

**CITIES OF TOMORROW (CoT) R&D PROGRAMME  
GRANT CALL 1  
FOR VERTICAL 5: CITY IN NATURE**

**FREQUENTLY ASKED QUESTIONS (FAQS)**

**CALL TOPIC 4: LANDSCAPE AND WELL-BEING**

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Please note that the FAQs will be updated periodically. Please refer to the [CoT V5 programme 1<sup>st</sup> Grant Call website](#) and [IGMS website](#) for the latest version of the FAQs.

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**T4. CALL TOPIC 4**

**T4.1 What type of guidelines are expected to be developed from research under this Call Topic? (09 March 2023)**

Research under this Call Topic should develop design guidelines that stipulate the landscape quality attributes relevant in promoting mental well-being. These guidelines ought to be applicable for all HDB developments, and can also be adopted for parks and green spaces, and other types of developments.

**T4.2 Are there any existing nature landscapes/locations in Singapore where data on improvements to mental well-being should be collected from? (09 March 2023)**

This Call Topic does not specify any particular locations where data should be collected from. Research proposals should suggest an appropriate set of study locations that are suitable for developing a baseline mental health measurement for standard residential neighbourhood landscapes, and for measuring improvements to mental health as brought about by enhanced landscape attributes.

**T4.3 One of the objectives of the Call Topic is to validate the correlation between better mental well-being and optimised landscape typologies through the development of landscape prototypes and on-site experiments. Do these on-site experiments require making physical changes to the space and investigating the corresponding changes to mental well-being? Can the experiments be done virtually instead of on-site, as the latter would be potentially costly and unfeasible within the duration stipulated for the Call Topic? (09 March 2023)**

The objectives of this Call Topic include directly testing the effects of identified landscape quality attributes on mental well-being and subsequently, validating the overall results in actual settings (i.e., actual neighbourhood or natural area).

Researchers may propose for some landscape quality attributes to be tested virtually. However, validation of the test results in actual physical sites would still be important and necessary.

Teams could use existing physical sites, which may already have landscape quality attributes designed with mental well-being considerations in mind, as possible validation sites.

Submitted proposals will be evaluated accordingly, based on their proposed project scope.

**T4.4 Besides landscapes in public housing estates, would landscapes around commercial or medical hubs be of interest for this Call Topic? (09 March 2023)**

The Call Topic is predominantly focused on landscapes in public housing estates – particularly, on-site experiments should be conducted in HDB neighbourhood settings. Nonetheless, the research findings could also apply to other settings, such as commercial and medical hubs.

**T4.5 Besides looking at mental well-being, will looking at physical well-being be of interest for this Call Topic? (09 March 2023)**

The Call Topic primarily intends to examine the effect of landscape attributes on mental well-being. As part of this, research under this Call Topic should look at physio-psychological indicators (e.g., heart rate, cortisol levels, and frontal cortex activities) of mental well-being, which are readily measurable, and which also respond more quickly to changes in the physical landscape.

**T4.6 How will new design guidelines developed as part of the research under this Call Topic relate to existing ones (e.g., design guidelines for contemplative landscapes by CUGE, NParks)? (09 March 2023)**

The existing guidelines may be used as a resource to understand landscape attributes which have positive effect on mental well-being.

This Call Topic aims to build on the existing guidelines, and further examine the effect of landscape quality attributes on mental well-being, with a focus on neighbourhood environments such as void decks, precinct gardens and common greens within public housing estates.

**T4.7 Is the Call Topic only interested in measuring physio-psychological indicators (e.g., levels of cortisol and heart rate)? Can proxy data from regular health-check-ups be considered for the proposed research? (09 March 2023)**

For this Call Topic, we aim to collect direct outcome measures in relation to exposure to public spaces with varying landscape quality attributes, by looking at physio-psychological indicators such as heart-rate, cortisol, and/or frontal cortex activity.

The research team may propose suitable indicators in their proposal, but they must be accompanied with supporting reasons (preferably based on literature). For example, proxy data from regular health-check-ups may supplement as an additional layer of information for correlational analysis.

- T4.8** Given that the Call Topic’s definition of landscape quality is broad, including “attributes such as landform, vegetation, furniture, built structures, water elements, character, views, vistas, building density, etc.”, are there any important set of elements to specifically test for, with regard to their impacts on mental well-being in this Call Topic? (09 March 2023)

Identifying specific landscape quality attributes which positively impact well-being is part of the scope of the Call Topic. Research teams can conduct a shortlist of attributes through literature review.

- T4.9** Would green spaces within and around hospitals and polyclinics, be accepted by HDB as viable/suitable study sites, in place of the actual implementation sites like community gardens within public housing estates? (09 March 2023)

The validation site should be at a HDB neighbourhood landscape area. For this, researchers could propose wearable sensors. As for testing the various attributes and their correlation to well-being, this can be done through simulation. Overall, the proposed research should have a good balance of objective and subjective measurements.

- T4.10** Given the significant emphasis on landscaping and urban planning, would HDB provide guidance on the “development of landscape prototypes and on-site experiments”, such as through direct inputs from HDB landscape architects regarding the experimental design, so that prototypes reflect real needs within public housing areas? (09 March 2023)

Given the significant emphasis on design and planning, it would be ideal if the research team includes experts in this field, e.g., an architect or landscape architect. HDB will also be heavily involved in the research project, once awarded.