# Glass Floors

## Design Requirements Criteria

1. What Building Classification is it?
   - **A** – Residential;
   - **B** – Public or;
   - **D** – Retail

2. What sub-category is it?
   A1; A2; A3; A4 or;
   B1; B2; B3; B4 or;
   D

3. Client must supply an evenly distributed *(4) and fixed point *(5) design load.

| | | | *4 | *5 |
|---|---|---|---|---|
| Cat | Sub Cat | Description | $q_k$ (kN/m²) | $Q_k$ (kN) |
| | A1 | Houses | 1.5 | 1.5 |
| | A2 | Hospital/Schools/Hotels | 2.0 | 1.5 |
| | A3 | Stairs | 3.0 | 1.5 |
| | A4 | Balconies | 4.0 | 3.0 |
| | B1 | Offices | 2.5 | 4.5 |
| | B2 | Libraries | 3.0 | 4.5 |
| | B3 | Kitchens/Bathrooms/Toilets | 3.0 | 5.0 |
| | B4 | X-Ray Rooms/Operating | 3.0 | 5.0 |
| | D | Shopping Centres | 5.0 | 5.0 |

## Framing:

- Each piece of glass needs to be rigidly supported all round.
- Frame/glass bite needs to be a minimum of 1.5 times the design glass thickness.
- All Framework will need to be signed off by a Structural Engineer, and needs to withstand the self-weight of the glass as well as the required design load.

## Other Factors to be considered with Glass Floors

- Does the client require a non-slip application applied to the glass surface? (glass is very slippery when wet)
- For external applications – a thermal stress evaluation is required.
- Never recommend toughened glass panels due to the post fracture strength of toughened glass.
- If breakage occurs with a toughened multi laminate, either 25% or 33% of the overall glass strength will be compromised depending the overall glass thickness.
- All glass floors will need to be ***SIGNED OFF BY A COMPETENT PERSONS (GLAZING) or PR ENGINEER.***

When in doubt, please email msagi@natglass.co.za with all the information above as well as framework details if possible.