

## **About the research:**

Overexposure to solar ultraviolet radiation (UVR) leads to significant adverse health effects globally, the most dangerous being skin cancer. With climate change the number of people effected is expected to increase substantially, with one study predicting an 11% increase with a 2 °C (3.6°F) increase in ambient temperature by 2050. Current approaches to reduce skin cancer rely on building public awareness of the dangers, and of individual sun protection measures (e.g., wearing hats and applying sunscreen). However, studies indicate they provide inadequate protection to reduce the incidence of cancer. While landscape design can help prevent overexposure, the focus has only been on shade provision, which has similarly been found to be inadequate to ensure protection. Studies indicate many people are not using shaded areas, and even if they do, they are not adequately protected from UVR exposure. For people to be protected in open spaces, four key design objectives need to be met: 1) protect from direct UVR overexposure, 2) protect from indirect UVR overexposure, 3) ensure thermal comfort, and 4) provide attractive activities or play opportunities.

Through literature review and modelling, this research involves the development of design guidelines in support of sun protection behaviour in public recreational spaces using Christchurch as a case study

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