experts, architects, and tradespeople."

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The last year's the SHD event featured:

- 129 featured homes
- 28 Sustainable House Day events
- 25 Community Partner events
- 7,542 online event attendees
- 31,000+ house tour video views
- 7,090 free event registrations
- 3795 paid event tickets sold
- 5 Council Partners
- 27 Community Partners

Energy Update

by Mike Hulme

It's such a relief to finally have the Tesla Powerpack's in each cluster in Stage 1 providing 100% renewable energy to each cluster.

We are very pleased with how they're operating and how incredibly efficient our homes are. The clusters are only using between 20 – 40% of their batteries each night. The batteries are set to automatically start filling at 10am each morning and are fully charged between 11-00-11.30am.

As most homes now have solar systems and Droplets installed, we are able to see what homes are producing, consuming and exporting from their solar systems remotely. From this data I have to say a huge congratulations to all Stage 1 residents as your average daily energy consumption is less than half the State and National average. It gets even better than that, as now that our batteries are turned on, our energy is also 100% produced on site from our household solar. It doesn't get more efficient or sustainable than this.

Each Stage 1 cluster is exporting energy (over and above household consumption) from as early as 6am through to 6pm. We're really seeing the great benefit of having a mix of east, west and north facing panels in each cluster.

The upgrades to the Site Main Switch Boards (SMSB's) that's we've been required to do, due to

changes in Western Power's commercial scale solar rules, were completed in Stage 1 last year, and are currently underway in Stage 2 & 3. These will be followed by the grid protection testing (GPT) on the upgraded SMSB's and the power quality assessments (PQA's) on the solar systems and batteries next week. Once completed, these will all be lodged with Western Power for assessment and approval to operate. Phew, we're nearly there.

We all owe a debt of gratitude to our Stage 1

pioneers who have paved the way for a simplified roll out now that we have got everything working to Western Power's requirements. We are the first in the State to do this, so it's been a big learning curve for our engineers, electricians and Western Power.

Stage 4 & 5 should be simpler again, due to having household batteries, but we're still waiting to find out from Western Power as the Stage 4 plans were lodged some time ago.

Energy Billing

Once everyone's batteries are turned on in each stage, all homes with solar systems will be 100% self-sufficient from solar energy, directly from their inverter during solar hours and from the batteries between solar hours.

The battery allocations appear to be generous at this point, as no households appear to be consuming their daily battery allocation, and most aren't consuming half of it. This makes for very easy billing as each home with solar is also exporting far more than their battery allocation.

Homes with operating solar will therefore have a $0.00 charge for battery energy. However, homes without solar connected yet will need to pay for their energy from the battery. This is also simple for billing, as these households will be paying 20c/kWh for all energy consumed from peer-to-peer consumption, regardless of whether this is from solar or battery. The income from exported solar will be simple to calculate.

The Stage 1 clusters are averaging export of around 500kWh/day to the grid, and importing around 1.2kWh/day that the battery draws from the grid to confirm that the grid is live and functioning. As such, if they have solar connected, they shouldn't have any more energy bills – just income from now on.

I want to say a huge thank you to Karen Millar who's been bogged down in the last quarter's energy billing spreadsheets for the past couple of weeks. This has been a tedious process for us to manage for each strata while waiting for the large solar and battery approvals. While I'm confident that this will become a much simpler process once the solar and batteries are all turned on, I have also started exploring a more simplified way to convert the StormCloud energy data for each strata & home with a software engineer. I'll keep the Strata Council's posted.

EV Chargers

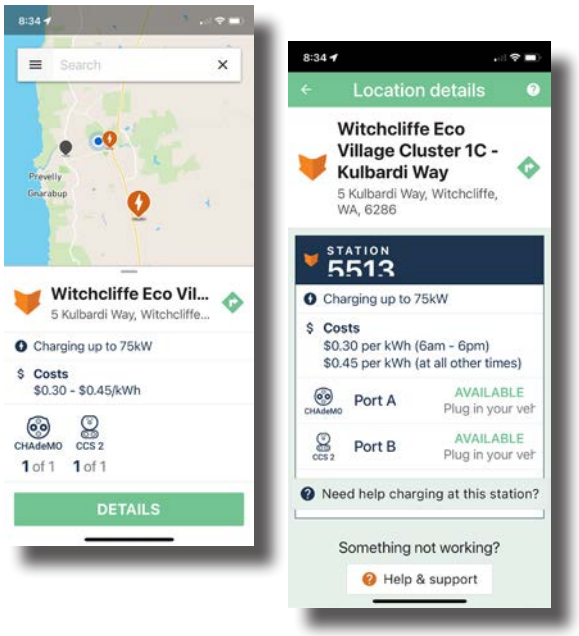
Our first EV Charger went live this week.

Congratulations to 1C for being our EV charger pioneers. I think you'll be pleasantly surprised to start generating income straight away.

We've set the charge rate at 30c/kWh during sunlight hours (6am-6pm) and 45c/kWh from 6pm to 6am, to encourage charging during sunlight hours. The RAC charger in Margaret River is 45c/kWh and Tesla is 71 c/kWh.

Part of making our EV chargers successful is making a few of them available as soon as possible, so that EV driving tourists that visit the area regularly will know they are here and can be relied upon. Consistency and reliability are the name of the game for EV chargers.

As such, the sooner they are on the Chargefox app the better.



Each of the Stage 1 clusters are exporting enough solar energy to run the chargers directly from solar and battery, so it's definitely worth getting all of these chargers turned on now. But, I'm sure 1C will be happy if 1A & 1B want to defer longer.

I think Stage 2 clusters should wait until we have got the approvals to turn on all of your solar and batteries, and then we can see how much solar we're exporting at that point and make a call on the timing to switch on your chargers.

Stage 3 are still a while off. As such we haven't installed your EV chargers yet, but with the amount of home approvals we've been doing over the past couple of months it hopefully won't be too far away.

Thermie Permies feel the heat

by Mike Hulme

We had a lot of fun doing the first survey of how well our homes are performing during Friday afternoon's 38C heat wave! We have an awesome team of volunteers, all but me with very scientific/ mathematic backgrounds! A big thank you to our Thermy Permies: Jason, Richard & Rashmi. Some of you may have wondered what those four crazy people were doing riding their bikes around the village for a couple of hours in the midst of a heat wave! Well, let me explain.

My FaceBook post earlier that week received a quick response from many Ecovillage residents volunteering their homes for internal and external temperature measurement. The purpose of the exercise in general is to confirm if our homes are providing comfortable 'passive' living spaces during peak heat periods, but will also enable us to learn about the pros and cons of different construction (wall) materials, glazing, insulation, slabs (insulated or not), internal thermal mass walls, and the benefits of fixtures & fittings like curtains and solar pergola's.

We established a set of measurements that we would assess at each home:

- the external wall temperature on the north and east side of the home (we'll add the west to our next survey);
- the internal 'ambient' temperature of the living room (which we measured from a glass of water which each of our residents had left on a table/chair in the middle of the living room for around 6hrs before we arrived);

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- the ceiling & floor/slab temp in the middle of the room; and
- the temperature on the inside of the northern and eastern walls, in same location that we measured the external wall temp.

The most important observation was how wonderful and happy our community of volunteers were – what an extraordinary community this is! On behalf of the Thermy Permies, I'd like to say a big thank you to Tim & Anne-Marie, Trish & Paul, Rio & Alix, Chloe & Dennis, Alex, Robin & Iris, Paul & Nic, Hannah & Peter, Pernille & Dorthe, Bob & Lindy, Elke, Carrie & Warwick, Catherine, Lyndal & Michael, Shane & Jane, Rashmi & Richard, Ruth, and Caro for opening/offering your beautiful homes to us to measure.

The second most important observation was how proud everyone was of their homes, and how happy they are with their home's performance/comfort, without any need for air conditioning during the heat waves. Most had curtains drawn and ceiling fans going, the two 'low CO2 emission' summer essentials.

We started off at the WEV office with two infrared thermometers, which after some effort we simply couldn't calibrate. After boiling the kettle, we decided to run with the cheaper of the two, a $30 Ozito from Bunnings, as it correctly measured the temp at 100C. However, during the course of the survey it started playing up. We presume it had a heat stroke (thankfully before any of us did). So we had to call it a day before getting to the four last homes.

As such, we can't rely on these figures with 100% confidence, so we won't be publishing them beyond our community. But we feel that they are accurate enough to share these initial findings within our Ecovillage community.

The following are the average (mean) temperatures of the homes we surveyed:

External wall North 41.7C

External wall East 37.7C

Internal Wall North 24.3C

Internal Wall East 24.6C

Ceiling 24.7C

Floor/slab 22.3C

Room Temp 23.7C

Experts say that a very well designed and built solar passive home should have an internal air temperature of between 18C - 24C year round. Only three homes measured slightly above this range (none above 25.6C), two of which were homes with young kids that were regularly opening living room doors to get outside - there's not much one can do about that! As you can see above, our mean internal temp was 23.7C, which is outstanding on a 38C day after a week of very hot weather. The only home that was above 24C that didn't have kids appeared to have some missing insulation batts in the ceiling as we could see sections of the ceiling that were much warmer than others. I've discussed this with the owner and I am going to inspect inside her roof this weekend to confirm. Sometimes a slack tradesman will move batts around to access the ceiling and forget to put them back in place.

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A few observations that we have made:

The three most important factors associated with external wall temp were colour, thermal mass and shading. However, colour appears to have a much greater impact than anticipated, possibly equivalent to mass and shading. Hardie boards painted white (which are made from recycled concrete and cardboard) which is about the most affordable wall construction option available, were hard to beat for external temperature.

The coolest home inside was Tim & Ann Marie's strawbale home at 22C, which didn't surprise me as it's also hard to beat the level of insulation provided by the thick strawbale walls. However, this home also had the hottest external wall temperature of 57.3C due to the 50mm thick render (even with beautiful shading verandahs all around). The next coolest was Robin & Iris's timber framed home (22.3C) with white Hardie Board, soaring ceilings and meticulously installed insulation (owner built by a builder), followed very close behind at 23C was Rio & Alix's timber framed home with very light coloured Hardie boards (owner helped builder and confirmed rigorous attention to detail when installing the insulation) and Warrick & Carrie's Hempcrete 'Settler.' A range of other timber framed and hempcrete homes were hot on their heels behind these two with most homes sitting between 23-24C.

It's worth noting at this point that these results are even better than they look as they are all going to improve substantially as our gardens and deciduous shade trees grow, along with our household savings, so we can all eventually afford good quality block-out blinds and summer-shading pergolas, as our windows are our greatest thermal leaks.

I've been a bit reluctant to post these results as it's not a competition. It's about learning what we can from the awesome example we're all setting together, and I know you're all keen to learn from these results. It's also important to remember that these results won't be in the same order in the middle of winter, which from an energy perspective is probably more important than summer performance. I expect Strawbale and Hempcrete may be hard to beat in winter due to their combination of excellent insulation and thermal mass, but I also expect that the majority of our homes will sit around 18C in the midst of the coldest weeks in winter, which is very comfortable living indeed.

I had to say that it was hard to return home to our stinking hot house in Margaret River after inspecting all of these beautiful cool houses. Our home was owner built by a builder, predominantly out of beautiful dressed jarrah, but with almost zero insulation – not unusual in Australia unfortunately.

That evening I went for a swim in the dam after leaving the office at 6pm and Shelle and I sat on our Ecovillage lot for a picnic dinner and a couple of glasses of our 2018 Foxcliffe (Ecovillage) Cabernet. It was the first bottle of the 2018 that we've opened since it was bottled in 2019 – it was magnificent, as was Shelle's home-made take away dinner! We sat under the extraordinary view of the Milky Way, which shines so bright for all of us in the Ecovillage (due to the fight we won with the Shire engineer who wanted street lights throughout) and we both had to pinch ourselves that we're finally here, sharing our dream of a sustainable life with an extraordinary group of people that all want to walk their talk and show the world how sustainable our human settlements can be. We've just got to build our home now 😫.

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Water Use across the Ecovillage

by Mike Hulme

Alex Jolly (1B resident and surveyor) and I have been keeping a close eye on dam water consumption across the village over the past four months, particularly as it's been a warmer and drier spring and summer than average; the driest in 35yrs, apparently!

As we haven't had to use much water in Stages 4, 5 and the Ag Lots yet, we haven't been very concerned about how much water the clusters, avocadoes and vineyard have been using. However, from the meter data at hand, I now feel it's time to provide a brief report on what we're using across the Ecovillage and where we need to start becoming more efficient. This will need to be our last summer of using our dam water inefficiently.

Alex has now surveyed the current dam levels so we can confirm the exact level drop in each dam (see table 1 below), which also enables us to calculate the amount of water used since the dams stopped overflowing in October. Assuming a 3:1 fall around the surface of the dams (will be close enough) we can make some reasonably accurate estimates of how much water we have used in total since October. Then subtracting the total amount of water we have pumped from October 1 to January 31, we get an estimated level lost to evaporation. This is helpful, and by comparing with the evaporation of the middle dam we can compare to the average annual evaporation in our region (BOM).

Our three dams all started overflowing in June/July last year and stopped overflowing earlier than usual, in October, due to it being such a dry spring. I've provided a breakdown of the dam data below.

Dam	Volume	Surface Area	Level Drop	Level Volume Loss	Irrigation	Evaporation	Evaporation
	KL	m2	1/10/23-10/2/24	1/10/23-10/2/24	KL	Oct - Jan (KL)	mm
			mm	KL		690	
Northern	100,000	29,473	840	33,951	13,615	20,336	503
Central	50,000	22,749	690	15,280		15,280	690
Southern	100,000	30,257	1,100	31,262	10,385	20,877	735
Total	**250,000**	**82,479**		**80,494**	**24,000**	**56,494**	
% of Total				32.2%	9.6%	22.6%	

Our central dam, which holds around (50ML) isn't being used at all, and as it's our conservation dam we don't intend to take water from it unless necessary. Therefore, we know that this gives us a correct evaporation value from October 1 to January 31 of 690mm. This sounds right as the 25yr BOM estimate in our region for Oct-Jan is 630mm, and this summer has been warmer than usual.

The dams are holding up extremely well, and we can see that the northern dam is actually making some water (approx. 170mm over past four months) during spring and summer, from ground seepage.

As we're unlikely to use much water from June to the end of September, our water budgets are based on 200 days of water use, and 165 days of rainwater recharge. Whilst this sounds like we're using more water than we're recharging, 200:165,

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we're re-charging from the whole catchment of each dam (range from 30-40Ha each). To give you some idea of each catchment's capacity, we built a V-notch weir in the southern spring-fed creek that runs into the southern dam around 10yrs ago, to accurately measure the volume of water flowing into the dam via the creek over the peak of the winter months (July & August). The measured flow rates fluctuated between 2 to 4 million litres a day! So even if we have used 80% of each dam through evaporation and irrigation over 200 days from Oct – May, they can recharge within a month once the water starts running.

Having outlined this abundance, which was one of the reasons I knew this was such a great location for our Ecovillage, it's very important that we all learn to conserve and greatly respect our beautiful fresh water resources as we're going to be using a lot more when the whole village os built and thriving.

All three dams have low flow by-pass pipes up-stream of each dam, to ensure the creeks downstream get fed from early and late flows. The central dam, which was already here when we purchased the two farms that we've built the Ecovillage on, has a pond to its west that feeds the by-pass pipe which runs through the dam and under the future amphitheatre to just inside the neighbour's boundary. The northern and southern dams that we built both have by-pass ponds with 100mm pipe that runs around the outside of the dams and into the creeks behind each dam. Much to my surprise the by-pass pond on the northern dam has remained full through the last two summers. As such the reeds that we planted around its edge have taken off and it's become a wonderful natural environment. It's now home to a pair of purple swamp hens (mulal) that have nested there and are managing the reed growth in an extraordinary manner (a future newsletter article)! They say that frogs and swamp hens moving into a wetland are a sign of a very healthy environment.

As the Ecovillage is located at the top of the catchment, each of our dams are fed by on-site catchments, except the central dam, which catchment extends slightly west into the eastern side of the Witchcliffe town centre (east side of Bussell Hwy). As such, we are able to completely manage nutrients that flow into northern and southern dams, and the vast majority that flows into the central dam. The beautiful trees between Shervington Avenue and our oval do an excellent job of stripping nutrients that could come from the town centre.

To maintain the health and water quality in each of our magnificent dams, it's essential that we ensure absolutely minimal nutrient runoff, in particular, nitrogen (N), potassium (K), and phosphorus (P), that can flow from our gardens and EUA's into the creeks that run through each cluster.

1C, 1B & 4A flow into the central dam, as does the commercial zone and Village Square. 2A, 2B, 3A & 3B run into the northern Stingray dam, and 4B, 5A, 5B, and the southern creek run into the southern dam.

Mark Tupman ran a series of fertiliser trials in the community garden at our old office, which proved that good soil management, using nothing but nitrogen-fixing green manure crops, readily available organic matter and good compost to drive healthy delivery of nutrition to the vegetables, were better

than those that had been fertilised with manure and organic liquid NPK. We all need to get proficient with how to build healthy life-giving soil that stores available nutrients for plants to use as required, instead of simply adding manures and fertilisers that will leach out of our gardens and into the dams. Otherwise, we'll end up with dams and cluster swales filled with green algae!

Mark is running a series of courses on site this autumn, so I hope to see all of our new residents (anyone that hasn't already done these courses before) attending, if possible. (See garden article attached.)

Water Budgets

As you're aware we set an average annual dam water budget of 3ML for each cluster, which was based on the amount of water needed to grow our EUA food crops and common gardens. The average cluster has 22 lots = 136,363 litres/lot. Based on this the table below confirms the volume of water each cluster, Ag lot, and POS area receives in return for their annual contribution to Ecovillage Commons (ECL).

Table 2. Ecovillage Water Budget

Ecovillage Water Budget	Dams	ML/Lot	No. Lots	Budget ML	1/10/23-31/1/24
Resi Clusters (Average)		3	11	33	12.14
Sub Total - Ag lots 1-12		3	12	36	0.48
Ag Lot 13		4	1	4	0.03
Sub Total - Vineyard		6	1	6	5.40
Sub Total - Fire Tanks		0	4	0	0.01
Sub Total - POS		6	1	6	4.70
Sub Total - Avacado Trees		0	1	0	2.30
Evaporation		0	3	93	56
Total ML	250			178	81.32

Table 3. Water Budget by Cluster/Area

Type	Lots	Water Allowance	Volume	ECL	ECL
Resi Clusters		ML/Lot	ML	Water Cost $0.50/KL	Membership $100.00/Lot
1A	24.00	0.136	3.26	$ 1,630.00	$ 2,400.00
1B	21.00	0.136	2.85	$ 1,425.00	$ 2,100.00
1C	19.00	0.136	2.58	$ 1,290.00	$ 1,900.00
2A	23.00	0.136	3.12	$ 1,560.00	$ 2,300.00
2B	22.00	0.136	3.00	$ 1,500.00	$ 2,200.00
3A	27.00	0.136	3.66	$ 1,830.00	$ 2,700.00
3B	19.00	0.136	2.58	$ 1,290.00	$ 1,900.00
4A	26.00	0.136	3.53	$ 1,765.00	$ 2,600.00
4B	20.00	0.136	2.71	$ 1,355.00	$ 2,000.00
5A	22.00	0.136	3.00	$ 1,500.00	$ 2,200.00
5B	20.00	0.136	2.71	$ 1,355.00	$ 2,000.00
Subtotal	243.00	136KL/Lot	33.00	$ 16,500.00	$ 24,300.00
Average	22	0.136	3.00	$ 1,500.00	$ 2,200.00
Ag lots 1Ha	12.00	3.00	36.00	$ 18,000.00	$ 1,200.00
Ag lot 3Ha	1.00	4.00	4.00	$ 2,000.00	$ 100.00
Vineyard 8Ha	1.00	6.00	6.00	$ 3,000.00	$ 100.00
POS	1.00	6.00	6.00	$ 3,000.00	$ 3,000.00
Avocado	1.00	0.00	0.00		
Subtotal	16.00		52.00	$ 26,000.00	$ 4,400.00
Total	259.00		85.00	$ 42,500.00	$ 28,700.00
Total Income					$ 71,200.00

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Current Water Use

I have used anticipate evaporation rates (BOM) to calculate how much water we will use from February to May.

We don't expect all of the Ag lots to use their 3.0 ML allowance (e.g., our goat paddock, lot 12, when fully planted out probably won't use more than half its allowance) and the Ag lots can't trade water, so I expect an Ag lot surplus here each year. The public open space (POS), which was handed over to the Shire in early January is currently using too much water. I have spoken to their manager of POS about this and they are going to start reducing water from next season.

I haven't been concerned about the extra water that some clusters have been using over budget as we currently have considerable surplus due to Stages 4 & 5 and the Ag lots not using much water yet. It's also been good to use some extra water to get the tree roots established in each cluster. However, as we can see from these figures, it's time for some clusters to start conserving water from next Spring. Things like sprinklers in EUA's need to be ruled out now. All EUA's and common gardens (except lawn) need to be watered via drippers. As per all cluster bylaws, strictly no dam water is to be used within private residential lots. The use of dam water on private lots could lead to the whole cluster not receiving water from the ECL, as it is a strict requirement of our planning negotiations with the Shire & DWER that non-potable dam water is not supplied to privately owned residential lots, only

Table 4: Current water consumption by Cluster/Area

Type	Lots	Water Allowance	Annual Budget	Period	Projected	Estimated Total	Difference
Resi Clusters		ML/Lot	ML	1/10/23 - 31/1/24	1/2/24 - 31/5/24		Budget-Projected
1A	24.00	0.136	3.26	1.51	1.07	2.58	0.68
1B	21.00	0.136	2.85	2.01	1.43	3.44	-0.59
1C	19.00	0.136	2.58	1.91	1.36	3.27	-0.69
2A	23.00	0.136	3.12	1.45	1.03	2.48	0.64
2B	22.00	0.136	3.00	1.54	1.09	2.63	0.37
3A	27.00	0.136	3.66	2.10	1.49	3.59	0.07
3B	19.00	0.136	2.58	0.99	0.70	1.69	0.89
4A	26.00	0.136	3.53	0.35	0.25	0.60	2.93
4B	20.00	0.136	2.71	0.26	0.18	0.44	2.27
5A	22.00	0.136	3.00	0.02	0.01	0.03	2.97
5B	20.00	0.136	2.71	0.00	0.00	0.00	2.71
Subtotal	**243.00**		**33.00**	**12.14**	**8.62**	**20.74**	**12.26**
Average	**22**	**136KL/Lot**	**3.00**	**1.10**	**0.78**	**1.89**	**1.11**
Ag lots 1Ha	12.00	3.00	36.00	0.48	0.34	0.82	35.18
Ag lot 3Ha	1.00	4.00	4.00	0.03	0.02	0.05	3.95
Vineyard 8Ha	1.00	6.00	6.00	5.40	0.60	6.00	0.00
POS	1.00	6.00	6.00	4.70	3.34	8.04	-2.04
Avocado	1.00	0.00	0.00	2.30	1.63	3.93	-3.93
Evaporation	3.00		93.00	56.00	41.00	97.00	-4.00
Subtotal	**19.00**		**145.00**	**68.91**	**46.93**	**116.02**	**29.16**
Total	**259.00**		**178.00**	**81.05**	**55.53**	**136.58**	**41.42**

strata common property, Ag lots and POS.

Our water budgets, set at 136KL per lot provide a very generous amount of water for the size of our community gardens, if used efficiently. Well mulched common garden beds and street trees shouldn't need to be watered more than once a week between October to December, then twice a week from January to February, then back to once a week from March to May. We will hardly use any water from June to September when the dams are overflowing.

This year we have spent considerable funds on re-doing all of the irrigation in the Vineyard, converting the old irrigation pipe to new 19mm poly throughout, with a single 8Lt/Hr dripper on each vine. This has halved the water use at the same time as providing a much more direct water to vine outcome whilst also encouraging deeper root growth. Whilst the vineyard is 8Ha, we only water the vines from November to February, and the old Cabernet vines are only watered during January.

The avocado orchard has also had a major irrigation retrofit to get more water directly to each tree, and I'm sure you've all noticed the huge difference in tree growth since completed. This season around half of the water provided to the avo trees has come from recycled waste water, around 30% from the waste water dam, and 20% from our dams. This will be the last season that we need to supply our dam water to the avocados.

I hope this gives you all a good understanding of how our water budgets work and how we're going at present. And remember, the more water we conserve, the more water we have to swim in!

Gardening workshops

by Mark Tupman

Without a doubt, autumn is the best time of year to take your vegetable garden to the next level. The weather is fine and there's rain on the way, making for fine growing conditions. The planting we do over the next couple of months not only provides us with a bountiful and extended harvest, but also builds that all important organic matter, feeds microbial life, and protects our soil in the harsher winter weather.

To help you get growing this season, Mark Tupman from Productive Ecology will be running a series of gardening workshops at WEV.

Much experience and research has been called upon and collated in the development of these highly informative and practical workshops, along with facts and figures gathered from the Ecovillage site over the last three years. They are designed to give residents the grounding to get their gardens thriving. If you haven't had the chance to attend them previously or would just like a refresher, come along.

- **Planning and Preparing for the the Autumn Planting Frenzy – at Ag Lot 1**
  Sunday 17th March (9:00 - 10:30am)
- **Growing Organic – at WEV Community Centre**
  Saturday 6th April (3:00 - 4:30pm)
- **Patch From Scratch – at WEV Community Centre**
  Sunday 7th April (9:00 - 10:30am)
- **DIY Composting & Wormfarm Systems – at Ag Lot 1**
  Sunday 19th May (9:00 -10:30am)

St John's Defibrillator now located at WEV Community Centre

by Michelle Sheridan

St John's Ambulance have kindly installed a public defibrillator unit undercover on the eastern wall of the WEV Community Centre. This is now available to anyone in the vicinity experiencing a medical emergency requiring a defibrillator. Many thanks to St John's for providing this valuable infrastructure. We hope no-one ever needs it, but we are very glad that it's there!

In any emergency situation, you must first call 000 and request assistance. If a defibrillator is required in your situation, you will be given the location of the nearest registered defibrillator and a code to open the unit.

https://www.healthdirect.gov.au/calling-triple-zero

You can also download the HealthDirect or Emergency Plus apps to your Smartphone and call 000 directly from the app, which can then provide your accurate location to emergency services.

https://www.healthdirect.gov.au/health-app

https://www.emergencyplus.com.au

If you have a current First Aid certificate and the confidence to put it to action, you may like to register with St John's as a First Responder. You can register here:

https://stjohnwa.com.au/online-resources/st-john-first-responder-app

Composite Stone - Use as a material now prohibited at the Ecovillage

by Clare Hamilton

There has been recent investigation by Safe Work into the risk of silicosis to workers from composite stone benchtops, and the safety of continued use due to the risks in its manufacture and processing. Silicosis is a horrible disease of the lungs that causes scarring that can't be reversed and often progresses to permanent disability and death. Exposure to silica dust can also cause other serious diseases.

Our Building Design Guidelines at section 7.6 already included the requirement to ensure installation of composite stone benchtops adhere to all safety standards for workers' lung health. However, as Safe Work Australia has now secured the Australian Governments' agreement to impose a total ban on engineered stone from July 1 2024, we will not be supporting its use in the Ecovillage from here on. Our internal ban is simply bringing the national ban date forward by a few months to protect local tradespersons and workers in the supply chain of Ecovillage materials.

As such, prohibition of use of composite stone benchtops in the Ecovillage has now been included in section 7.6 of the BDGs and listed in the associated checklist (Appendix J Building Design Guidelines Checklist) that requires to be submitted

during formal design assessment. Our specifications summary template (Appendix N) also requires that benchtop materials are listed. We have updated all of these documents which are now available to downloaded from the WEV website under 'Document Library'.

We are highlighting this now to ensure you are aware when choosing materials as we will be assessing this in our design reviews and prohibiting use of composite stone going forward.

For any designs already submitted, but not yet approved, we will flag this should we find composite stone is proposed. An alternative material will require to be specified to receive formal approval.

For your information please visit Safe Work Australia's fact sheet: at https://www.safeworkaustralia.gov.au/safety-topic/hazards/crystalline-silica-and-silicosis

WEV team changes

by Mike Hulme and Michelle Sheridan

Just as the Ecovillage project has developed and grown over the years, the WEV team has evolved as we have moved through the various stages of such a complex project: planning, engineering, architecture, construction, landscaping, marketing, sales, community liaison and consolidation.

We are now moving into a phase where we are focused on the landscaping and sales of the final stages, and development and sales of the commercial and Village Centre areas of the Ecovillage, while continuing to manage the implementation of the renewable energy systems, manage ECL land, and liaise with and assist lot owners with their building approvals.

This inevitably leads to some changing faces on the team, and we also have had some long-term team members moving on to branch out and further their careers in more independent directions.

Whilst this was always inevitable, and we are sad to see them go, we wish them all very well for the future. As some of them remain Ecovillage residents, they are no doubt going to continue be involved in the Ecovillage in different ways as time goes on as our valued neighbours and friends.

Whilst Jeff has only been doing up to 10hrs a week over the past couple of years, he has now moved on to re-establish his own town planning consultancy business, which he will eventually be running from home in the Ecovillage.

Jeff Thierfelder worked closely with Michelle and I whilst developing our design guidelines and managing our unique design approval process which ensures that all Ecovillage homes are sustainable, energy-efficient and in keeping with the Ecovillage's natural material palette and rural village character. In his planning capacity, he managed our many Local Development Plans, the Village Centre parking plan and Commercial Design Guidelines, liaised with the Shire and Dept of Planning, and managed a successful amendment to our structure plan for 3E & 4E. He's been a great guy to work with and while we miss him at the office, it's great to know he's going to be working from the Ecovillage in due course, and bringing his focus on sustainable design and what he's learnt from the Ecovillage to new projects with future clients.

BULLETIN #12

Chad Elton is a landscape architect who has been managing the design and implementation of the gardens throughout the Ecovillage, but he has also been my saving grace throughout the construction of Stages 4 & 5, due to his extensive project management experience and skills. Chad has wound back to one day a week now that we have completed civils in Stages 4 & 5 and the handover of the Public Open Space to the Shire, and move on to complete the landscaping of Stages 4 & 5.

Jo Thierfelder handing over to Clara Fischer

Jo Thierfelder you will all know as our communications manager and sales rep, who has been working 4 days a week with us since before we started construction of Stage 1 in January 2020. Whilst the past few years have been very tough for all of us, Jo also had to cope with the massive stress associated with a family member's illness and a build that has been way harder than it should have been, to say the least. However, she just kept showing up each day with her unbridled enthusiasm and commitment to the project intact. Jo is also responsible for our beautiful and informative website and film which have been our most important marketing tools over the last few years. We'll really miss her enthusiasm and her skill at generating fantastic Ecovillage promotion material, whether in print, digital, or social media articles and interviews, but we also understand that it's time for a change. We wish her all the very best with her new endeavours with helping the Lower Blackwood Catchment LCDC (https://lowerblackwood.com.au/) with their marketing and events management, and her plans to work in real estate sales in the region.

We also have some wonderful new team members to welcome onboard.

Witchcliffe local, **Michelle Homer**, has joined Karen Millar in managing our admin desk. Michelle is an avid gardener with a beautiful land holding down the road, and brings many years of experience in Admin management in the legal and property industry.

Michelle Homer

Another Witchcliffe/ Forest Grove local, **June Cunningham**, has joined our team part-time as our new book-keeper. June did book-keeping work for us many years ago and was always very thorough and great to work with, so we're very happy to have her back!

With Jo moving on, we've decided to bring a full-time marketing professional on board, as we feel like it's time that we start doing some different marketing to sell the remaining developer and Village Homes lots. We advertised via SEEK and were thrilled to find **Clara Fischer** who has only been living in Margaret River with her boyfriend for a couple of months. Within a week of our second interview, Clara has started doing four days a week for us and has now rented a beautiful new groupie in cluster 2B!

Clara brings many years of marketing and events management to our office, which is perfect timing for our upcoming Sustainable House Day event.

Having the WEV office at the Community Centre is the most important component of selling the remaining residential lots, as most people have come to us through word of mouth, hearing about the Ecovillage from family or friends, from our website, or just driving by and seeing the project and dropping into our office to find out more.

As such we have a wonderful community of people that genuinely want to live in a highly sustainable home and neighbourhood with the infrastructure required to encourage and build community participation. We feel that this is a big part of our community's success; we're all people that want to live sustainably but are also prepared to put the effort into building a community and wonderful lifestyle together.

Whilst we've never spent much money on marketing, the little we've done has never garnered much interest through traditional real estate marketing avenues, so we feel that we now need to move into a range of new marketing initiatives to sell the remaining short stay and commercial lots, as these will require more of an investor oriented focus.

Michelle and I are both excited about this next stage and both feel like it's the right time for me to step back into sales as we've finally been getting on top of the mountain of work associated with all of the approvals, documentation, completing civils, the majority of landscaping, contracts, the wastewater treatment plant, dam and irrigation zones, solar and battery approvals, etc, etc!

As you all know, we're both so passionate about the Ecovillage, and whilst Michelle has been actively helping buyers select the right lot whilst managing all sales contracts, I haven't been doing any sales since Stage 1. However, as you also know, there's nothing I enjoy more than talking about the Ecovillage, its incredible infrastructure and community. I'm looking forward to doing this with Clara supporting Shelle and I with a complete focus on marketing, so we can focus on selling our remaining lots. We are so keen to complete all of the sales, and building our home, so we can retire to the Ecovillage life we have been dreaming about together for nearly 30yrs! So expect to see me out and about with prospective new buyers in the near future.

And lastly, not someone leaving the team, but instead leaving the country whilst staying on the team!

Clare Hamilton, who many of you have dealt with as the manager of our BDG approval process, is heading home to Scotland for a few months, but will continue to manage the approval process for us remotely. We do not anticipate that this will have any impact on her streamlined approach and excellent assessment timeframes, however, we will have to accept that she is no longer working in our time zone, so any zoom meetings arranged will have to take place between 3pm and 5pm WST.

Clare's email (clare@ecovillage.net.au) and Tuesday to Friday working days will remain the same and she can schedule meetings via zoom, but she will no longer be able to answer phone enquiries.

BULLETIN #12

Winter is coming!

by Mike Hulme

A couple of old farmers have told me of late that they expect decent rainfall this winter due to it being such a dry summer. They've told me that very dry summers are often followed by wetter than usual winters. This is consistent with BOM's recent advice that El Niño appears to be changing back to La Niña again, which is generally associated with wetter than usual winters.

As such, it's time for our clusters in Stages 1-3 to get prepared by making sure that your storm water drainage swales are free of any blockages, particularly where they enter pits and pipes that transport storm water under roads to adjacent clusters or dams.

At your home, make sure you're stormwater flow paths are clear and ready to transport stormwater to the adjoining swale, road or through your EUA to your community garden swale. If you're uncertain about this, remember that all of the recommended inter-lot stormwater drainage paths (shallow surface drains that can hand dug after building the home) plans, that were advised to install after home construction, were handed to your strata council at handover of the strata.

Clean your gutters and your water tank filter basket (where your downpipes enter your rainwater tank). Open the screw cap (usually around 100mm) at the bottom of where your downpipes run up the side of your water tank and leave this cap off so the first rain events flush the dust and dirt that has accumulated on your roof and gutters out to your storm water flow paths. Once the first decent rainfall event is finished you need to screw this cap back on so you're ready to start collecting clean rainwater in your tank.