**Module 7 Week 5 Exercise 26**

EXERCISE 26

Apply the AS/NZS 3000 standard to design a bathroom electrical layout that adheres to safety regulations and zoning guidelines.

1. Refer to the regulations and requirements for electrical installations in bathrooms according to AS/NZS 3000. Familiarise yourself with the different zones in a bathroom and the safety measures associated with each zone.
2. Examine the 3D bathroom layout provided (see picture below), noting any potential hazards or considerations related to water sources and wet areas.

|  |
| --- |
| Potential hazards include… |

1. Divide the bathroom layout into different zones according to the regulations. Shade each zone a different colour and write in its dimensions (these do not have to be to scale).
2. Plan and strategically place (draw) electrical installations within each zone, while adhering to the regulations. Consider safety, convenience, and the overall layout of the bathroom. These electrical installations should include:

* **Power sockets** - Show the placement of power sockets in accordance with zone requirements, e.g., you might include power sockets near vanities and countertops, following the specified distances from water sources.
* **Light switches** - Indicate the location of light switches, considering convenience and safety. Make sure switches are appropriately positioned to avoid contact with wet hands.
* **Heated towel rail** - Show the position of a heated towel rail, taking into account its distance from water sources and any specific regulations.
* **Exhaust fan** - Indicate the placement of an exhaust fan, considering proper ventilation and compliance with zoning guidelines.
* **Ceiling or wall-mounted light fixtures** - Show the placement of ceiling or wall-mounted light fixtures, ensuring they are positioned safely and effectively illuminate the bathroom.
* **Shaver outlets** - Include shaver outlets in suitable locations, adhering to regulations and safety standards.

1. Complete the table explaining the rationale behind your placement of the electrical installations.

|  |  |
| --- | --- |
| * **Power Sockets** | |
| Type of fitting including IP rating |  |
| Zone |  |
| Location description |  |
| Location rationale |  |
| * **Light Switches** | |
| Type of fitting including IP rating |  |
| Zone |  |
| Location description |  |
| Location rationale |  |
| * **Heated Towel Rail** | |
| Type of fitting including IP rating |  |
| Zone |  |
| Location description |  |
| Location rationale |  |
| * **Exhaust Fan** | |
| Type of fitting including IP rating |  |
| Zone |  |
| Location description |  |
| Location rationale |  |
| * **Light Fixtures** | |
| Type of fitting including IP rating |  |
| Zone |  |
| Location description |  |
| Location rationale |  |
| * **Shaver Outlets** | |
| Type of fitting including IP rating |  |
| Zone |  |
| Location description |  |
| Location rationale |  |

1. Share your completed bathroom electrical layout with your tutor and classmates, highlighting the zoning, installation placements, and safety considerations based on the AS/NZS 3000 standard.
2. Have you followed the AS/NZS 3000 standard? Have your classmates adhered to the standard? Are there any improvements you would make?

