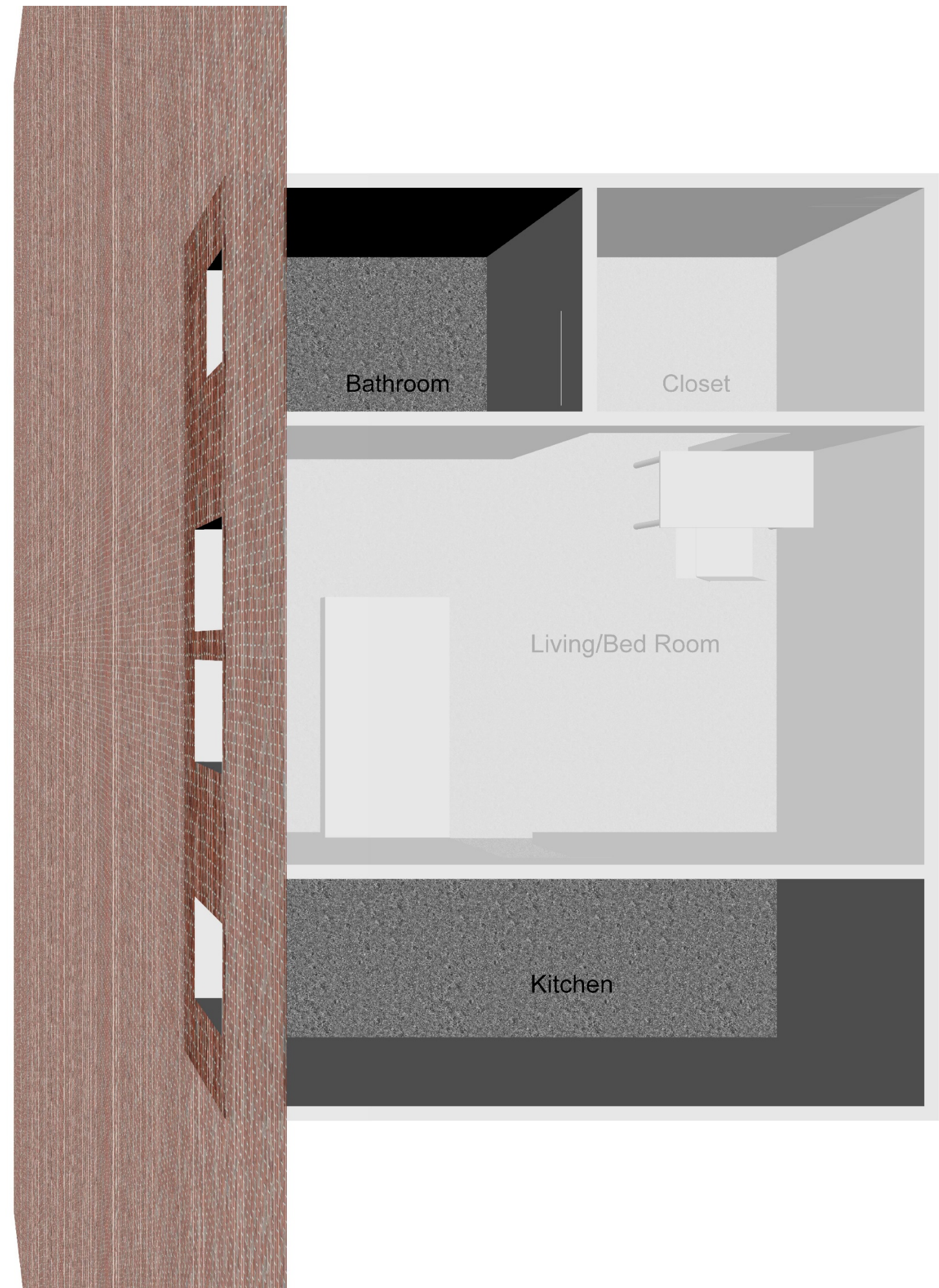
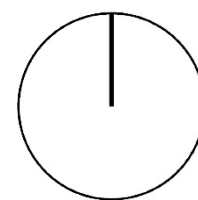


- This is a 3rd floor studio apartment in a four-storey apartment building.
- The living/bedroom + closet area of the apartment is treated as a single EnergyPlus zone.
- The zone has two West-facing windows on the exterior wall.
- The building is a wood-framed brick structure from the early 1900s.
- There may or may not be additional insulation in the walls.
- The windows are double-glazed but of poor construction with significant infiltration.
- The interior walls of the zone are modelled as adiabatic surfaces based on the assumption that the adjacent apartments and corridor are maintained at the same temperature as the apartment.



- If the windows are modelled as being inoperable then the zone is too hot for comfort for a majority of the year.
- If the windows are modelled as being operated between 20-30°C internal temperatures, then the zone is comfortable for approximately 62% of the year.
- However, if a realistic level of infiltration (0.0003m³/m² of façade) from the windows is taken into account, then the zone is comfortable for only about 26% of the year due to a loss of heat in winter.
- The influence of the internal loads from a single occupant using a laptop, four LED bulbs and a fridge appears insignificant.
- The easiest strategy to improve the performance of the zone is therefore to decrease infiltration.

