Inventory of supplemental materials

File name	Specific content	Corresponding parts in the manuscript
Codes	The mapping schema between IFC and IDF	Section 3.1.2
	IFC2IDF function library	Section 3.1.3
	Grid-based dataset generation	Section 3.2.1
	Surrogate model training	Section 3.2.2
	NSGA-II-based WPS optimization algorithm	Section 3.3.2
	WPS2Drawing	Section 3.3.3
Table S1 Surrogate model development for assessing WPS performance	Generated dataset for surrogate model development	Section 3.2.1
	Training parameters and model structure design	Section 3.2.2
	Values from simulation and surrogate model	Section 3.2.3
Table S2 Optimized WPSs for the case building	Pareto optimal solutions of WPSs with flexible window sizes	Section 4.2.1
	Pareto optimal solutions of WPSs with fixed window sizes	Section 4.2.2
	4 optimized WPSs of rooms under different objective weightings	Section 4.2.1 & 4.2.2
	4 examples of pareto optimal solutions for room-level WPSs under different weights	Section 4.2.1
Table S3 The performance comparison	List of experts and five expertise-based WPSs	Section 5.1
	5 flexible-sized WPSs from our approach	Section 5.1
	5 fixed-sized WPSs from our approach	Section 5.1
	Comparing E-WPS to O-WPS using the Wilcoxon test	Section 5.1
	The time comparison between software simulation and surrogate model	Section 5.2
Video S1	Time for the software simulation to process one WPS of one room	Section 5.2
Video S2	Time for the surrogate model to process one WPS of one room	Section 5.2
Video S3	Time for deriving one building-level WPS using surrogate model-based approach	Section 5.2

All supplemental materials including codes, data and videos are available in the GitHub repository (https://github.com/0AnonymousSite0/A-multi-objective-window-placement-approach-using-BIM-and-surrogate-model).