The prevalence of skin cancer in North Queensland is among the highest in the world, yet comparably few individuals report deliberately sunbathing to get a tan. This might suggest that sun damage in this region is due to incidental sun exposure – exposure that is not planned or deliberate. Until now, skin cancer prevention efforts have focused on decreasing deliberate sun exposure, while only limited research has explored the psychosocial factors that contribute toward incidental sun exposure. The theoretical frameworks that have guided past research have successfully accounted for planned behaviour such as deliberate tanning and sun protection. However, these frameworks are not likely to be effective for the prediction of incidental sun exposure, which is typically unplanned and reactive to environmental cues. If incidental sun exposure is to be explored in future research, novel approaches and new theoretical frameworks are required. The prototype willingness (PW) model is a dual-process model of health behaviour. The pathways of the model have been designed to differentially predict calculated and deliberative, as well as reactive and spontaneous behaviours. With these dual pathways to behaviour, the PW model provides the breadth of scope required to predict a range of sun-related behaviours. A focus on incidental sun exposure is particularly important for environments with high ambient ultra violet radiation (UVR) exposure where targeted health promotion messages are required to reduce sun exposure and the incidence of skin cancer.