Sustainability Summit

ARCHITECTURE DESIGN

Refuel 5.0 FORMAL CPD POINTS
Australian Institute of Architects

Our full day program entitles you to 5 formal CPD points. Please be aware you are required to manage your own CPD records. We will provide you with your participation certificate and CPD evaluation based on our attendance records post event and your completion of the below questionnaire.

1. WATER CONSERVATION AND ITS RELATIONSHIP TO SUSTAINABLE DESIGN

In designing buildings to be as sustainable as possible, the importance of implementing water-saving ideas and technologies is integral to any new building's designs. So, what are the latest water conservation ideas and technologies that need to be adopted in the built environment on a continent where water scarcity is an ever-present crisis? Where should we start with water conservation in Australia? Are water storage & water recycling and water desalination the answer? What about water efficient fixtures and appliances, rainwater and greywater reuse? What are the ideas that architects and designers could and should implement into their designs to ensure water is being recycled, reused and ultimately conserved?

At the end of this panel, attendees will be able to:

a] name at least three types of water saving designs used in Australia
b] Show how water savings can help with liveability and sustainability
c] What are some designs that can ensure water is being recycled, reused and conserved?

Competency Standard – Design: Schematic Design
Relates to: 4.2 Evaluation of design options against values of physical, environmental and cultural contexts.

2. DESIGNING AND BUILDING FOR THE NEW BUSHFIRE PARADIGM

After the bushfire crisis in Australia, the way we design, and construct buildings is set to change. What else should we be doing to prevent what we saw in the 'black summer' of 2019/2020? Does our entire approach to design and building need an overhaul and where do we need to start? Along with designs, what materials should we be looking at to build the fire-proof structures of the future? When it comes to the bushfires, what can we learn from the First Nations of Australia and can this knowledge help us manage future bushfires and help us reduce the impact of fires across our built environment?

At the end of this panel, attendees will be able to:

a] name at least three types of bushfire-resistant products
b] list at least 3 building materials that can be used for building in bushfire-prone areas
c] What are some things that Indigenous history and culture can teach us about fires in Australia?

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3. PASSIVE DESIGNS, PASSIVE HOUSES AND MULTI-RESIDENTIAL BUILDS

The Australian climate requires that homes be designed or modified to ensure that the occupants remain thermally comfortable with minimal auxiliary heating or cooling in the climate where they are built. So does passive design fit into the eight climate zones in Australia and how is this design managed by the National Construction Code (NCC)? And while the northern European-derived passive house design is not always the best solution for Australia's climate, do we need to instead concentrate on vernacular design and focus more on local needs, local materials, and local traditions and how does Australia's growing love of high-rise apartments fit into all this? Do we need an Australian version of passive house design and what would that look like?

At the end of this panel, attendees will be able to:

a] name at least three types of passive designs used in Australia
b] list all 8 climate zones in Australia that affect passive design
c] Show how passive design and passive houses can help with livability and sustainability

Competency Standard – Design: Schematic Design
4.7 Coordination and integration of appropriate environmental systems, including for thermal comfort, lighting and acoustics.

4. PLANNING FOR A CARBON ZERO / CARBON POSITIVE FUTURE

Urban developments around the world are using smart design and new materials to create net-zero energy structures and even carbon positive districts that challenge everything we have learnt about design to date. When it comes to being sustainable, one of the most effective ways to lower a carbon footprint is to reduce or even entirely eliminate a building's reliance on external fossil-fuel derived energy for power and lighting. How can residential homes and for that matter, precincts reduce their carbon environmental footprint and how have some precinct around the world been designed to be carbon positive and what can we learn and borrow from these designs?

At the end of this panel, attendees will be able to:

a] name at least three developments around the world that are using smart design and new materials to create net-zero energy structures and even carbon positive districts
b] What are the most effective ways to lower a carbon footprint in the built environment?
c] Show how carbon positive is possible in an urban context
d] What are some of the quickest and easiest ways residential homes and for that matter, precincts reduce their carbon environmental footprint?

Competency Standard – Design: Schematic Design
Relates to: 4.2 Evaluation of design options against values of physical, environmental and cultural contexts.

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5. HOW DOES BUILDING AUTOMATION LEAD TO BETTER BUILDING SUSTAINABILITY?

The future of building design belongs to structures with extensive sensor networks that can control temperature, monitor power and energy, and water consumption, track sustainability performance in real-time, and much more. In fact, automation is key in buildings when we are considering their longevity and the future since sustainable buildings emit less pollution and greenhouse gases, while at the same time have lower operating costs while increasing the value of the assets. They are also able to reduce energy (and water) consumption by optimising the operational efficacy. So how is all this technology changing the way buildings are designed, built and managed and how do we measure its' impact on sustainability?

At the end of this panel, attendees will be able to:

a] name at least three technologies currently used in building automation applications
b] What are the most effective ways to leverage technology to help lower carbon emissions?
c] What are some ways technology can help reduce energy and water consumption in a building?
d] What are some of the latest technologies we will soon see in the building automation field?

Competency Standard – Design: Schematic Design
4.7 Coordination and integration of appropriate environmental systems, including for thermal comfort, lighting and acoustics.