

1st April 2026

Daylight, Sunlight and Technical Compliance Implications of Classroom-Adjacent Canopies - Brookleigh PS1

This note sets out the technical considerations associated with the installation of canopies in close proximity to classroom façades.

Canopies fixed directly to classroom elevations would introduce a permanent overhang and physical obstruction to the proposed façade glazing. Such interventions would materially reduce both daylight and sunlight availability within the affected teaching spaces by restricting visible sky and limiting the penetration of direct and diffuse daylight through the windows.

The school has been designed to comply fully with the Department for Education (DfE) Output Specification, specifically *Technical Annex 2E: Daylight and Electric Lighting* (refer to **Appendix 01**). The current façade and fenestration strategy has been carefully developed to meet these prescribed performance standards. There is no residual tolerance within the achieved daylight metrics to accommodate additional external obstructions without resulting in non-compliance.

At the request of the Local Planning Authority, a detailed technical daylight assessment has been undertaken to test the impact of introducing external canopies to selected ground-floor classrooms (refer to **Appendix 02**). Two scenarios were assessed:

1. Canopies modelled as opaque elements with no daylight transmission; and
2. Canopies modelled as glazed elements, allowing limited daylight transmission through the overhang.

The results demonstrate that in the opaque canopy scenario, all education spaces to which canopies are attached fall below the daylight targets set out in Technical Annex 2E. Retained Spatial Daylight Autonomy (sDA) values range from 151–214 lux, significantly below the required 300 lux target. Overall compliance reduces to 67%, which is materially below the requirement for at least 80% of Basic Teaching Spaces to meet the standard, as defined within the DfE Output Specification.

While the glazed canopy scenario performs marginally better, achieving retained sDA levels of 182–244 lux, all affected education spaces nevertheless remain below the required 300 lux threshold. As such, neither option is capable of maintaining technical compliance.

With respect to overheating, extensive analysis was undertaken during the design stage to balance overheating mitigation with the daylight performance requirements. The resulting façade design represents an optimised solution that satisfies both thermal comfort and daylight standards. In isolation, overheating considerations would not preclude the use of canopies, and it is acknowledged that such features can assist in mitigating solar gains. However, façade performance relies on a finely balanced interaction between daylight provision and thermal control. Introducing canopies adjacent to glazing would undermine this balance, resulting in unacceptable detriment to daylight compliance that cannot be mitigated elsewhere within the design.

In conclusion, the positioning of canopies directly adjacent to classroom glazing is therefore not viable. Our Daylight Consultant advises that any canopy or similar structure would need to be located a minimum distance of 3–5 metres away from the façade to avoid adverse impacts on internal environmental performance.

Given the sensitivity of the building's daylight strategy and the lack of capacity to accommodate future obstructions, it is considered reasonable for the Local Planning Authority to remove Permitted

Development rights for the installation of canopies or similar structures adjacent to classroom elevations. This would ensure that future alterations do not compromise the environmental quality of teaching spaces or undermine compliance with DfE technical standards.

End.