

# SURFACE REQUIREMENTS FOR PAVERS



Requirements for Concrete Segmental Pavers and Tactile Ground Surface Indicators (TGSIs)

## DEFINITIONS

**Paver** – Refers to a solid unit with gross plan area less than or equal to 0.08 m<sup>2</sup> which is used to form a surfacing layer.

**Flag** – Refers to a large format solid paver with gross plan area greater than 0.08 m<sup>2</sup>.



Pavers



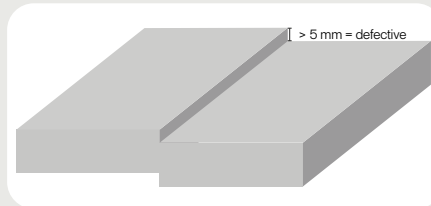
Flags

## GENERAL REQUIREMENTS

Segmental and permeable interlocking concrete pavements must adhere to the following requirements:

- For pedestrian applications, the pavers must have a minimum 2 kN breaking load and have a minimum thickness of 40 mm.
- For pedestrian and light vehicle access (driveways, parking, etc.) the pavers must have a 3 kN breaking load and must have a minimum thickness of 40 mm.
- For pavements carrying commercial vehicles, the pavers must have a 5 kN breaking load and must have a minimum thickness of 60 mm.

- Pavements are defective if the lippage between 2 adjacent pavers exceeds 5 mm.
- According to AS 1428.4.1 standard joint gaps between pavers must not exceed 12 mm and must be completely filled. Gaps in permeable pavements larger than this may require additional approval.



## SLIP RESISTANCE

The following slip resistance should be used:

- Pavers placed on external colonnades, walkways and pedestrian crossings should have a minimum P4 slip resistance rating.
- Pavers on external ramps must have a class P5 slip resistance rating.
- Pavers used for undercover concourses must have a minimum P4 slip resistance rating.
- Pavers used for external stair nosings must have a minimum P4 slip resistance rating.

## PAVER AND FLAG MINIMUM REQUIREMENTS (Based on Table 2.8 AS/NZS 4455.2)

Pavement Application		Minimum Characteristic Breaking load kN		Work Size Minimum Thickness mm	
		Pavers	Flags	Pavers	Flags
Relevant Australian Standard		AS/NZS 4455.2 AS/NZS 4456.5		AS/NZS 4455.2	
Residential	Pedestrians only (e.g. paths, patios and outdoor areas)	2	5	40	40
	Pedestrian and light vehicles only (e.g. driveways, parking spaces and the like)	3	7	40	50
	Pedestrian and commercial vehicles	5	8	60	60
Public Space	Pedestrians only	2	5	40	40
	Pedestrian and light vehicles only	3	7	50	50
	Pedestrian and commercial vehicles	5	§§	60	§§
Trafficked Segmental Pavers	Minor and residential	6	NA	60	NA
	Local access	6	NA	60	NA
	Collector	6	NA	76	NA
Industrial	-	10	NA	80	NA

§§ – Consult with your manufacturer for allowable specification.

# DESIGN FOR ACCESS AND MOBILITY

Ulverstone Cultural Precinct by Playstreet  
Photography by Isaac Fergusson

## ADDITIONAL TGSi REQUIREMENTS

TGSIs are textured surfaces that are installed on the ground to assist visually impaired individuals in navigating their surroundings safely.

TGSIs are required in various applications such as:

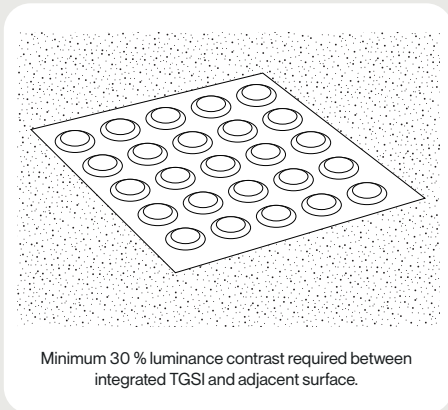
- **Stairs and Escalators: Top and Bottom Landings:** TGSIs must be installed at the top and bottom landings of stairways and escalators to alert users of the change in level.
- **Ramps: Top and Bottom Landings:** TGSIs are required at the top and bottom of ramps

- **Platform Edges:** TGSIs must be placed along the edges of train and tram platforms to alert users of the platform edge.
- **Bus Stops:** TGSIs are needed at designated waiting areas at bus stops.
- **Pathways and Walkways:** TGSIs may be required on certain public footpaths, sidewalks, and walkways to guide safe travel routes.

TGSIs must also comply with the following:

- TGSIs should be slip resistant where they have a top surface no more than 4 to 5 mm above the base surface.
- The base surface of an integrated TGSi should not be more than 3 mm higher than the abutment surface of the surrounding surface/s and shall have all exposed external edges chamfered.

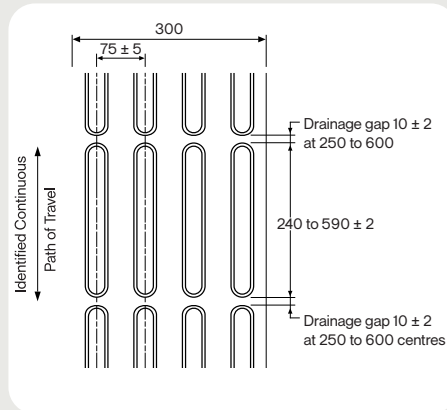
## LUMINANCE CONTRAST



TGSIs shall have luminance contrast to the base surface as follows:

- Where the TGSi is an integrated unit, it shall have a minimum luminance contrast of 30% compared to the amount of light reflected from the surface of the adjacent path of travel, when tested to Appendix E of AS 1428.4.1.
- For discrete TGSIs, not less than 45%.
- If two or more materials (or colours) are used for discrete TGSIs, the raised surface must have a section that has 60% luminance contrast for a diameter  $25 \pm 1$  mm tested as required by AS 1428.4.1.

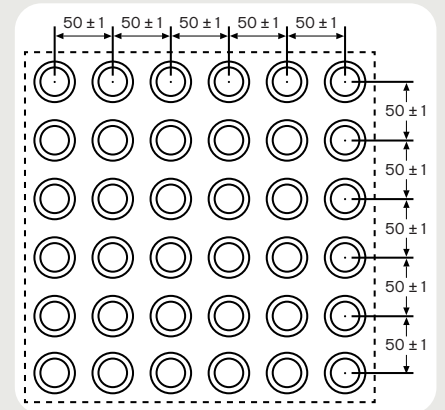
## DIRECTIONAL TGSi



Directional TGSIs:

- Need to comply with the figure above.
- Need to be installed parallel with and along the centre-line of the required direction of travel.
- Where directional TGSIs are placed across the direction of travel, they must extend over a depth of 600 mm to 800 mm.
- See AS 1428.4.1 for more information.

## WARNING TGSIs



Warning TGSIs:

- Need to comply with the figure above.
- Need to be designed perpendicular to the direction of travel when approaching the hazard.
- Need to be setback  $300 \pm 10$  mm from the edge of the hazard except at railway platforms and wharves.
- Need to be installed for the full width of the path of travel.
- See AS 1428.4.1 for more information.