Deicke Richards

We use design to achieve social purpose.

Sustainability Action Plan

ISSUE A

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Globally, buildings and construction play a major part of the climate breakdown and biodiversity loss crisis, accounting for nearly 40% of energy-related carbon dioxide (CO2) emissions whilst also having a significant impact on our natural habitats. Deicke Richards recognises the architectural profession as integral to the journey towards more regenerative built environment. At Deicke Richards, sustainability is embedded across our projects and provides an ecological, social and economic asset for our clients, our practice and the communities we work with.

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We pay our respects to First Nations individuals and communities - past, present and emerging - and consider them integral to conversations about our evolving cities. Brisbane and surrounds are located on the custodial homelands of the Yuggera, Turrbal, Yuggarrapul, Jinabara, Quandamooka and neighbouring nations.

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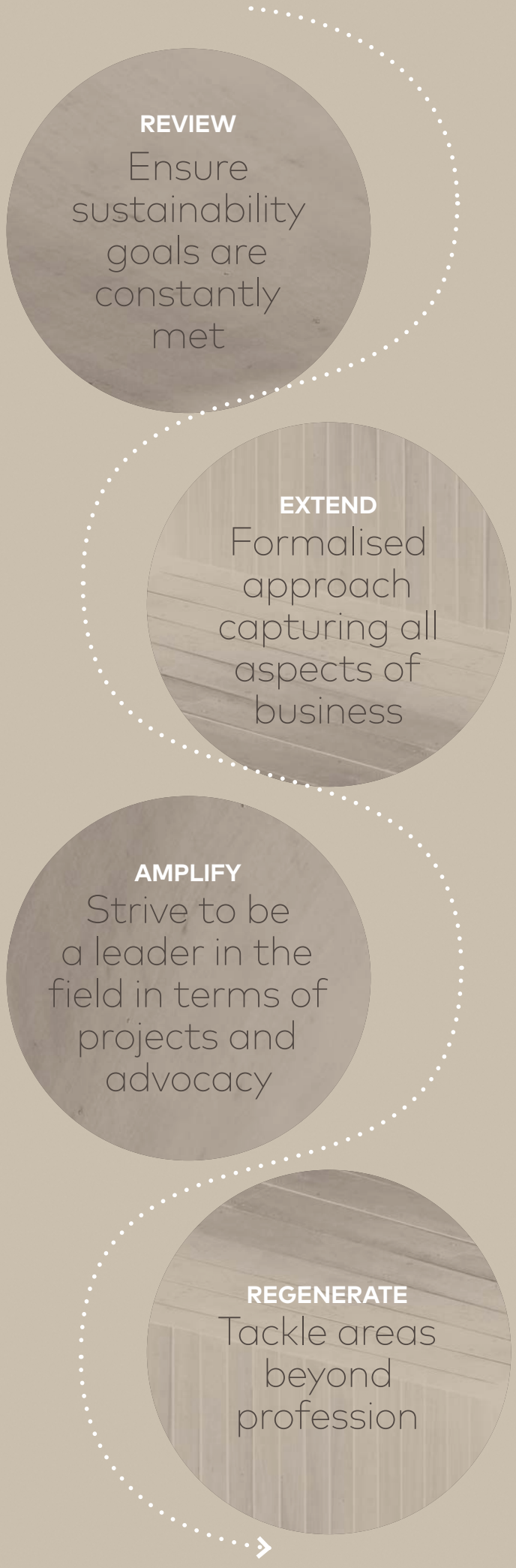
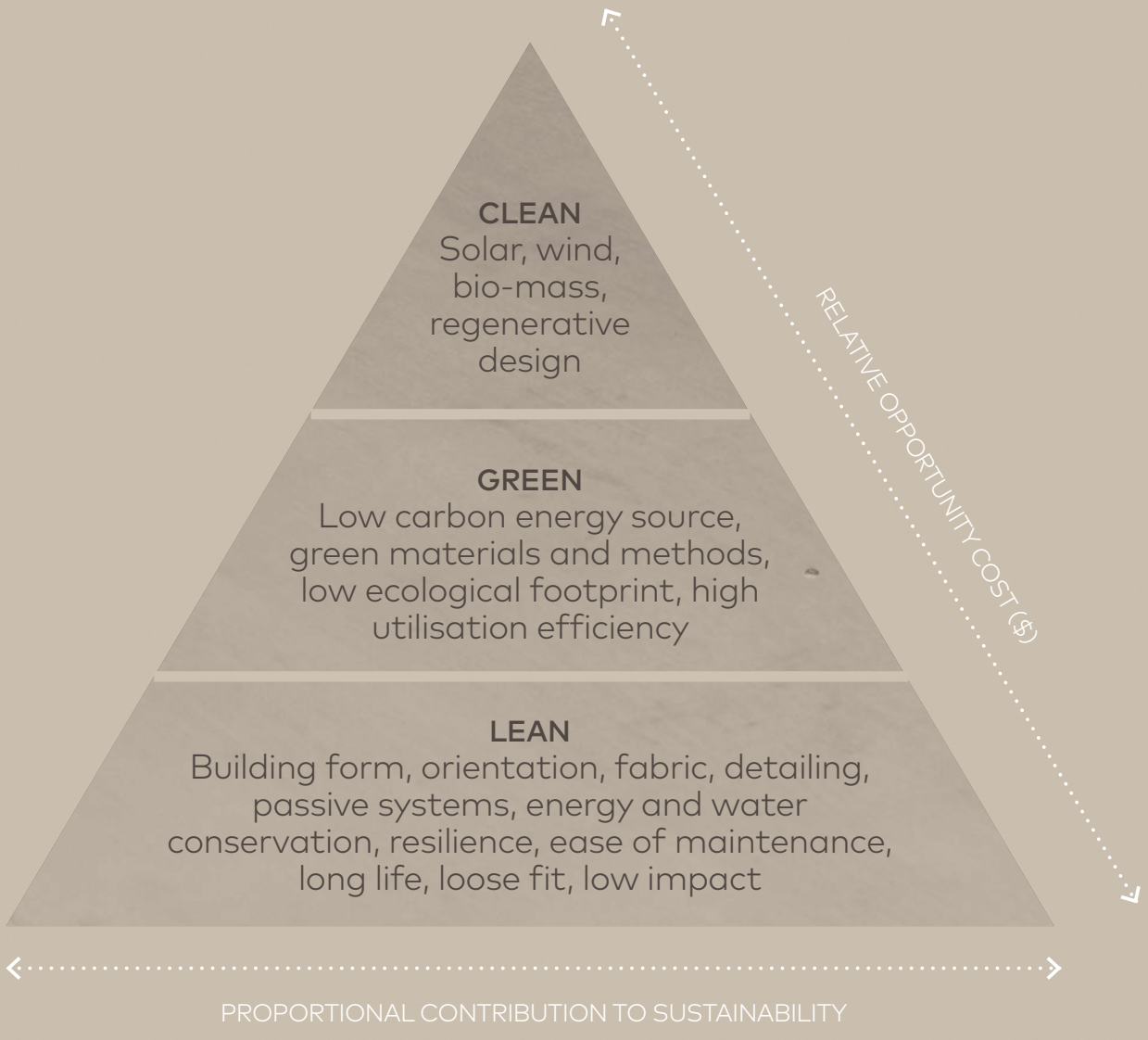


The Deicke Richards Sustainability Action Plan (SAP) uses the principles of the Architects Declare, an industry recognised initiative, as a instrument to drive change within our practice. The SAP serves as a tool that defines the actions that Deicke Richards will undertake to improve the impacts of our projects and our operations on the environment. The SAP is a dynamic document that defines the operational and design methods as related to sustainability and proposed improvements, research, and advocacy towards Net Zero emissions by 2030.

1.2 OPERATING CONTEXT

Typically, when just 1% of a project's capital cost has been expended (schematic design fee), more than 80% of its life cycle costs and impacts have been committed.



SUSTAINABILITY PYRAMID

CRADLE TO GRAVE

CRADLE TO SITE

CRADLE TO GATE

GATE TO SITE

A1	RAW MATERIAL SUPPLY	**PRODUCT STAGE**
A2	TRANSPORT	
A3	MANUFACTURING	
A4	TRANSPORT	**CONSTRUCTION PROCESS**
A5	CONSTRUCTION	
B2-5	MAINTENANCE /REPLACEMENT	**USAGE STAGE**
B1	USE	
B6	OPERATIONAL ENERGY	
B7	OPERATIONAL WATER	
C1	DEMOLITION / DECONSTRUCTION	**END OF LIFE**
C2	TRANSPORT	
C3	WASTE PROCESSING	
C4	DISPOSAL	
D	REUSE, RECOVERY, RECYCLING POTENTIAL	**OPTIONAL**

UPFRONT CARBON

OPERATIONAL CARBON

EMBODIED AND WHOLE LIFE CARBON

CARBON LIFE CYCLE

1.3 GLOSSARY

A COMMON LANGUAGE WITHIN THE PRACTICE.

HEAT ISLAND EFFECT

Refers to an urban or metropolitan area that is significantly warmer than its surrounding areas due to human activities. This is caused by concentrations of impermeable surfaces and air conditioning systems that extract heat from inside buildings and project it out to the surrounding atmosphere. Note: Increasing permeable surfaces, trees and vegetation can help reduce urban heat island effects by deflecting sun radiation, increasing shade, and releasing moisture into the atmosphere.

CIRCULAR ECONOMY

An industrial system that is restorative or regenerative by intention and design. It replaces the linear economy and its 'end of life' concept with restoration and shifts towards the use of renewable energy, eliminates the use of toxic chemicals, and aims for the elimination of waste through the design of materials, products, systems that can be repaired and reused. The circular economy encourages the elimination of waste as a concept.

PASSIVHAUS STANDARD

Passivhaus is a standard for the design and construction of comfortable, highly energy efficient buildings with set performance targets. It is the first step towards achieving a net zero operational carbon building. Note: Reduces reliance on heating and cooling systems. A highly performing and efficient building enveloped with extreme air tightness. Exceptional indoor air quality.

WHOLE LIFE CARBON (WLC)

WLC emissions are the carbon emissions resulting from the construction and use of a building over its entire life, including its demolition and disposal. This includes all embodied and operational carbon emissions. Note: Such as those embedded within raw material extraction, manufacture and transport of materials, construction and the emissions associated with maintenance, repair, and replacement as well as dismantling, demolition, and eventual material disposal.

NET ZERO CARBON (NZC)

NZC buildings offset all building operational carbon emissions with onsite renewables or purchased renewable energy (as an offset). Onsite renewable energy is proritised, and if this cannot be achieved, then additional renewable energy may be purchased to make net zero CO2 emissions. Note: Means the same as Net Zero Emissions + Carbon Neutral.

GREENHOUSE GASES (GHG)

GHGs are man-made emissions of natural gases that trap heat into the atmosphere by absorbing infrared radiation. Larger emissions of GHG lead to higher concentrations in the atmosphere, thus causing global warming. The most common GHG emission is carbon dioxide (CO2), which is produced by burning fossil fuels, solid waste, trees and other biological materials and as a result of certain chemical reactions (e.g. manufacture of cement). Note: Other GHG emissions include Methane (CH4), Nitrous oxide (N2O) and Fluorinated gases.

BIODIVERSITY

The totality of living animals, plants, fungi and micro-organisms in a region; the variety of life in all forms, levels and combinations.

EMBODIED CARBON

The carbon emissions emitted producing a building's materials and their transport and installation on site as well as their disposal at end of life. Note: It typically comprises 1/3 of a building's entire emissions over its life cycle. Typically, about 50% of embodied emissions is located within the structural make up.

OPERATIONAL CARBON

Operational Carbon refers to the collective carbon emissions produced for the ongoing building operations, from the energy and ventilation systems through to any electrical equipment. Operational Energy is the energy consumed by a building associated with heating, cooling, and lighting systems, as well as electrical equipment.

LIFE CYCLE ANALYSIS (LCA)

A tool for measuring the environmental effects associated with a product, process, or activity over its life cycle from raw material acquisition through to production, use, and disposal.

THE RED LIST

The Red List refers to the Living Building Challenge (LBC) Red List, which represents the "worst in class" materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem that are prevalent in building products. The international Living Future Institute (ILFI) believes that these materials should be phased out of production due to human and/or environmental health and toxicity concerns.

ECOSYSTEM

An interconnected and symbiotic grouping of animals, plants, fungi and micro organisms that sustains life through biological, geological and chemical activity. Existing ecosystems should be retained, enhanced, and protected as a priority.

ZERO CARBON

Zero Carbon buildings offset all building operational energy use with 100% onsite renewable energy sources only. Fossil fuels usage is not permitted. The requirement to source all energy needs onsite increases the difficulty in achieving the zero carbon status. Note: Requires all services and equipment to be electric. Requires high performing envelope. Requires all energy demand to be sourced onsite.

CARBON NEUTRAL

Carbon Neutrality, or net-zero carbon emissions, is achieved when an organisation's emissions are balanced by CO2 removal, typically over one year. Carbon Neutral usually refers to an organisation's operational emissions as opposed to a building. Note: A carbon neutral target relates to carbon dioxide emissions only, whereas a 'net-zero' target usually accounts for all greenhouse gas emissions.

NET ZERO CERTIFICATION

Net Zero Certification is attained through the AU Federal Government's 'Climate Active' scheme. To attain certification you must be licensed with Climate Active, calculate and report emissions, implement a reduction strategy, purchase offsets, arrange independent validation and publish an annual public emissions statement. Note: Buildings not certified can be referred to as 'Net Zero Ready' if onsite use of fossil fuels as an energy source is eliminated.

1.4 TOOLS AND INITIATIVES

Good design creates connectedness to place, to people, and to meaning. It improves the daily experience of those who engage with it.

NABERS	Rating system for a building's consumption of energy + water, and emissions of carbon + waste. This is a good measure of operational carbon.
greenstar	Voluntary rating tool that measures energy, water and material use in buildings, as well as indoor environment quality.
INTERNATIONAL WELL BUILDING INSTITUTE™	A voluntary global tool measures a building's performance in human health and wellness.
LIVING BUILDING CHALLENGE	Green building certification and sustainable design framework.
Passive Haus Institute	Independent research institute involved in the development of the Passive Haus concept, an internationally recognised performance based energy standard in construction.
zero carbon 2030	A global initiative to achieve net-zero carbon emissions by 2030, through economic influence.

2. FRAMEWORK

The DR SAP framework is divided into several sections that set out a clear course of actionable steps to the following areas:

ACTIONABLE

- Response to the Architects Declare principles.
- Steps to evolve our office operations.
- Steps to upskill staff to positively contribute to the environmental outcomes of our projects.
- Steps related to each project phase.
- Steps towards DR QMS implementation.
- Steps for implementation of ArchiCAD Life Cycle Analysis Tool.

WHO ARE WE

We advocate for the people who use our spaces and their positive experience by providing spaces that are functional, comfortable, enjoyable, inclusive, and accessible. Our values are informed by the following behaviours: We listen and lean-in to each other, clients and communities. We share our ideas, knowledge and perspectives. We care about shaping a responsive, inclusive and equitable world.

COMMUNITY ENGAGEMENT

We act as facilitators and collaborators in conversations with multifaceted groups. We consider communities associated with the project and seek to understand through research, consultation, and engagement. We share our knowledge with peers, students and the broader community.

OUR APPROACH TO SUSTAINABLE PRACTICE

We ground our work in its place. Our work is not produced in isolation and is responsive to its place. We consider; First Nations and the site social and/or cultural significance and history. Adjacent built form/character: Climatic conditions (connection to external spaces, natural ventilation): We use our limited resources responsibly: We apply rigorous design process to establish what is needed in terms of space and materials. We use sustainable, robust materials preferably Australian made and manufactured locally with low ongoing maintenance. We consider Whole of life carbon (Embodied & operational energy) during material, structural and services selections and discussions. We place focus on circularity using materials with high recycled content and opportunities for end-of-life cycle reuse and recycle. We set to improve our own behaviours and ways of thinking.

2.1 ARCHITECT'S DECLARE PRINCIPLES

This section demonstrates Deicke Richards' commitment to the 11 Architects Declare principles and defines the actions that DR will undertake to improve the impacts of our projects and our operations on the environment.

PRINCIPLE 01

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

OUR RESPONSE

- Development of and regular updates to the Deicke Richards Sustainability Action plan and related documents such as the Materials Guide detailing best sustainable practices.
- Integration of SAP principles within the DR QMS Systems, Architectural Specification and Schedules.
- Staff training as related to SAP, QMS procedures and development of new tools and resources such as the DR Materials & Products Guide and the ArchiCAD LCA Tool .
- Client education through the application of the above.
- Project debrief to involve advocacy and a broader sustainability conversation.
- Publish our SAP and sustainability outcomes on the website to ensure transparency and accountability.

PRINCIPLE 02

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

OUR RESPONSE

- Host periodical internal events to keep up to date with sustainability and innovation updates in the industry. Discuss new products, attend conferences, events and awards as related to sustainability. Aim for this to be undertaken on monthly basis.
- Commence client discussions at the briefing stage to tailor the sustainability strategy to their needs from the concept stage of the project.
- Specify sustainable, locally manufactured products and make project sustainability goals clear to all consultants and project stakeholders from the project outset.
- Broad advocacy, publicity, and education within the architectural profession.
- Application across practice and professional development and industry forums.

PRINCIPLE 03

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

OUR RESPONSE

- Advocate for carbon mitigation, using guidelines, challenges, and awards to drive the methodology behind projects.
- Explore entering alternative award programs such as the Sustainability Awards.
- Achieve certified carbon neutral rating by 2030.
- Some DR projects already hold green credentials. Where this is the case, collect project data and conduct post- occupancy analyses. Publish findings in from of case studies during annual SAP updates.

PRINCIPLE 04

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

OUR RESPONSE

- DR SAP is to be a living document shared online within the wider public and updated annually.
- Share DR sustainable strategies on social media platforms (Linkedin, Instagram).
- Publish our commitments as well as regular data analysis (annually) to ensure accountability.
- Dedicate staff resourcing to the SAP Team for research of new sustainable products and certifications and SAP updates.

PRINCIPLE 05

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

OUR RESPONSE

- Evaluate all new projects against the SAP and related DR QMS systems.
- Establish client's sustainability goals early in the process and formalise using the PF27 Brief Proforma to establish what will be done as a minimum and what is the associated cost.
- Ensure consultants understand the project sustainability requirements and set these out in the PF20 Consultant Scope documents.
- Consider engaging a sustainability expert and commissioning an external Life Cycle Analysis.
- Section J engagement to be undertaken in the early stages of the project.
- Implement Archicad LCA Tool within DR Archicad template. Utilise this tool to evaluate several options in the initial project stages to assess different design outcomes and structural systems.
- Ensure the project sustainability goals are reflected in the architectural drawings, schedules, and specifications.

PRINCIPLE 06

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

OUR RESPONSE

- Encourage refurbishments over building new where possible. Critically assess the size of the project and determine what is needed through rigorously planning to avoid designing spaces that are not necessary.
- Formalise through the PR13 Design Review Procedure. Apply the knowledge and expertise of the DR Leadership team for successful implementation.
- Consider the life cycle and embodied carbon of materials. Work with existing materials where possible, reduce materials where functionally not necessary, use recycled materials or materials with recycled content and materials that are easy to recycle. Refer to the DR Materials & Products Guide to guide sustainable project selections.

PRINCIPLE 07

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

OUR RESPONSE

- Implement Archicad LCA Tool within DR Archicad template. Ensure that all DR staff are trained on how to utilise this tool from the concept stages of each project.
- Utilise the Archicad LCA Tool to assess various preliminary project options as well as acting to collect basic measurable data for all projects for the main building elements & systems.
- Utilise the data for Life Cycle Analysis and project specific carbon modeling.
- Consider the engagement of external specialists for the LCA assessment on selected projects.
- Encourage and improve post-occupancy analysis processes with clients.

PRINCIPLE 08

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.

OUR RESPONSE

- Apply the above regenerative design strategies supported by the relevant QMS systems to all DR projects.
- Dedicate time and resourcing for research into sustainable design and new products and technologies.
- Promote Deicke Richards as a practice committed to sustainability and achieving Net Zero. Convey this to the public and the architectural profession via social media, attending and presenting at conferences, and university affiliations.
- Set clear and measurable targets to achieve DR sustainability goals.
- Once several sustainable projects had been completed and post-occupancy data has been collected, utilise this data to formulate and publish case studies.

PRINCIPLE 09

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

OUR RESPONSE

- Sustainability to be at the core of DR QMS system to ensure that the processes and procedures are embedded within the practice and followed by staff members.
- Client's sustainability goals to be established early in the process and formalised using the PF27 Brief Proforma. Similarly, the PF20 Consultant Scope document is to capture and set out the project sustainability requirements.
- Collaborate with clients that are interested in projects with regenerative outcomes. Collaborate with consultants that are enthusiastic about those projects and willing to bring sustainable and innovative strategies to design relevant systems within the projects.
- Seek contractors that share those principles.
- The SAP Team for research of new sustainable products and certifications and SAP updates.

PRINCIPLE 10/11

Accelerate the shift to low embodied carbon materials in all our work. Minimise wasteful use of resources in architecture and urban planning, both in quantum and in detail

OUR RESPONSE

- Use robust, locally sourced materials with a regenerative life cycle (use materials that are recycled as well as recyclable where possible) and do not contain harmful chemicals. Develop the DR Materials & Products Guide that is to be used as a reference base for projects for all staff to use.
- Question whether the use of materials is necessary and give consideration to building less and using finishes deliberately to reduce overconsumption.
- Updates to the architectural specification to reflect updates to materials and systems in line with sustainable and regenerative practices.
- Dedicated resourcing for further research & staff training.
- SAP and relevant checklist to be embed and audited as an integral part of the DR QMS system.

2.2 THE HOW - OFFICE OPERATIONS

This table details the actionable steps that DR will take to evolve our internal operations with the goal of positively contributing to the office & operational outcomes. The table identifies practices that are already in place, those that are to be implemented in near future and those that are yet to commence. As we increase our knowledge in this space, these tables will be updated to reflect our shifting goals over time.

PRESENT BY 2024	NEAR FUTURE BY 2026	FAR FUTURE BY 2030
Maintain certifications which demonstrate DR' s ongoing commitment to sustainability – CCIQ, EcoBiz Star Partner Membership and Carbon Neutral.	Currently achieving Carbon Neutral certification with the purchase of offsets. Aim to gradually reduce the offsets. Research into further certifications such as the UN Program SME Climate Hub to demonstrate DR's commitment to becoming carbon neutral.	Eliminate the purchase of carbon offsets altogether and become fully carbon neutral as a practice.
	Organisational Greenhouse Gas Inventory by Carbon Neutral to be commissioned annually to identify the areas for improvement in GHC emissions. Currently the largest factors are electricity (over 50%) and food (24%).	
	New Office Sustainability Operations Champion is to be selected to manage the future certifications and practice related sustainability.	
Comprehensive PL03 Environmental & Sustainability Policy sets out the practice's commitment to sustainable operational standards. This includes actions as related to sustainable procurement and policies around Energy, water and waste.	Sustainable procurement – avoid using suppliers that are not committed to sustainable procurement and focused on minimising waste. Use local businesses where possible. Bulk buy of cleaning products to reduce packaging. Fix office equipment rather than replacing it.	Ensure that external presenters understand DR's sustainable procurement policy and only use sustainably focused suppliers for lunch presentations etc.
	Energy – 84x 310-watt solar panels installed for the office use. The balance is from green energy sources. Energy efficient LED lights installed throughout the office. Ducted air conditioning used as needed. Louvres installed in the upstairs area to promote natural ventilation.	Upgrades to the server and the air-conditioning system when the time to replace these arise to install a more energy efficient option. Consider using fans within the downstairs area.
	Water – water efficient fixtures and fittings including dual flush toilets. Staff encouraged to keep showers to 4 mins. Dishwasher for the office use. Conduct water audits to monitor water usage for leaks.	Consider an installation of a rainwater tank for the front garden area.
	Reduce the energy use during out of office periods – Staff to be trained to ensure computers are turned off before leaving the office as well as switching off the lights and air conditioning.	
	Conduct regular energy audits to identify areas for improvement in the office's energy efficiency.	

IMPLEMENTED
BEGUN
NOT STARTED

PRESENT BY 2024	NEAR FUTURE BY 2026	FAR FUTURE BY 2030
Comprehensive PL17 Waste Management Plan sets out core Deicke Richards principles, procedures & management of the waste generated by the practice and details the commitment to Refuse, Reduce, Reuse, Repurpose, Recover, Recycle and Dispose.	Waste – Eliminate purchase of wasteful or non-recyclable products. Practice waste reduction including paper consumption reduction – printing only in black and white and double sided. Reduce food waste during events & office presentations. Encourage staff to finish food provided for lunch the next day.	Purchase only essential products with recyclable packaging to be purchased and used.
	Introduce a composting bin within the kitchen area and introduce a dedicated team member to manage. Address soft plastics reduction and recycling within the office. Ensure that architectural library samples that are no longer in use are returned to the suppliers. Purchase of an office computer that can facilitate Bluebeam for architectural markups in lieu of paper markups.	Become a paperless office & generally reduce the office waste.
Reduce transportation related carbon footprint. Encourage shared transportation or bicycle use for employees. Online meetings where possible in lieu of travel to client / consultant offices.	Encourage reduction in employee carbon related footprint by keeping a spreadsheet with an individual information on transport carbon and update annually.	Purchase of an electric office car.
Community contribution – Current annual volunteering days for Fair share and participation in the Architects Sleepout which raises money for homelessness related causes. Pro bono work for Sharing With Friends initiative. Provide workplace opportunities for people with disabilities.	Consider additional volunteering activities that aid in the reduction of carbon footprint- such as tree planting days. Introduction of Disability Action plan to support people with disabilities in the DR workplace.	

2.3 THE HOW - ARCHITECTURAL OUTCOMES

The table outlines the actionable steps that DR will take to upskill staff with the goal of positively contributing to the environmental outcomes of our projects. The table identifies practices that are already in place, those that are to be implemented in the near future and those that are yet to commence. As we increase our knowledge in this space, these tables will be updated to reflect our shifting goals over time.

PRESENT BY 2024	NEAR FUTURE BY 2026	FAR FUTURE BY 2030
Present draft SAP to the DR team to allow opportunity for practice wide feedback. Launch Deicke Richards SAP on the website. Promote the SAP on the practice's social platforms and to existing clients and consultants. Undertake annual updates to the DR SAP.	Integrate the SAP as a comprehensive set of documents within the Deicke Richards QMS Systems as per the QMS Implementation Plan. Commence defining clear sustainability targets in all new DR project work.	Design projects with clear objectives benchmarked against case studies and sustainability credentials and initiatives
Forge and expand sustainable relationships with clients, consultants, and suppliers. Promote DR's image as a practice committed to sustainability outcomes.	Supported by the DR QMS Systems including the PF27 Brief Proforma & PF20 Consultant Scope of Service to formalise client sustainability goals and the PF20 Consultant scope of service to communicate these goals to the consultants.	Establish methodology on educating clients on sustainability initiatives and establish relationships with consultants with a clear understanding of project's sustainability goals.
Commence monthly staff training by the SAP Team on sustainability tools, initiatives, precedents and materials as well as CPD presentations with sustainability focus and external speaker talks. To be organised by the SAP team on monthly basis.	Create & launch the DR Materials and Products Guide and the ArchiCAD LCA Tool. Train the DR staff to use the Guide to make meaningful material and FF&E selections on all projects. Use the ArchiCAD LCA tool to begin measuring the carbon on all DR projects.	Utilise the information from the ArchiCAD LCA tool to analyse the project carbon and set measurable targets to reduce overall embodied carbon on all projects. Develop carbon positive targets and action plan.
Creating sustainable communities by designing spaces that are functional, comfortable, enjoyable, inclusive and accessible. Design work that considers the positive experience of the user and is grounded in research, consultation and engagement. Socially and environmentally responsive project work that responds to the site build form, climatic conditions and considers First Nations History.	Existing Reconciliation Action Plan, updated on annual basis and internal knowledge sharing. Apply rigorous design process to establish what is needed in terms of space and materials. Use sustainable, robust materials preferably Australian made and manufactured locally with low ongoing maintenance. Consider whole of life carbon during material, structural, and services selections and discussions. Place focus on circularity using materials with high recycled content and opportunities for end of lifecycle reuse and recycle. Set out to improve our own behaviours and ways of thinking.	

2.4 THE HOW - PROJECT DELIVERY

STAGE	WHAT WE DO	DELIVERABLES
Project Start-Up	Internal planning stage to establish or confirm the brief, program, and resourcing to ensure the projects overall success.	–Program. –Fee reconciliation. –Client or return brief. –Site constraints and opportunities diagram / analysis
Sketch Design	Preliminary project brief is established during this stage. Three internal Design Reviews are to be conducted during this stage to clearly define the contract documentation process.	–Client letter confirming proceeding to tender. –Tender review report. –Contract documents x3.
Development Approval	During Development Approval the project team will develop the inputs required for a town planning application.	–Completed Building.
Developed Design	Design Development is the process of refining the design and integrating initial inputs from consultants in preparation for contract documentation.	–Site Plan with setbacks and constraints noted. –GA plans with furniture. –Elevations with basic materials and fenestrations. –Sections with working floor and floor heights. –Establish rudimentary approach –To structure and services. –Preliminary interiors concepts. –3D Views. –Updated client brief (if required).
Contract Doc	Contract Documentation is the process of documenting The design of a building so that it can be priced and built. This stage can include preparing tender or for construction documents. The contract documentation process is split into two internal phases to clearly define the contract documentation process.	Planning advice dependent: –Site Plan with setbacks, deep planting and turning circles. –Development Summary – GFA, unit numbers, and car parking. –GA plans. –Elevations, overall heights, materials, and planting. –Sections. –3D views or renders. –Design statement. –Design strategy diagrams.
Tender	During the tender stage the project team is responsible for managing the tender process. This includes responding to RFI's, issuing addenda (if required), and preparing the tender report for the client.	–Site Plan. –GA plans including joinery, floor finish types. –RCPs including bulkheads coordinated with consults. –Room/ unit plans (If applicable). –Elevations including finishes and fenestration types/sizes. –Sections. Establish locations and number, minimal details. –Stair section test. –Typical details – party wall, eave. –Specification commenced. –Update client brief (if required). –Preliminary fixtures and finishes schedules. –May include 3D views to assist communication.
Contract Admin	Contract administration is the process of managing the builder's work to ensure it complies with the contract. If engaged as the superintendent, this stage also includes the administration of the contract.	–Site plan. –GA Plans – joiners, floor finish cods, details call outs. –RCPS with code types, dimensions, access panels, key lighting and merch grills. –Room / unit plans. –Set out plans – dimensions and wall types. –Elevations with codes, tags. –Sections with call outs. –Stair Sections. –Window and door schedules. –Wall types schedules (if required). –Internal elevations – wet areas and spaces with complex finishes. –Joinery details. –Construction details. –Schedules –Specification.
Project Debrief & Post Occupancy Analysis	Project debriefs are conducted after the completion of the project. They are recorded on PF18 Project Debrief Report. The purpose of a project debrief is to review project outcomes and opportunities for improvement as part of a commitment to continuous improvement.	–Project Debrief Report.

The below table details the actionable steps that DR will take during each stage of project delivery.

INTEGRATED SAP

–Potential sustainable initiatives and outcomes discussed and communicated to the client. –Documented in the PF27 Brief Proforma containing prompts related to Project Sustainability and filed accordingly on the practice's server. –PF21 Architectural Scope of service to reflect the above outcomes.
–Ensure that the project's sustainability goals are clearly defined in the tender documents. –Seek contractors that are passionate about innovation and sustainability and have –comprehensive company policies around the management of construction waste.
–Consider including a clause within the contract to ensure materials specified are in accordance with those installed on site. –Handover for the end of life to be developed.
–PR13 Design Review Procedure - Undertake 3 Design reviews with the leadership team to encourage refurbishments over building new where possible and critically assessing the size of the projects. Determine what is needed through rigorously planning to avoid designing spaces that are not necessary. –Ensure that key consultants are engaged at this stage including structural & civil engineers, environmental consultants and key services systems engineers. Capture the project's sustainability outcomes in the PF20 Consultant Scope of Services. –Discuss the benefits of engaging an external consultant to conduct the Life Cycle Analysis with the client. –Ensure that preliminary material selections are robust, sustainable, and renewable. Refer to the DR Materials and Products Guide to make preliminary selections. Ensure that materials are used only where needed and avoid unnecessary finishings. –Ensure that the project Archicad file is set up to accommodate the ArchiCAD Design LCA tool. Test a number of options with consultants to investigate an outcome with the lowest embodied carbon. –Refer to similar typology award winning sustainable project for sustainable aspirations. –Review the need for onsite demolition and options for recycle hubs and depots. –Review passive design strategies that cannot be value managed out.
–Aim to exceed the local council's sustainability requirements.
–Review project finishes, fixtures and materials for sustainable rating. Use the DR Materials and Products Guide to make selections. –Review construction methods and building systems with relevant consultants to ensure the most sustainable options in given circumstances are achieved. –Review project against the PF27 Brief Proforma and SAP principles. –Review the project's embodied carbon through the ArchiCAD Design LCA tool.
–Conduct internal documentation reviews against the PF27 Brief Proforma and the SAP to ensure the documentation meets the project's sustainable objectives. –Architectural specification including amendments as related to sustainability is to be used. Consider including a section on Contractor Waste Management. –Architectural schedules are to be finalised using the DR Materials and Products Guide
–Use the PF18 Project Debrief Report to establish if the project's sustainability outcomes were met. –Encourage the client to undertake Post-Occupancy analysis to monitor the building's sustainability outcomes. –Enter Deicke Richards projects into sustainability awards

2.5 QMS IMPLEMENTATION PLAN

TO BE UPDATED
ON PROJECT BASIS
NEW DOCUMENT

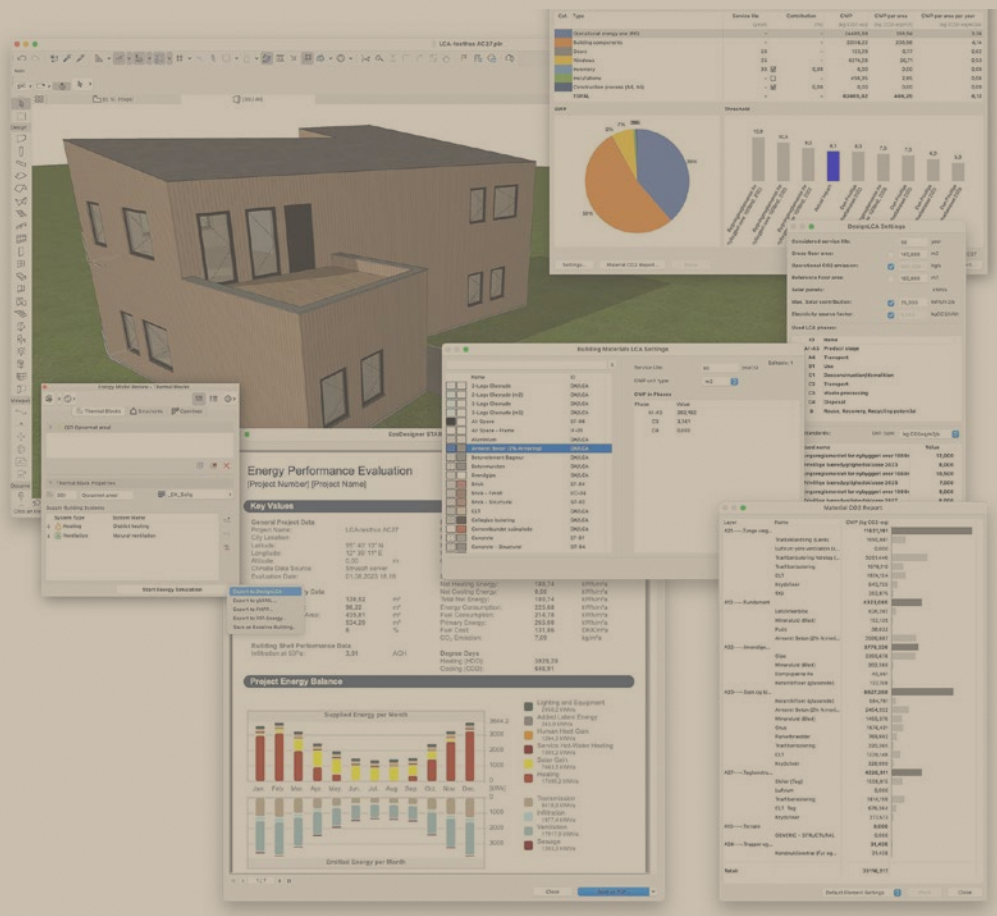
The below table denotes the actionable steps that DR will take to ensure the SAP integration into DR QMS Systems.

PF27 Brief Proforma	Implement prompts in the Proforma to aid in establishing the client's sustainability goals early in the process and formalise this using the PF27 Brief Proforma to establish what will be done as a minimum and what is the associated cost. It is critical that this is used on every new DR Project and that it is filed in the project folder and updated as required.
PF21 Architectural Scope of Services	Implement prompts in the form that communicate the client's sustainability goals and set out what is required of Deicke Richards as a minimum to achieve those.
PF20 Consultant Scope of service	Implement prompts in the form that communicate the client's sustainability goals and set out what is required of the consultants as a minimum to achieve those.
PF13 Design Review Procedure	Implement prompts within the procedure that encourage refurbishments over building new where possible and critically assess the size of the project to determine what is needed through rigorously planning. This will help to avoid designing spaces that are not necessary. Operational carbon will need to be assessed on post-occupancy data and project to project basis
PF18 Project Debrief	Implement prompts in the form that address whether the project sustainability outcomes as set out in the PF27 Project Proforma were achieved.
PF33 Project Process Checklist	Include a line on the checklist that indicates that the PF27 Brief Proforma had been used in the briefing stages of the project.
DR Materials & Products Guide	DR to research and develop a document containing several sustainable materials and products used commonly within the practice that are robust, locally sourced, consider recyclability and do not contain harmful chemical to be used as a reference base for projects for all staff to use in lieu of referring to past projects when specifying. The intent is to include several brands for each item such as vinyl, carpet, tapware etc. Like the SAP this is to be a living document, and it is to be updated on a regular basis.
ArchiCAD Life Cycle Analysis (LCA) Tool	Implement the Archicad Design LCA tool within the DR Archicad template. Implement a trial period on several projects prior to training DR staff and rolling out practice wide. Utilise this tool to evaluate several options in the initial project stages to assess different design outcomes and structural systems. Maintain during project delivery and use the data following construction documentation stage to monitor the project's carbon footprint and collect project data. Use this data to develop further strategies to achieve Net Zero on DR projects by 2030.
Architectural Specification	Updates to be undertaken on the architectural specification to ensure that the specified products reflect DR's sustainability commitments. Undertake once the DR Materials & Products Guide had been released to the DR staff.

2.6 THE HOW - LCA TOOL

The ArchiCAD LCA tool aims to provide the practice with the ability to collect carbon data across all DR projects through an ArchiCAD plugin. It will also be a valuable resource in the early design stages of projects where various structural and service systems options can be tested and compared in terms of embodied carbon. The LCA tool is to be rolled out in the following stages:

- Research and trial the most suitable LCA tool to slot within DR's current ArchiCAD protocols from the plugins currently available on the market.
- Trial on new project(s) and establish the best processes for the use of the tools. Document these processes and integrate into DR Template and design process.
- Train staff to use the plugin and roll out across all projects.
- Collect carbon data and use the tool to improve DR's design practices. Eventually utilise the tool to achieve Net Zero by 2030 on Deicke Richards projects.



DesignLCA

DesignLCA is a free plugin for Archicad that easily allows you to calculate LCA on your BIM project from early sketching. – The best thing is that you don't even have to be a LCA expert

One Click LCA

Design and deliver net-zero and circular buildings. Compare design options and find eco-friendly materials in BIM and the cloud. Differentiate and achieve carbon reductions, building certifications, and regulatory compliance.

eTool
A Cercłos Product

Zero Carbon, Zero Compromise Empowering you to design net zero buildings and infrastructure. Get the big picture of your project's operational and embodied carbon emissions with whole-of-life environmental impact assessments.

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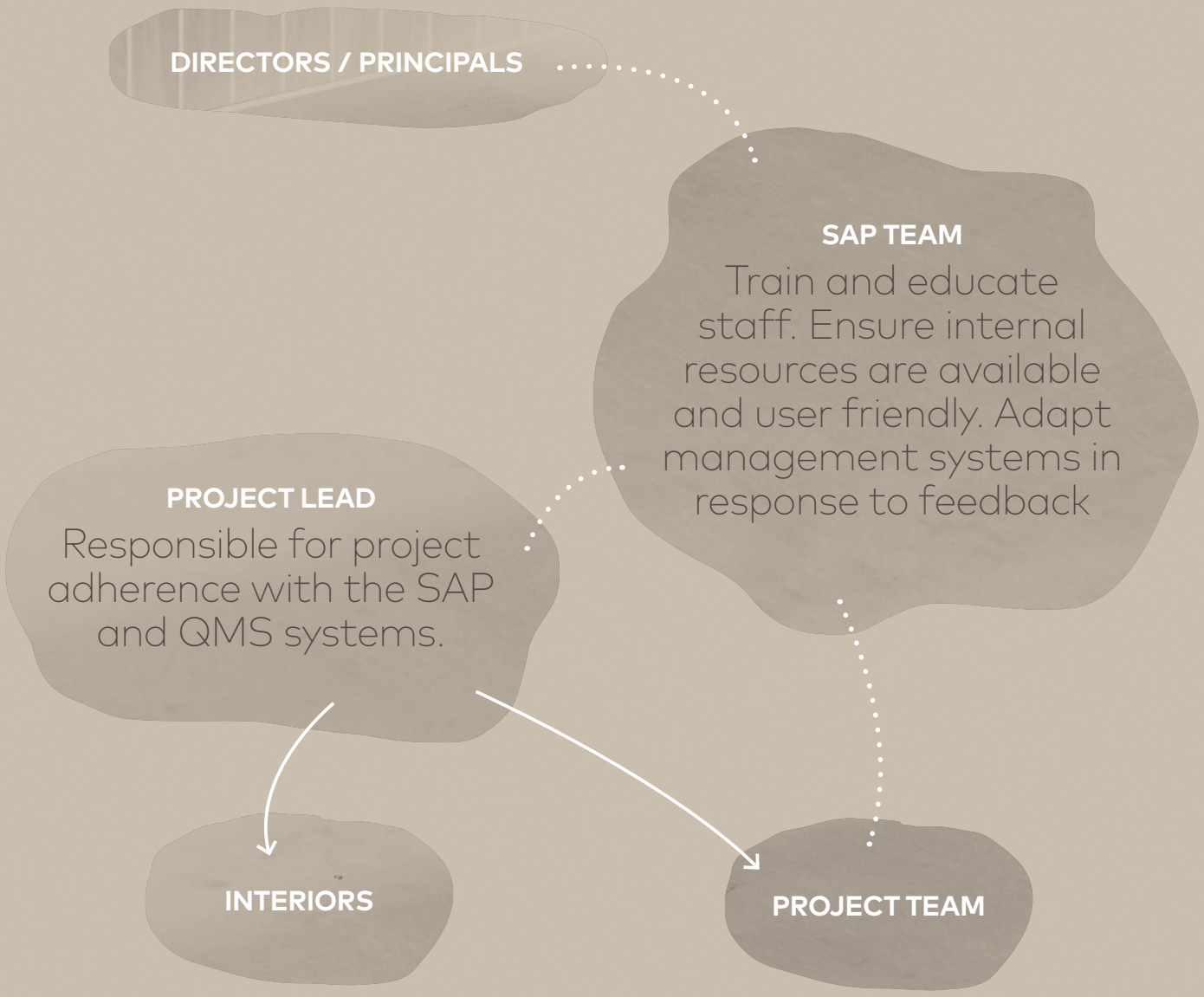
Fast, accurate, and cost-effective sustainability consulting for every firm. Leverage unparalleled resources to streamline project planning and execution, driving meaningful progress toward achieving sustainability goals.

3. THE WHO

At Deicke Richards we believe that sustainability is everyone's responsibility. While the Project Lead must ensure that the SAP and related QMS systems are adhered to, all project staff have the responsibility to design and document with the best sustainable and regenerative practices in mind and are encouraged to share ideas and initiatives.



SAP TEAM	
SAP LEAD	DOMINIKA RICHARDS - ARCHITECT
SAP ADVISOR & LEADERSHIP LIAISON	CAMERON DAVIES - PRACTICE PARTNER
SAP TEAM + LCA COORDINATION	HUNTER ECCLESTON - ARCHITECTURAL GRADUATE
SAP TEAM + OFFICE OPERATIONS	TBC

3.1 WHAT IS NEXT?

The below diagram denotes the next steps for the future development of the SAP.

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