

**The Shared Space Summit - 2020**  
**Ethan Burns: Sustainable Apartment Living Made Easy**  
**Publication Date: 16 September 2020**

Watch the video [here](#).

**Amanda Farmer:** Hello and welcome to this Summit Session. I'm Amanda Farmer, the founder of Your Strata Property and your Summit Host.

In this session, I'm bringing you Ethan Burns. Ethan is an Environmental Engineer and Director of Sustainability Now. He's sharing the practical steps for getting started with an energy efficiency project in your building. Now this Summit is all about shifting your perspective, finding new ways to tackle difficult problems. The climate emergency, as Ethan says, is certainly one of those problems.

The Summit is also about action. How can we put these great lessons to work in our communities? Right after the interview, I'll be back to share with you my own Summit Shift. One key takeaway that I have for you from this interview that I'm going to start implementing in my own community.

I'll also let you know how you can get your hands on the Summit Souvenir Playbook, giving you the action steps that you can take in your communities to implement precisely what our Summit guests are sharing in their interviews.

Right now, let's head on over to my chat with Ethan Burns.

Ethan Burns, welcome.

**Ethan Burns:** Thanks for having me.

**Amanda Farmer:** It is my pleasure to have you here with us at The Shared Space Summit, Ethan.

You have been helping residential strata buildings implement practical energy and water efficiency solutions for over 10 years, I think. I am sure that you have seen lots of change in your time, and at the moment our strata communities are facing a lot of new challenges. Is now the right time for our communities to be looking into a sustainability project of some sort?

**Ethan Burns:** Amanda, I think any time is the right time to be looking at this, and there's no time like now, as they say. Everyone will have heard that government entities all around the world, from local governments all the way through to national governments, have been declaring climate emergencies. I think COVID-19's probably taken a little bit of the wind out of that, but it's still there and we still need to act and do something about it.

With energy and water efficiencies, there's something for everyone there. If you're not behind the climate movement, then more than likely you will be behind the financial savings movement. The good thing is that energy and water efficiency are directly linked to financial savings. Save a ton of carbon and save a bucket load of money as well at the same time, and the same with water.

Australia's not getting any wetter either. We have little spikes in our dam levels and that sort of thing going up and down, but the trend seems to be downward. Water efficiency is also important, and again, directly financially linked. There's some buildings out there that actually spend more on water than they do on electricity and gas in terms of common property. There's lots to be done.

**Amanda Farmer:** Yes. We're definitely going to talk about some hard numbers there with the financial savings to be made.

Ethan, are you concerned about this distraction, perhaps that COVID is, when it comes to the climate emergency? I was reading in the paper recently, doing some research about the impact of waste and rubbish in our apartment buildings. It's just staggering what people are reporting about the increased waste in our homes, because people are not in their offices, everybody's at home, and the impact that's having on the environment. That's a direct COVID effect, if you like. I'm sure there's many others. Seems a worry to me, is it to you?

**Ethan Burns:** Oh, for sure. We're living in an ever-more disposable society. There's a few people skirting around the edges of

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circular economies where we try to deal with our waste before it becomes a problem and minimise it, and reduce, reuse before we recycle and dispose of it. It seems like a ... I think maybe COVID has had an effect of online shopping, people buying more bits and pieces and that sort of thing at home.

**Amanda Farmer:** And take away food containers.

**Ethan Burns:** That's it. The quality of general goods and services, and goods just seems to be lower these days and it doesn't last as long. It gets thrown away and ends up in landfills. Yes, it's a real concern.

**Amanda Farmer:** Assuming we have at least some of our viewers on board here who are convinced that this is something they need to be paying attention to, what do you say is the first step that a strata community can take or should be taking once they've decided they want to implement some of these efficiencies in their building?

**Ethan Burns:** Sure.

Well look, I think you really need to establish some sort of baseline of what sort of resource consumption you're using at the moment, so your energy and water are my key focuses. There's an old saying, you can't manage what you can't measure. Start measuring as soon as you can.

This can be as simple as just creating a spreadsheet using Google Docs, or Microsoft Excel, or something like that, and just inputting your energy and water consumption from your bills as you get them. Someone really should be keeping an eye, not just the managing agent, but someone who's actually got some control over what happens at the building should be keeping an eye on those utility bills. Not just the dollars, but also the actual kilowatt hours of electricity, megajoules of gas, and kiloliters of water.

So keeping track of those. It can be as simple as a spreadsheet, and just looking at what's happening month to month, quarter to quarter, year to year, and just seeing what's happening there. That's the simplest thing you can do, and identifying any deviation from those trends to start with.

Also, the retailers have got some great free online portals now where you can log in and you can actually download and create graphs, download your bills, look at all kinds of information. A lot of that stuff is totally free. Talk to your retailer about that, find out what's available. Then you can actually, a lot of the time, depending on how long you've been with that retailer for, but you can go back as far as 2 years and look at some historic data on that sort of thing.

That's the first thing I do is, an energy consultant is actually look at what's happened, what's what's happening, and what's been happening in the last year, year to two years? That will give me a good idea of what the savings might be going forward, what the opportunities are. That'd be the first thing I'd say to do.

You can also seek out case studies. There's no need to reinvent the wheel on a lot of this stuff. It's all been done before. Most of it's been done before, and there's some great case studies out there. So take advantage of those.

There's a few key low hanging fruit that just keep coming back time and time again. These are the things that you can easily look at and implement yourself. One would be if you've got 24-hour fluorescent lighting that's operating in car parks and fire stairs, upgrading that to a modern LED lighting system with integrated sensors, so that the lights aren't using as much electricity when no one's around. Those sort of things are just ... I've been doing those projects for 10 years now. The technology's not new anymore. It's been in place for a long time. It's proven. There's no need to have any fear of it.

**Amanda Farmer:** Is that expensive, the lighting upgrade?

**Ethan Burns:** No. Actually, a building that I'm looking at right now in Zetland in Sydney, they're looking at spending about \$50,000 on a ... It's a big building of 600-odd apartments, something like that, a big complex. They're looking at spending in the order of about \$50,000 to upgrade their carpark and fire stair lighting to LED with sensors. But that will yield savings of \$70,000 per annum

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in electricity. Then probably another 20 in maintenance savings as well. That project's going to pay for itself in less than 6 months. Even though they're having to fork out a bit of capital up front, they'll have that back in no time at all.

There's a few key projects out there that will deliver those sort of returns. They're the ones to focus on in the first instance.

**Amanda Farmer:** Okay.

You mentioned there case studies, Ethan. I know you've got a few of those on your website and we'll make sure that our viewers have the link to that so they can go and check them out. One that jumped out to me when I was having a look was a Chatswood building where they saved \$95,000 in one year on their electricity bill. Was that lighting as well?

**Ethan Burns:** Yes. That was a big lighting project. That was a perfect example of all the low hanging fruit, that building. It was in the realms of, I can't remember exactly how old, but 20 years old, that sort of thing, and not much had really changed in that time. It was just business as usual for that whole time. There were some excellent opportunities to upgrade there.

In that case, all the car park and fire stair fluorescent lighting was replaced with LEDs, incorporating integrated sensors. When no one is around, they just dim down to about 20% of full power. The space has never dark. People don't need to worry about falling over or anything like that. You can always see what's going on. But the lights only come up to full power when someone comes within 10 metres of the light, or a car, or a person, that sort of thing. It was a great opportunity. They saved lots and lots of electricity on that particular project.

But they also had a car park ventilation system that was running most of the day on a timer. Essentially the fans were just huge fans, I think in the order of 75 kilowatts. There might've been two fans of that size. They were massive. These things were just running at full speed most of the day. The Australian standards say that you don't really need to run those fans all the time, if you can monitor air quality. All we did there was installed some carbon monoxide sensors throughout the car park and use those to control the fans with variable speed drives as well. When a high level of carbon monoxide is detected, it tells the fan, "Okay, it's time to turn on now." And it doesn't do it at full speed. It does it at a slower speed to start with, which uses a lot less electricity, and then ramps it up slowly as necessary to clear the air and then turns it off again. Again, if you've got car park ventilation fans that are running via timer, or even 24 hours a day in some cases, then this sort of project will save you plenty of electricity.

The third key project there was that this building had a condenser water plant, which is quite common, I suppose, in a lot of buildings. Essentially, the air conditioning units inside apartments are water-cooled rather than air cooled, like you might see a split system air conditioning unit. In order to be installed inside an apartment where there's no access, no closed access to outdoor areas to air cool an air conditioning system, there's a big pipework loop through the building that carries water to each apartment and actually takes the heat away from those air conditioning units. It takes it up to a cooling tower on the roof and expels it to the air that way. These plants are notoriously inefficient, because most of the time, the pumps that run the water loop run 24 hours a day, seven days a week, 365 days a year at full speed. Even in the middle of winter, when there's no actual demand for cooling from those air conditioning units, the pumps are still running flat out all the time. Again, a fairly simple project of installing a controller and a variable speed drive to control those pumps, slow them down when there's little demand for cooling and just adjust them based on demand, essentially.

Massive savings there again. Yes, in total, about 95 grand a year savings on that, which I think paid for itself, I'd have to actually check the numbers, but it wasn't a 10 year payback period or anything like that. It was a couple of years.

**Amanda Farmer:** Yes. I can imagine.

Now, I'm hearing all of these retrofitting, I suppose I would call it with my lay-person hat on, that is going on in these buildings. Are you across what's happening in new buildings now, Ethan? Are developer's getting attuned to these issues and are they preventing the problems before they arise?

**Ethan Burns:** Certainly some are. But a lot of this stuff is best practice rather than business as usual for new builds. There's still

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certain, the Building Code of Australia, and the National Construction Codes, that sort of thing, that have minimum requirements, and certainly all developers need to meet those minimum requirements. But the problem is that those minimum requirements could be better. Typically speaking, I think it's probably fair to say that most developers put in the cheapest available technology that will meet the minimum requirements. If they don't have an ongoing interest in paying for the utility cost going forward, then it's a simple financial equation for them.

But there certainly are some developers out there who are thinking about these sorts of things. Definitely for example, with carpark ventilation systems, you probably wouldn't find too many buildings that have a ventilation system installed that isn't controlled by carbon monoxide sensors now, in a new build. That sort of thing is happening. A lot of the new lighting that's going into buildings is LED from the outset as well, which is good. But it may not be sensor controlled. It may still be 24 hours. But yes, certainly things are improving I guess, and they have improved over the last 10 years or so. There's always room for improvement.

**Amanda Farmer:** Exactly.

I'd like to think as the market, the consumer, becomes more educated about these issues, understands not just the climate emergency that we're facing, but the financial savings there are down the track if they are to purchase in a building that has these efficiencies already in place, then they'll be voting with their feet. Those are the apartments that are going to get the better return there for the developers, and hopefully that filters through to better decision making.

**Ethan Burns:** Yes.

I think that's probably not a bad time to segue into NABERS for apartment buildings.

**Amanda Farmer:** Yes, go for it.

**Ethan Burns:** NABERS has been around for more than 20 years, and it's an acronym: Stands for National Australian Built Environment Rating System. It's been available for commercial office space for more than 20 years now. It's been mandatory to disclose a NABERS rating at the point of sale or lease for commercial office space over a thousand square metres for more than 10 years now. That's called Commercial Building Disclosure. It's a Federal Government program, and it's actually led Australia to be a world leader in energy performance in commercial office space. It has really driven us to be the best in the world. That competition in the marketplace, there's certain State Federal Government contracts, they won't even consider buildings that are under ... I don't know the exact number, but say under a four star NABERS rating and that sort of thing. If you want to be seen as a premium office space, then you need to perform and you need to show an up to date NABERS certificate showing that you perform.

NABERS was adapted just over 2 years ago for residential strata. It's a simple zero to 6 star rating system that just basically puts all buildings on a level playing field throughout Australia. You can compare, for example, a 10 apartment building in Sydney with a hundred apartment building in Brisbane that's got a large centralised air conditioning system. Theoretically, you should be able to make a direct comparison between the star rating of the 2. It does energy and water, and like I said, nationally recognised. That can be really a good thing to use to drive improvement in environmental performance.

So you might get a NABERS rating at the beginning of your energy and water efficiency quest, I suppose. See where you stand now. Maybe it doesn't look so good. That's fine. There's no duty to disclose that rating at the moment. The thought is that within 5 years there probably will be some sort of mandatory disclosure, similar to the commercial office space. The idea is, get in now, find out where you stand, improve that as much as you can before you need to actually disclose that rating.

**Amanda Farmer:** Never more important than when so many people are moving from offices and commercial spaces back home. I'm really pleased that NABERS, I know it did start a couple of years ago getting that system in place for residential apartment buildings, and hopefully we're going to see the take up of that really increase now.

I will make sure that we have links to the NABERS resources and where buildings can go to find out more about NABERS and how

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to get involved in that process just below this video.

Ethan, I get approached quite regularly now by owners who are interested in solar for their apartment buildings. Some buildings may be not ready to tackle that project yet, but some perhaps are there. Can you tell us a bit about solar for apartment buildings?

**Ethan Burns:** Sure.

Look, it's definitely a really good project to do. Finding buildings with enough available roof space, so it's typically not ideal for larger, taller buildings. So high rise, your surface area available on the roof to put panels is usually fairly limited. And also getting the panels up there can be a little bit problematic sometimes, but it's not impossible and it's definitely been done plenty of times before. The good thing about solar too is that every little bit helps. Even if you only have a fairly small system that's only shaving off a little bit of your daytime demand, it's all helping, I guess.

Yes look, there's some really great projects, and I've been lucky enough to help in the order of 16 or 17 buildings in the last few years, put some fairly large systems up there. Actually we've got one that's going on in Piermont at the moment that's 99 kilowatts. I think that will probably be the biggest solar installation on a residential strata building in Australia.

**Amanda Farmer:** Oh, fascinating.

**Ethan Burns:** I'm not sure, but it'll be definitely one of the biggest. That's a really good project, and that's all going into the common property. Essentially it's just ... And that's the simplest way to do it, is to try and offset the common property electricity consumption.

But there are certain buildings where they're more lower rise or small to medium, where you can actually fit enough solar on the roof space to offset common property consumption, but also connect to the tenancies as well. That's an exciting space that's evolving at the moment. I don't think there's too many examples out there where that's happened yet, but there's some interesting products on the market out there at the moment that allow you to install one large solar array up on the roof and then share that electricity between the common property and tenancies. Keep an eye on that space.

**Amanda Farmer:** Yes, definitely.

I know a lot of buildings, or owners in buildings, get excited about a sustainability project and energy efficiency and they think, "*Oh, solar.*" And then they go and chat to somebody, and that person says, "*Well, it's a major project. This is the investment.*" Or, "*Maybe your building's not suited to that.*" Then the energy efficiency project is off the table. They stop thinking about the other things which we've been talking about, those easier, perhaps smaller mountains to climb when it comes to lighting and water. Let's not forget that those are available.

**Ethan Burns:** Definitely.

I would say, personally and from my experience, it always makes more sense to look at improving the efficiency of what you've got first before installing solar. If solar is more of an easier sell, then there's no reason not to do it either. You've just got to make sure that there's a few boxes that you have to tick in when you're doing it. Sizing the system correctly is one thing. But look, there's no reason not to go down that road, but generally speaking, you'll get a better return on your investment focusing on looking at those lighting projects first, in the first instance, and similarly the car park ventilation systems, other things. Improving efficiency first will usually get you a better bang for your buck than solar.

But the payback period for solar has come right down. 4 or 5 years ago, I was seeing projects that had a 10-year payback period on solar, which is not bad because it's a 25 year installation. It's almost set-and-forget once you put it up there and let it go. It requires very little maintenance going forward, and does have ... The component life is very long. 10 years is not that bad for a solar system. But we're seeing 3 to 5 years payback period now, just a few years later. It's improving all the time, the prospect. It's definitely an important part of the overall sustainability mix for residential strata.

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**Amanda Farmer:** Yes.

What are some of the common objections, Ethan, that you come across? If you're chatting to committees, or maybe even managers, or individual owners about a project, what's some of the push back that you get, and how do you get past that?

**Ethan Burns:** Look, it really can vary a lot. I guess it depends on how engaged the committee is and what the makeup of the strata committee is in terms of people's backgrounds and that sort of thing. I've heard some really interesting objections to things in the past, for lighting projects and that sort of thing. There was a lot of skepticism, I suppose, around LEDs and them not performing as well as fluorescent lights and that sort of thing. In the early days, I think there some substance to that, but the technology has improved so much now that it's, I think, in most cases equal or better in those situations.

There was other issues around, with the condenser water systems and that sort of thing, that slowing pumps down will lead the pipework to clog up and things like that.

Putting solar on the roof will actually make the roof hotter. I heard someone say that.

**Amanda Farmer:** Oh, that's interesting.

**Ethan Burns:** The reflections going to be too much, it's going to be too glary for my neighbours, that sort of thing.

In that case, the solar panels are actually designed to absorb light, not reflect it. That's not really going to be an issue. They install them on airports. They're not blinding planes and that sort of thing as they're landing. Solar actually will shade your roof and actually reduce the heat load through your roof. There's lots and lots of strange barriers out there.

**Amanda Farmer:** Misconceptions.

**Ethan Burns:** Yes, that's right. But they can usually be overcome with a rational discussion.

**Amanda Farmer:** What about people who say, "*We don't have the money. We can't get started on this because we don't have the money. And when we've got the money in the capital works fund, when we've saved enough, then we're going to do our sustainability project,*"?

**Ethan Burns:** Look, that can be an issue, certainly. Generally speaking, you need to spend a little bit of money to save a lot of money, in a lot of cases. There's a lot of other stuff that you can actually do. There's a lot of no-cost and low-cost items that you can start to have a look at, especially if you've never looked in any detail at your energy retail contract, for example. Try to find a better retail offer, can usually save you a little bit of money, if you haven't looked into that in any detail before. Potentially talking to an energy broker to try and get a better deal. You can do the legwork yourself, but it's fairly laborious, depending on how big your building is and what sort of contract you've got.

The other thing that I find quite a lot as well is that people are quite often on the wrong network tariff. There's two components to your electricity tariff. For example, there's a retail component and then there's a network component. If you're on the wrong network component, then you're paying a lot of extra money in just daily access charges that you probably don't need to pay. That's something I see reasonably regularly, actually, that people aren't on the right network tariff.

As you do energy efficiency projects, more than likely you will drop down a network tariff as well. Again, so there's more financial savings there, just in access fees. It's important to try and leverage those as well to really maximise your savings. Check all that sort of stuff out.

The other thing, as well, is just understanding how your electricity tariff works, for example. Most buildings will have peak shoulder and off-peak billing periods in there. How do you leverage those time-of-use tariffs to just take advantage of the financial

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incentives. If you've got loads in your building that don't need to operate during peak billing periods, can you use a simple timer or something like that to shift those to off peak or shoulder, and make some savings there. Just understanding how your electricity tariffs work can often net you some really good savings.

Again, your existing plan that's running at the moment could simply just be controlled better using existing control systems on there as well. Again, no-cost opportunities, or very little cost opportunities to make some savings. Once you've made those savings, those savings can be transferred to the bigger projects that do have a higher capital cost.

**Amanda Farmer:** Yes, exactly.

And it costs nothing to start your spreadsheet that we talked about at the beginning of our call here, get that Excel spreadsheet, Google Sheet, out and start recording exactly what your bills are saying. The first zero-cost step.

**Ethan Burns:** That's it.

I guess I'd say as well, you can definitely DIY a lot of this stuff. If you've got someone on the strata committee who has got time on their hands, and they're not bad with numbers, then a lot of this can be done in-house. The question is, how many strata communities are in that situation? I'd say probably not many. Everyone's time poor, and I think a lot of the time, it's easier to just outsource this stuff to a professional who can actually have a look at it and give you some good targeted outcomes to focus on.

**Amanda Farmer:** Yes.

So many excellent tips there and lots of actionable steps that our viewers can be taking. Thank you, Ethan.

Is there anything that we haven't covered that you want to make sure we get across? And definitely let everyone know how they can find out more about you and Sustainability Now.

**Ethan Burns:** Sure.

Look, I think we've covered most of the important stuff there. Again, I just stress, one of the things that is always worth doing is get in touch with your local council and find out what they've got on offer in terms of sustainability programs for residential strata. The City of Sydney have got some amazing programs going. They're probably the Australian leader in that area, but Waverley Council are doing a lot as well, North Sydney Council. There's lots of others. I think Melbourne City Council has some good programs and that sort of thing is going. Just talk to your local government, find out what they've got on offer.

Have a look at your state government level as well and see if they've got anything to offer. Again in New South Wales, we've got the Energy Saving Scheme, which is great, and it's been running since I think about 2008 now or something like that. It's a community-funded program where everyone who has an electricity account in New South Wales pays into a fund. When you make some energy efficiency gains in your building, you're allowed to take some money back out of that fund to help you fund those projects. Why not take advantage of that? The Federal Government's got the Renewable Energy Target, which allows you to get some rebates for solar installations and that sort of thing. Definitely, I think probably one of the first steps would be talking to your local council, and hopefully they can point you in the right direction to all of those other programs. It's great to have some financial assistance, or even technical assistance with these things.

But failing that, again, talk to an energy efficiency professional, and if you haven't got the time on your hands to DIY, it makes so much sense to outsource it. At least you'll actually get somewhere, I suppose. Yes.

**Amanda Farmer:** Excellent.

We will make sure that our viewers have the link to all of the resources that we've talked about today, including your website, Ethan, where they can go to find out more about what you do, as a very experienced energy efficiency professional.

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Thank you so much for your time here with us today.

**Ethan Burns:** No problem, Amanda. Good to talk to you.

**Amanda Farmer:** I hope you enjoyed that interview with Ethan Burns. You can find out more about Ethan and the good work he does in the notes below this video. We also have the links to the excellent resources he shared in the interview.

Now the Shared Space Summit is not just about information, it is also about action. I'd love for you to join me over on the Facebook page this afternoon, where you can share some of the action steps you've taken from this interview. There's a link below to that page.

Okay, are you ready to hear my Summit Shift? It has to do with Excel Spreadsheets. That's all it takes to get started with improving your building's energy efficiency, and to start saving tens of thousands of dollars for your community. You can't manage what you don't measure. So start recording your electricity and water bills in a simple spreadsheet and get an understanding of your building's baseline. Then you have a foundation from which to improve.

Now throughout the whole Summit, I'm here as your Summit Mentor, supporting you to make the most of all the Summit sessions and put into action what you've learned. I'll continue to give you my Summit Shift at the end of each session.

The summit closes this Friday. The good news is, if you're a member of the Your Strata Property Online Community, you will continue to get access to all the Summit sessions. I am putting them over in the Members Only Library at the end of this week. If you're not a member, then head on over to [stratamembership.com](http://stratamembership.com), because for this week only, just while the Summit's open, we are welcoming new members into our community. This is the only online community of strata owners and strata managers that is supported by a team of strata experts, led by me, a qualified practicing Strata Lawyer.

We're answering your questions over in our Q&A forum, and giving you access to the templates, the tools, the resources that you need to ensure peaceful and profitable apartment living. You'll find all the details over at [stratamembership.com](http://stratamembership.com), including the Summit Bonus. This bonus is especially for you because you're joining our online community this week as part of the Summit. The bonus is your Summit Souvenir Playbook. I've prepared for you a complete list of key takeaways from each summit session, including every one of my Summit Shifts and the action steps that you can take in your communities to implement precisely what our Summit guests are sharing in their interviews. Valued at \$197, the Summit Souvenir Playbook is yours for free when you join the membership this week. Head on over to [stratamembership.com](http://stratamembership.com) for more details and get ready for your next Summit Session.

I'll see you there.