Sustainablity Action Plan

Delisle Hunt Wood
Working Document
2022

dhw
architecture and sustainable design

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This document is our first draft;

We aim to make this public and that as we update we help to keep ourselves accountable and continue being part of a culture of sharing, growth and responsibility.

Dec 2021

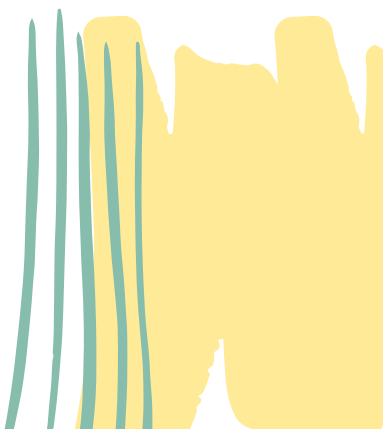
We are an architecture and design firm based in Sydney's Inner West.
At dhw, we aim for our designs to be simple and sustainable with people in mind.
As a firm, we bring together a solid understanding of sustainable design principles, decades of industry experience and technical skills. We specialise in residential new builds, renovations, home energy assessments and providing sustainable design solutions.

Finding inspiration in environmentally sensitive and innovative projects, we aspire to working with our clients to find design and built outcomes that practically, efficiently and inspiringly achieve solutions to their living problems.

In this Sustainability Action Plan (SAP), we aim to set out a firm basis and framework to ensure that as we go forward and develop that we are involved with a more sustainable model of architecture through our own internal culture and work practices.

Through our engagement with our community and the broader environment and through the design outcomes and solutions we provide to our clients and building users.

Graham Hunt, Mits Delisle, Ella Wood



COMMITMENT

DHW is a signatory to Australian Architects Declare Climate & Biodiversity Emergency (https://au.architectsdeclare.com/) and as a signatory we are committed to seek to:

1. Raise awareness of the climate and biodiversity emergencies and the urgent need for action amongst our clients and supply chains.
2. Advocate for faster change in our industry towards regenerative design practices and a higher Governmental funding priority to support this.
3. Establish climate and biodiversity mitigation principles as the key measure of our industry's success: demonstrated through awards, prizes and listings.
4. Share knowledge and research to that end on an open source basis.
5. Evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown, and encourage our clients to adopt this approach.
6. Upgrade existing buildings for extended use as a more carbon efficient alternative to demolition and new build whenever there is a viable choice.
7. Include life cycle costing, whole life carbon modelling and post occupancy evaluation as part of our basic scope of work, to reduce both embodied and operational resource use.
8. Adopt more regenerative design principles in our studios, with the aim of designing architecture and urbanism that goes beyond the standard of net zero carbon in use.
9. Collaborate with engineers, contractors and clients to further reduce construction waste.
10. Accelerate the shift to low embodied carbon materials in all our work.
11. Minimise wasteful use of resources in architecture and urban planning, both in quantum and in detail.

In Australia, we as architects and designers are aware that Aboriginal and Torres Strait Islander peoples have long espoused the cultural, social, economic and environmental benefits embedded in the holistic relationship of Caring for Country.

VISION

At DHW we strive to create an architectural design studio centred on an equitable, inclusive and collaborative working environment.

Our work aims to be client focused using a straightforward practical approach to provide cost effective solutions that create stimulating, healthy, resource-efficient homes that are holistically conceived.

We believe successful, responsible, environmental design is about making smart choices rather than costly ones.

We aim for DHW to be seen as an exemplar firm in the delivery of excellent sustainable and regenerative design.

As our own understanding of sustainability does not limit itself to either low-tech or high-tech solutions, we aim to educate and accommodate the commitments of our clients to explore the best short and long term sustainability goals that suit their given situations.

We believe that sustainable design should not be niche, but rather it should be commonplace, accessible, practical and universal, we are grateful to be part of the movement that holds these same ideals as truisms not as options.

CURRENT PRACTICE

In our current practice, we strive wherever possible to make our clients aware of sustainable solutions that are available and assist them to make informed decisions based on verified evidence and quantified outcomes. We have not always been able to get the most sustainable outcome or be convincing in every case. We have not consistently been setting targets to aim for and this is something that needs to be quantified through developing this SAP. Below we compare our current practice against the Architect's Declare commitments to assess our current status.

1. **Raise awareness of the climate and biodiversity emergencies and the urgent need for action amongst our clients and supply chains.**

For every project we do make clients aware of the range of sustainable solutions that are available. We have rarely done this from the specific perspective of the impacts of the climate and biodiversity emergencies but more from the broader view - improvement for a healthier world.
Even if briefing clients on sustainable options, we have not always done this assertively enough in all instances, often tending to customise our response in regards to our perception of how receptive our clients will be.

... CURRENT PRACTICE.

In regards to supply chains, we certainly select more sustainable products and solutions over others and it is the most critical factor in making material or product choices. We do enquire about the sustainability aspects of products as a starting point but we could do more to investigate and verify the stated sustainable features of each product.

Till now our focus has been on energy efficiency and minimising the environmental impact of design options for clients, material choices and different supply chain options.

We have not focussed so much on the biodiversity impacts of different options or approaches except by flow on benefit of recommending more sustainable choices.

On occasions where clients have been receptive to such ideas we have incorporated permaculture design principles which have a greater interest in localised/small scale biodiversity outcomes.

Advocate for faster change in our industry towards regenerative design practices and a higher Governmental funding priority to support this.

DHW is heavily involved in advocacy around energy efficiency and sustainable design practices through voluntary representation in the following forums:

- Australian Building Codes Board Residential Energy Efficiency Working Group (AIA Representative)
- NatHERS Technical Advisory Committee (AIA Representative)
- NatHERS Stakeholders Consultative committee (AIA Representative)
- Your Home Consultative Committee (AIA Representative)
- AIA - NSW Chapter Sustainability Working Group (observer)
- Renew National Board and local branch (www.renew.org.au).

Dhw has made submissions during the last 12 months to the review of the NSW Design for Place SEPP and the Public comment draft for NCC2022 Energy Efficiency Review. DHW has also been part of the Campaign for Zero Emission Homes - https://zeroemissionhomes.com/

DHW has not been involved as much in advocating for regenerative design practices specifically.

Establish climate and biodiversity mitigation principles as the key measure of our industry's success: demonstrated through awards, prizes and listings.

Graham Hunt for two years was a judge for the Inner West Council Built Environment Sustainability Award - 2018-2019.

DHW has been working with the Narara Ecovillage since 2015 to develop their Building Standards which set high sustainability minimum benchmarks for all new housing in the village

https://nararaecovillage.com/eco-sustainability/sustainable-house-designs/

The Aim of the Ecovillage is 'to nurture a resilient and inclusive intergenerational community that inspires collaboration, innovation and fun; to live with kindness, aware of our interdependence with others and the natural world; and to learn and demonstrate ways to thrive within the earth's ecological capacity, drawing on Indigenous wisdom and fostering regenerative environmental, social and economic practices.' The Building standards strive to reflect this vision through establishing a framework that villagers can use to ensure that their new homes provide living spaces that will be an enabling environment to realise the aims of the vision.

Since 2017, DHW has also been designing houses for the village with 5 all or nearly built, one soon to be built and three more in design. We have also worked with the community to design a Common House for communal use and to develop design options for cooperative living for the second stage subdivision.

Share knowledge and research to that end on an open source basis.

- DHW contributes a lot to the sharing of knowledge and expertise through the following avenues:
- Voluntary e-presentation on the various government committees listed above,
- Participation on a voluntary basis in Renew activities such as Sustainable House Day - https://sustainablehouseday.com and Speed Date a Sustainability Expert - http://sdse.ata.org.au/ over many years and through being involved with the local Sydney Central Branch of Renew since 2008 - https://renew.org.au/branches/sydney-central-branch/ which holds meetings and webinars for the public on renewable energy and sustainable living.
- Participation in industry conferences on a fairly regular basis. Graham Hunt presented at the BDAA/ABSA National Conference in 2020 on '8 Star Homes' and at the CSIRO Australian Residential Energy Rating Conference on 'Putting Energy Efficiency into Practice'

Speed date a sustainability expert event - source Renew*

Evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown, and encourage our clients to adopt this approach.

- At the start of each new project we evaluate the options for reducing the project's footprint, embodied carbon and operational energy. However we are doing this in a fairly ad hoc way. We use a Nathers assessment in a lot of our projects as a means to assess the thermal performance and the energy efficiency for heating and cooling. We assess material and product choices only on a desktop review process or based on experience. We do not undertake detailed life cycle analysis, formal assessment of embodied energy or calculator of the carbon footprint.
- Mostly we encourage our clients to consider using more efficient and more sustainable options but we do not currently do this across the board or in every instance.

Upgrade existing buildings for extended use as a more carbon efficient alternative to demolition and new build whenever there is a viable choice.

For all of our renovation or refurbishment projects, we look for all possible opportunities for retention or re-use of existing buildings or fabric. This is based on an assessment of the condition and health of the existing building/fabric, cost constraints and brief requirements. We do not undertake a detailed assessment or cost/benefit analysis to compare retention with building new.

Include life cycle costing, whole life carbon modelling and post occupancy evaluation as part of our basic scope of work, to reduce both embodied and operational resource use.

We do not currently undertake formal life cycle costing, whole life carbon modelling and post occupancy evaluation as part of our basic scope of work. Until now we have been developing our designs and value assessments based on relevant information and experience not using a quantifiable process.. Many of our designs for new homes at Narara ecovillage would be net zero or close to net zero in operational energy and would have below embodied energy but this has not been modelled or verified.

Adopt more regenerative design principles in our studios, with the aim of designing architecture and urbanism that goes beyond the standard of net zero carbon in use.

We currently apply regenerative design principles in our projects where feasible such as our work with the Narara Ecovillage. Mostly our focus has been on mitigating impacts rather than creating positive opportunities, as much of this is already integrated within the site of the Narara EcoVillage.

Collaborate with engineers, contractors and clients to further reduce construction waste.

In our designs, we strive to make them as efficient as possible in terms of structure, materials use and performance. We try and educate consultants and contractors who are not familiar with sustainable practices primarily by leading by example. We are not necessarily pro-active in engaging with them to encourage that they also do the same.

We do produce waste management plans as part of the approval process but they are fairly rudimental and we are not effective at ensuring that those plans are properly implemented during construction. Inner city projects tend to have symbiotic relationships with the sustainability measures and waste management strategies adopted by the LGA that they belong to.When initially talking to clients, we discuss sustainable options for them to consider and also provide more sustainable options as the design and the project evolves. We tend to limit our input in that regard when we find that the response from the client is less receptive. Where possible, we do encourage deconstruction rather than demolition and recycling and reuse where feasible.

Accelerate the shift to low embodied carbon materials in all our work.

In the majority of our projects, we tend to use more lightweight forms of construction using renewable products but not always as there may be competing requirements such as needing thermal mass for heating/cooling purposes in order to reduce operational energy. Over the last 12 months we have been tightening our specifications in regards to the use of higher embodied carbon materials such as concrete.

Minimise wasteful use of resources in architecture and urban planning, both in quantum and in detail.

We tend to work on relatively small projects for ordinary people with average budgets. We do some commercial work but this is primarily for a charitable organisation which has limited resources. Consequently just by their nature and scale our projects generally are fairly efficient in the use of resources. Allied with this is that we are always looking for opportunities to reuse and recycle materials or use materials that have high recycled content.

CARING FOR COUNTRY

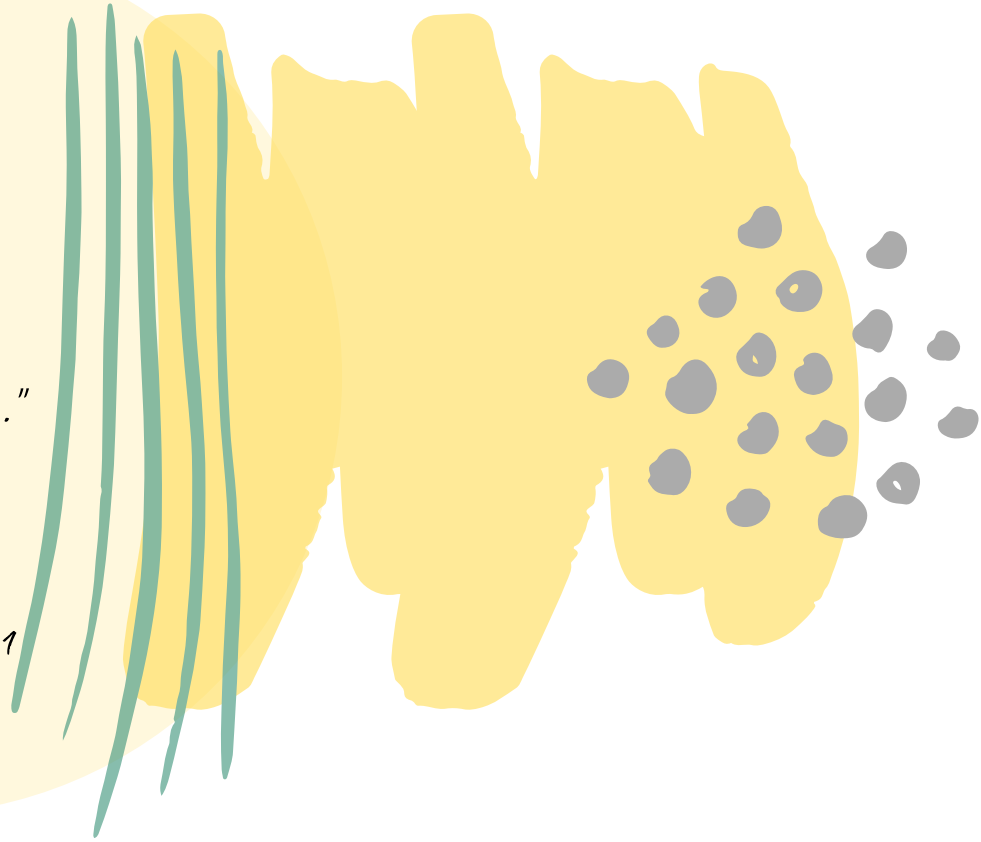
DHW does, and has always, acknowledge the First Nations People.
We have a sign to that effect in our office. As individuals we all have personal, integral, care for the country we live on and respect the principles and the knowledge of First Nations People and the potential for great learning in this sphere.

Ella Wood has attended lectures by First Nations designer Alison Page on the core principles of designing with Country. Many of our current practices as a matter or habit embody the theories and practices encouraged by first nations designers, to understand the environmental aspects of a place, the direction of sun rise, the prevailing winds and attempt to utilise these elements in an easily accessible way for our clients to engage with.

However, we could certainly begin a more proactive way of ensuring that our working culture, design processes and projects are being communicated to our clients or in the public space with these principles further at the forefront.

"everything comes out of the principle of caring for country.... country as a person... a family member..."

Alison Page
- spoken word- 2021



CURRENT OPERATIONAL PRACTICE

We are a small firm of currently three people that was formed in 2019. We started our practice in a relatively large office in Croydon. Within 8 months we had moved into a smaller office within a co-working environment in order to reduce our footprint and to a location that was more centrally placed in Marrickville so as to reduce the amount of travel to and from the office. Being within a co-working facility means that we are using shared facilities for amenities, kitchen, printing, NBN connection and air conditioning which results in overall reductions.

Our own dedicated office space is less than 12 m2, we have 2 PCs and use 3 laptops. The office space is entirely internal within the building and so has very low heating and cooling demand.

Over the last two years, our day to day operation has been affected by the COVID-19 pandemic and for much of that time our office has been empty or little used as we have each been mostly working from home. Earlier this year we undertook an in-house evaluation of our carbon footprint using the on-line tool Point Advisory Carbon Calculator-

https://pointadvisory.com/point-tools/carbon-calculator/ .

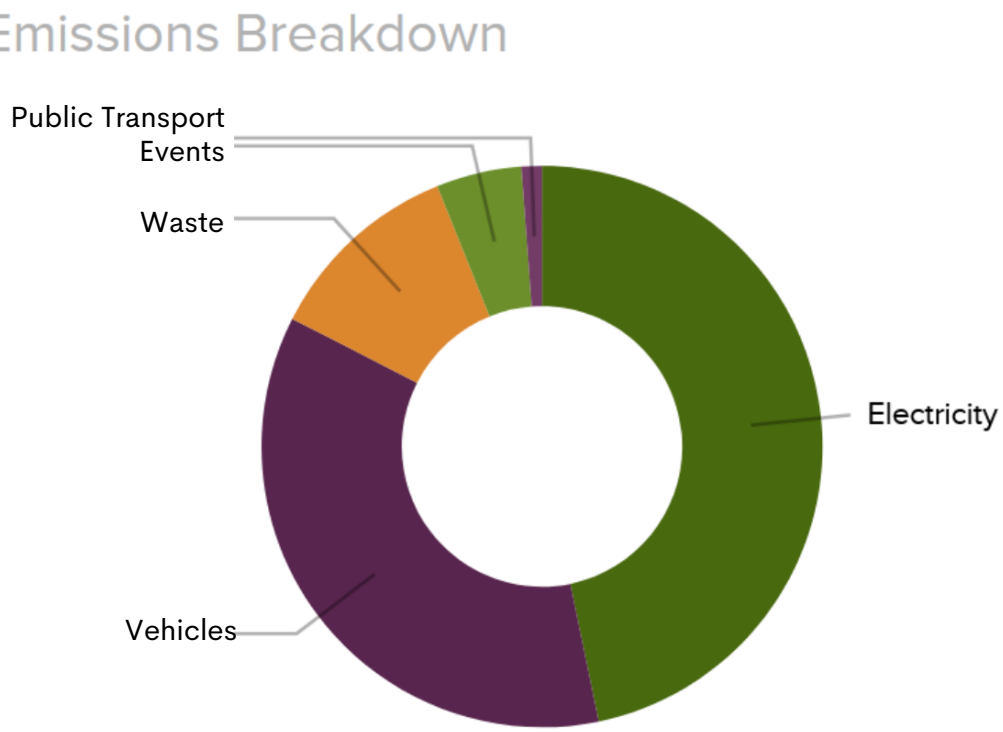
We did not engage an external auditor to do this for the following reasons:

- The disruption to our regular office operation as a result of the pandemic
- The difficulty with having an office within a co-working situation to quantify what actual part of the overall carbon footprint of the facility that we are responsible for.
- The cost of a full audit or such a small operation is hard to justify.
- The difficulty of bringing out change within the operation of the overall facility to reduce its footprint by either purchasing Greenpower, installing solar PV or implementing other energy efficiency initiatives are limited as the proprietors of the co-working space are only leasing the property themselves.

Our own informal footprint calculation gave an approximate carbon footprint for our operation including transport from the office to site and to meetings as between 5 - 6 Mt C02e.

Emissions and Offsets

Category	CO_2 Emissions	Percentage
Electricity	2.38t	46.76%
Vehicles	1.82t	35.76%
Waste	0.58t	11.39%
Events	0.25t	4.91%
Public Transport	0.06t	1.18%
Total	5.09t	



To Offset these emissions in June 2021, we purchased an Offsetting Certificate for 20 Mt C02e to cover two years of operation till June 2022 from the Narara Ecovillage. Their off-setting program is being used to assist with the cost of a storage battery for their Smart Grid which is also being funded by Arena -

https://arena.gov.au/projects/narara-ecovillage-smart-grid/

The aim is to make the Village self sufficient in energy. We chose this off-setting option due to our existing close relationship with the Narara Ecovillage and by investing in it we feel that we are contributing to a circular economy.

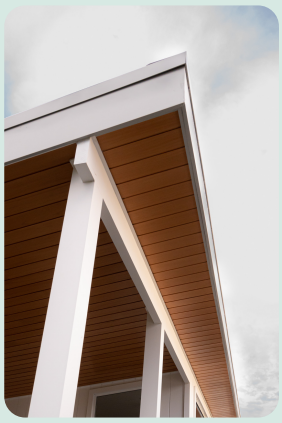
The impact of our buildings

At this point in time, we have not undertaken an assessment of the overall carbon footprints of our built projects. Since March 2019, DHW has completed over 27 projects, another 9 are under or about to start construction, and we have another 20 projects in various stages of design, approval application or documentation. Mostly they are fairly modest sized new homes within the eco village, inner city renovations or small commercial fit-outs.

To undertake a detailed assessment of the carbon footprint for each of these projects would be a significant task.

One approach is to do a review of a sample of various projects that cover the different types such as:

- Small scale renovation
- Medium scale renovation'
- Large scale renovation
- Smaller new home
- Larger new home
- Typical commercial fit-out



The outcome of the assessment of each of the various types could then be used to make some assessment of where the overall footprint lies. Once this is done, we can then make an assessment of what reduction in overall emissions we need to aim for and over what time frame.

We need to build our capacity to do this type of assessment - accurately and efficiently.

Once we have that capacity we will be in a better position to set reduction targets for our overall built projects but also our operations for 2030 and beyond.

Plan of Action for 2022

FOR THE NEXT 12 MONTHS, WE WILL STRIVE TO ADDRESS THE ARCHITECT'S DECLARE COMMITMENTS AS FOLLOWS:

Raise awareness of the climate and biodiversity emergencies and the urgent need for action amongst our clients and supply chains.

During the coming year, we commit to:

- discussing with all new or potential clients our concern with the looming climate and biodiversity emergencies prior to our engagement and explain the strategies we will use during our engagement process to ensure that their project will contribute to minimising those threats.

- presenting a copy of this Sustainability Action Plan to all new or potential clients prior to our engagement, to all consultants we work with and for it to be issued as a standard attachment to all tender packages

- presenting a copy of this Sustainability Action Plan to all our suppliers and product information services to highlight our need to have access to products that are sustainable and low in embodied energy.

Advocate for faster change in our industry towards regenerative design practices and a higher Governmental funding priority to support this.

During the coming year, we commit to:

- DHW will maintain it's advocacy around energy efficiency and sustainable design practices through various forums where it already has representation. We will continue to make submissions in regards to any relevant review of government policies that occur during the next twelve months.

- During the coming year, we commit to increasing our advocacy around regenerative design practices specifically and to undertaking a broader advocacy around biodiversity generally such as participating in campaigns around habitat loss and contributing to the funding of habitat preservation projects such as Bush Heritage Australia.

Establish climate and biodiversity mitigation principles as the key measure of our industry's success: demonstrated through awards, prizes and listing

DHW will continue to work with Narara Ecovillage by assisting with the ongoing refinement of their building standards but also by designing new homes within the Village which will act as a demonstration of how a community can create a sustainable future.

As an observer to the AIA NSW Chapter Sustainability Working Group, we can contribute to their on-going debate around what sustainability measures should be applied to their award process.

During the coming year, we commit to:

- lobbying the Inner West council to re-initiate their Inner West Built Environment Sustainability Award
- submitting at least one of our projects to a sustainability award program

Share knowledge and research to that end on an open source basis.

DHW will continue to share their knowledge and expertise through the various forums that we already do.

During the coming year, we commit to:

- ensuring that our focus in sharing that knowledge and expertise is around addressing the climate and biodiversity emergencies.

- look for new avenues and forums where we can participate



Evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown, and encourage our clients to adopt this approach.

During the coming year, we commit to:

- Undertaking a carbon footprint assessment of all our projects at concept design, pre- tender stage and on completion of construction
- Explaining to all new and potential clients the reasons for doing this and the benefits of doing so.
- To undertake an overall assessment of the total impact of our previous and current projects so as to provide a basis on which targets for future reductions can be based.

Upgrade existing buildings for extended use as a more carbon efficient alternative to demolition and new build whenever there is a viable choice.

During the coming year, we commit to:

- Undertaking detailed assessment or cost/benefit analysis to compare retention of the existing with building new for all renovation or refurbishment projects as part of the initial feasibility
- Trying to minimise the amount of demolition that occurs within any project
- Investigating with contractors and consultants better option for deconstruction rather than demolition



Include life cycle costing, whole life carbon modelling and post occupancy evaluation as part of our basic scope of work, to reduce both embodied and operational resource use.

During the coming year, we commit to:

- researching the various modelling tools available for use with life cycle costing, whole life carbon modelling and post occupancy evaluation and become competent in their use
- to including such modelling as part of our basic scope of works



Adopt more regenerative design principles in our studios, with the aim of designing architecture and urbanism that goes beyond the standard of net zero carbon in use.

During the coming year, we commit to:

- increasing our understanding of regenerative design principles through CPD programs
- developing a framework to assess whether design outcomes are achieving regenerative outcomes
- Starting to apply this approach to all of our projects.

Collaborate with engineers, contractors and clients to further reduce construction waste.

During the coming year, we commit to:

- providing more detail in our waste management plans at approval stage and revising them at tender documentation stage and then reviewing them with the appointed contractor
- consulting more with consultants and contractors about the need to reduce construction waste
- explaining to our clients at the start of the design process our commitment to reduce construction waste and that this will inform the design process.
- obtaining more detail from product suppliers the extent of waste that occurs during their production and supplying processes including packaging waste so as to better assess the waste implications of different product choices.

Accelerate the shift to low embodied carbon materials in all our work.

During the coming year, we commit to:

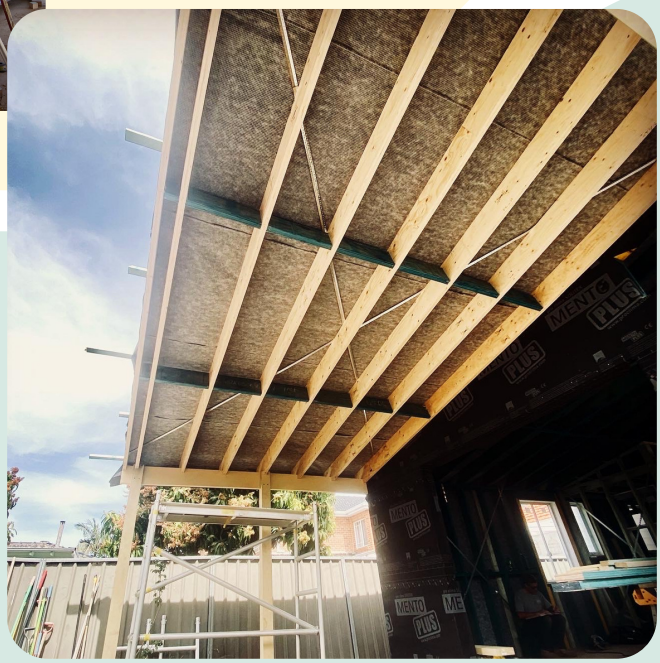
- further developing our specifications to ensure that low embodied materials are the first choice
- Inform our consultants and contractors of the need to give preference to low embodied carbon materials before starting any project
- explaining to our clients at the start of the design process our commitment to use low embodied carbon materials wherever possible and that this will inform the design process.

Minimise wasteful use of resources in architecture and urban planning, both in quantum and in detail.

DHW will continue primarily to work on fairly small scale modest projects that are efficient in their use of materials.

During the coming year, we commit to:

- ensuring that our designs use materials and resources as efficiently as possible
- discourage our clients from using resource rich materials and systems if that is their preference and provide good sound reasons for them making other choices.
- Wherever the opportunities arise to lobby for good sound urban planning principles supporting open space, suburban cooling strategies, good public transport and providing efficient and affordable buildings.



Caring for Country

During the coming year, we commit to:

acknowledging First Nations People on our website

acknowledging the country for each of our projects

increasing our knowledge of the principles of Caring for Country

ensuring our designs wherever possible incorporate some understanding of designing for country

"Man did not weave the web of life, he is merely a strand in it...
Whatever he does to the web he does to himself..."

- Chief Seattle 1854

Summary

This Sustainability Action Plan has aimed to assess the current status at DHW as to how we are performing against the Architects Declare commitments and how we are progressing in terms of addressing the climate and biodiversity emergency. As a very small firm we are doing a lot to provide designs and built outcomes which successfully address issues of sustainability and energy efficiency. We punch above our weight in terms of advocacy and sharing of knowledge and expertise.

In looking back we acknowledge that we need to :

- Improve our skills and knowledge so as to better quantify our performance in terms of reducing carbon emissions and measure the carbon footprint of our projects
- better engage with clients to ensure that they fully understand the impact of the climate and biodiversity emergency on their projects and how to design and prepare for it.
- better engage with consultants and contractors to use materials and resources more efficiently, reduce the embodied energy within projects and to minimise construction waste.

In looking forward....

We have committed to a set of actions as described in this Sustainability Action Plan for the next year.

At the end of 2022, we will review our progress and set a new action plan for 2023.