Exploring the effect of neighboring building on land surface temperature of central park

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Urban parks can effectively mitigate the urban heat island (UHI) effect. Many studies have investigated the relationship between the shape, size, interior components and cooling effect of the park, little attention have been given to explore the relationship between land surface temperature (LST) of central park and buildings in the neighboring areas. This study has explored the effect of the neighboring building on LST of central park, taking Beijing as the study area. The results showed that the cold island footprint of the park in summer was larger than that in winter (with an average area of 0.15 km\(^2\) larger). The components of building in cold island footprint of the park were dominated by middle-rese building (MRB). LSI of MRB and AREA_SD of LMB were identified as the key explanatory variables in summer and winter, respectively, which could explained 16.8% and 13.9% of the variance in the park's LST. This study could extend scientific understanding of the effect of building on park's LST, and could provide guidance to urban planners on how to mitigate the UHI effects through the rational allocation of buildings.