

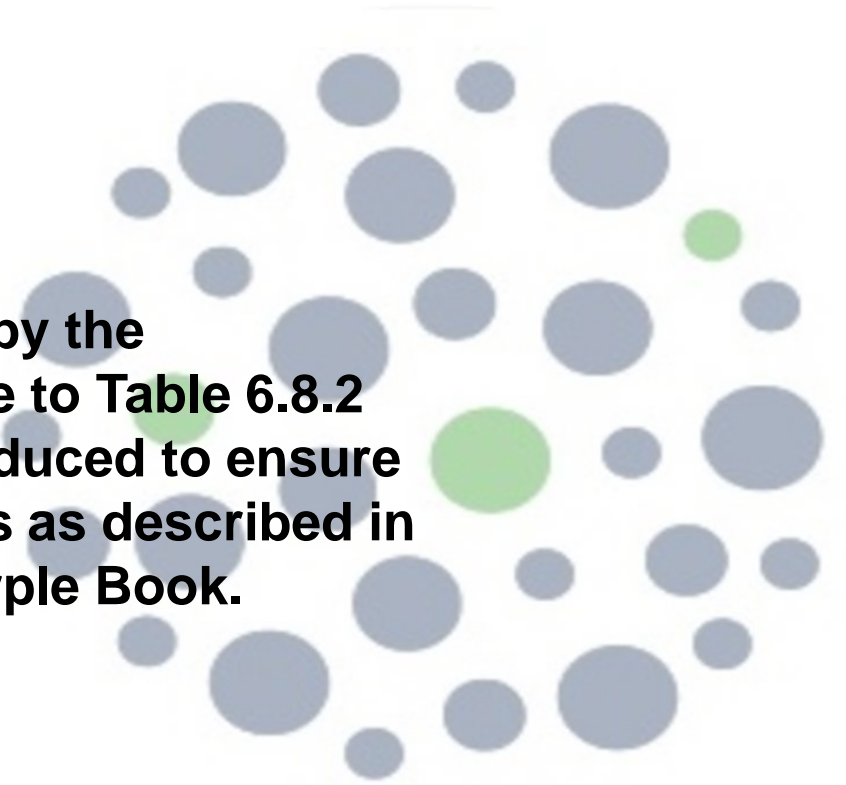
Circular RW 12 of 2025

**Reinstatement Tolerance and Intervention Limits as set out
in the Guidelines for Managing Openings in Public Roads
(The Purple Book)**

Training Material

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Following the issuing of Circular RW 12 of 2025 by the Department of Transport, and the revisions made to Table 6.8.2 Intervention Limits, this document has been produced to ensure national consistency for measurement of defects as described in Section 6.8.2 Reinstatement Tolerance in the Purple Book.



Surface Profile Measurements

1. Reference shall be made to the Guidelines to Managing Openings in Public Roads and specifically to section 6.8.2
2. The reinstatement of any surface shall be completed so that it is as flat and flush as possible with the surrounding adjacent surfaces. There should be no depression or crowning in the surface. Construction tolerances at the edges of the reinstatement shall not exceed 0/+3mm.
3. Once the reinstatement is registered as completed and opened to traffic, the intervention limits specified in Table 6.8.2 and described further in Sections 1-4 shall apply and not the construction tolerance.
4. At the end of the Guarantee Period, where the profile of the existing surfaces adjacent to the reinstatement is uniform and the surface of the reinstatement is outside the intervention limits, remedial works shall be carried out to restore the surface profile of the reinstatement to a condition consistent with the adjacent surfaces.

Tools required for Profile Measurement

To measure defects in road Opening Reinstatements, some tools are required which normally include the following:

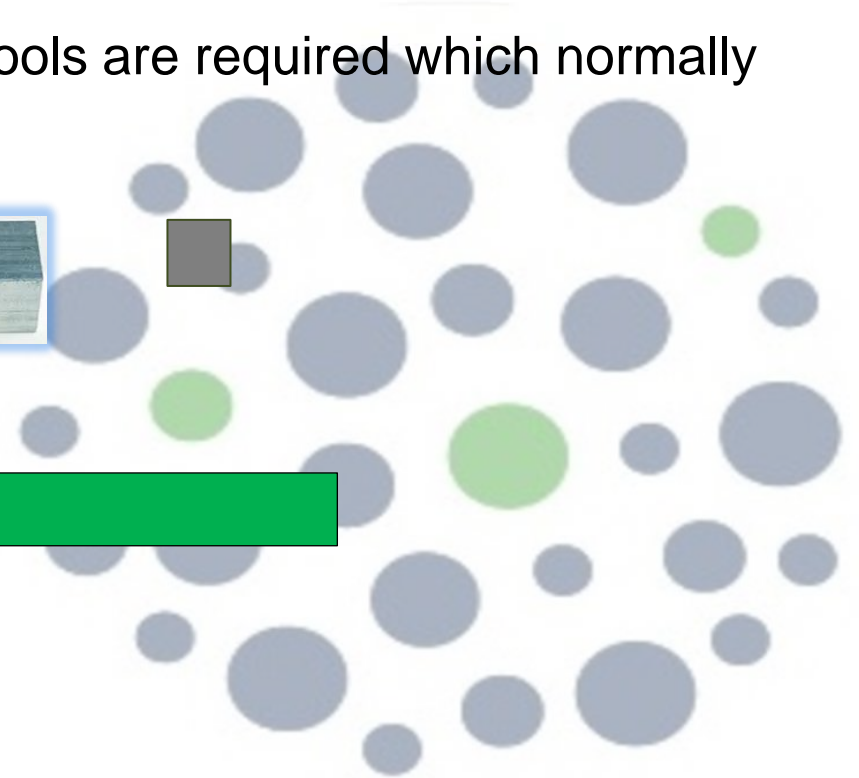
- A graduated measuring wedge



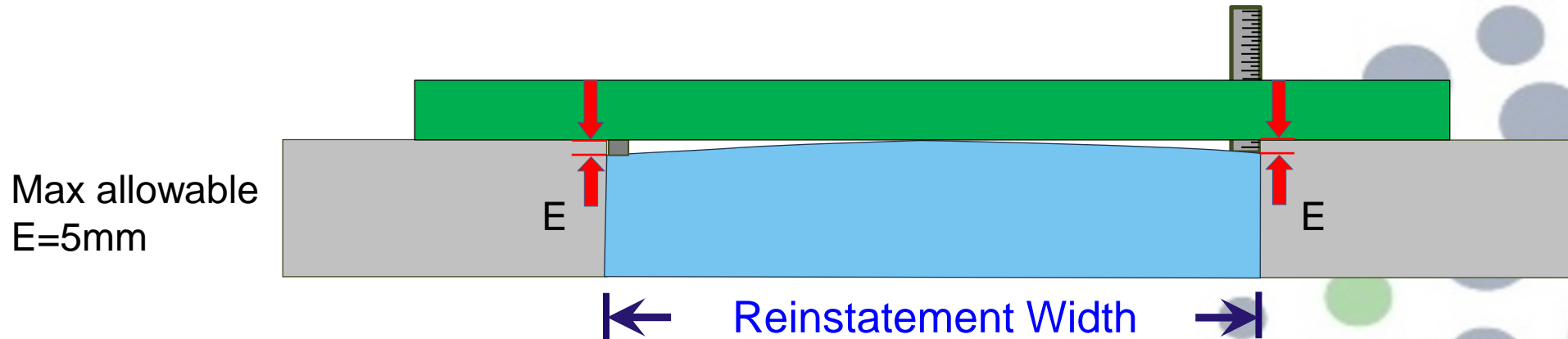
- A straight edge



- A graduated steel ruler or a measuring tape.
- A good quality camera to record the defect

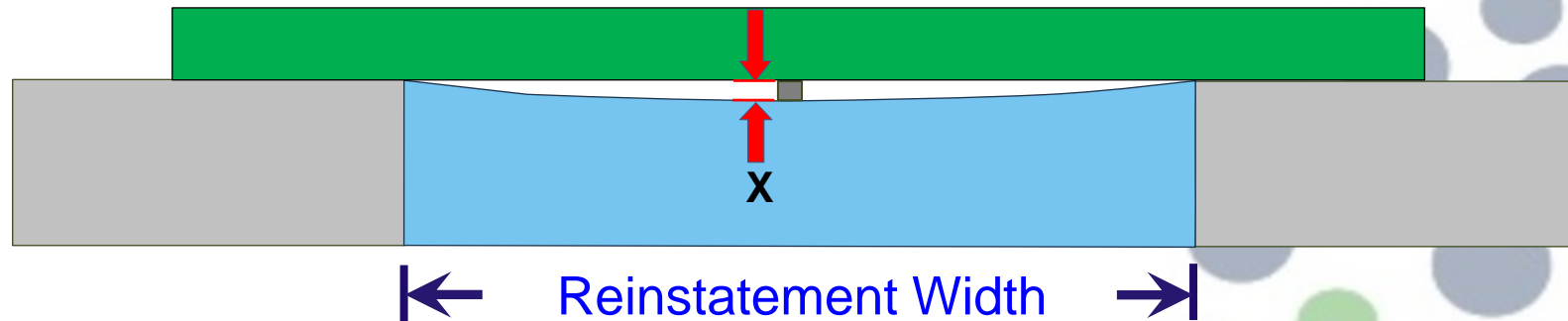


Section 1 Edge Depression Measurement



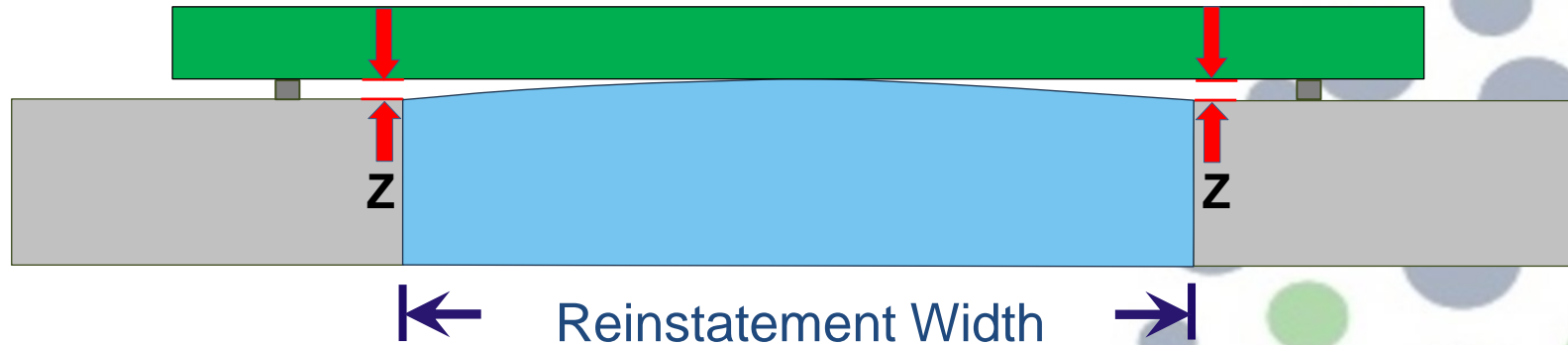
- To measure edge depression lay a straight edge across the reinstatement and place the graduated wedge or steel ruler at the greatest depth of edge depression and read measurement.
- Repeat the process at intervals across the reinstatement in all planes to get accurate results
- Intervention shall be required where the depth of any edge depression (E) exceeds 5mm over a continuous length of more than 100mm in any direction

Section 2 Surface Depression Measurement



- To measure surface depression lay a straight edge across the reinstatement and place the graduated wedge or steel ruler at the greatest depression and read measurement.
- Repeat the process at appropriate intervals across the reinstatement in all planes to get accurate results
- Intervention shall be required where the depth of any area of surface depression (X) spanning more than 100mm in any plan dimension exceeds the intervention limits shown in Table 6.8.2 of the Guidelines

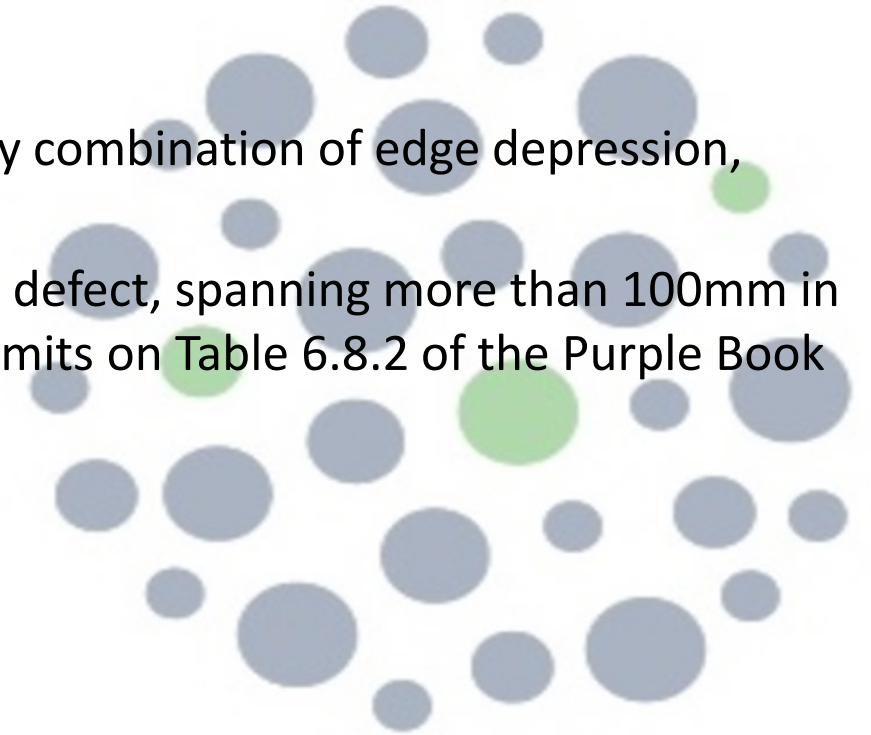
Section 3 Surface Crowning Measurement



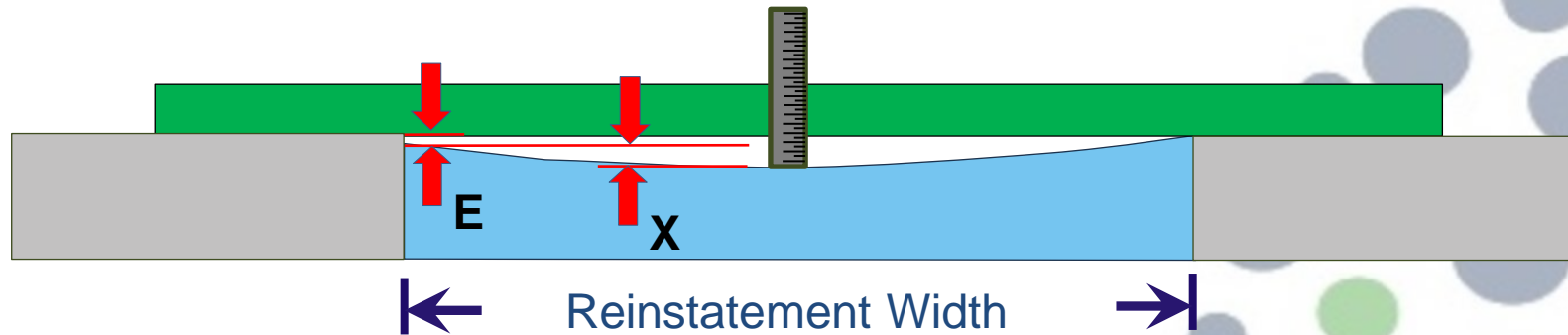
- To measure surface crowning lay a straight edge across the reinstatement, from existing surface to existing surface and insert 2 graduated measuring wedges, equalise both wedges and read measurement.
- Repeat the process at intervals across the reinstatement in all planes to get accurate results
- Intervention shall be required where the depth of any area of surface crowning (Z) spanning more than 100mm in any plan dimension exceeds the intervention limits shown in Table 6.8.2 of the Guidelines

Section 4 Combined Defect Intervention

- A combined defect is an area within the reinstatement where any combination of edge depression, surface depression or surface crowning overlap exists.
- Intervention shall be required where the extent of any individual defect, spanning more than 100mm in any plan dimension, exceeds the combined defect intervention limits on Table 6.8.2 of the Purple Book for the relevant defect.



4.1 Combined Edge Depression & Surface Depression

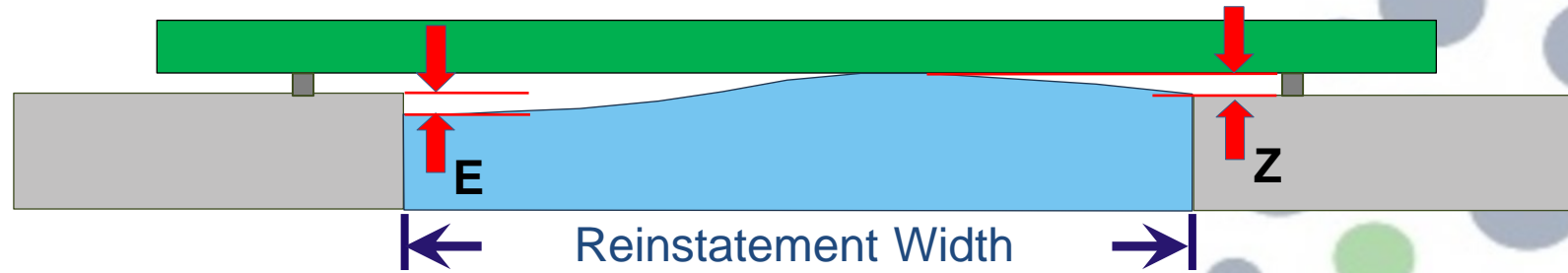


Combined Depression (C)

Where an edge depression (E) abuts an area of surface depression (X), then the area of combined depression should be measured as shown.

Combined Defect $C = E + X$ where $E \leq 5\text{mm}$.
(Maximum allowable tolerance for (E) Edge Depression = 5mm)

4.2 Combined Edge Depression & Surface Crowning



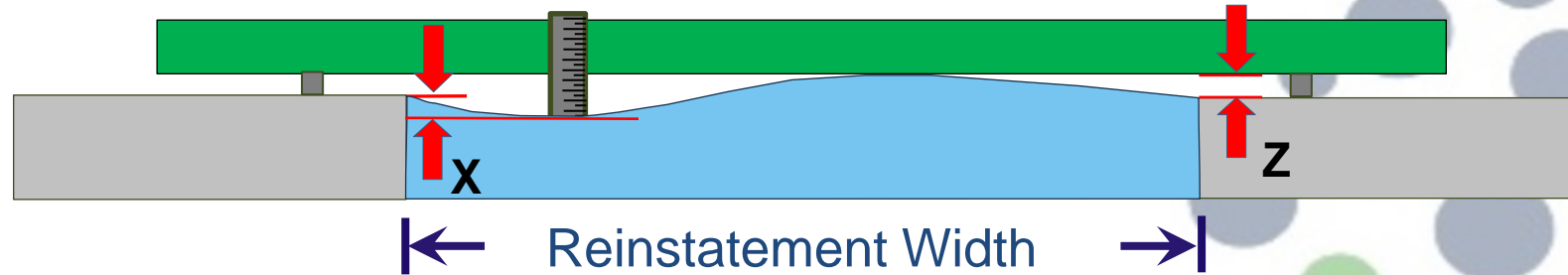
Combined Edge Depression & Crowning (C)

Where an edge depression (E) abuts an area of surface crowning (Z), then the area of edge depression and surface crowning should be measured as shown.

$$\text{Combined Defect } C = Z \quad \text{and} \quad E \leq 5\text{mm}$$

(Maximum allowable tolerance for (E) Edge Depression = 5mm)

4.3 Combined Surface Depression & Surface Crowning

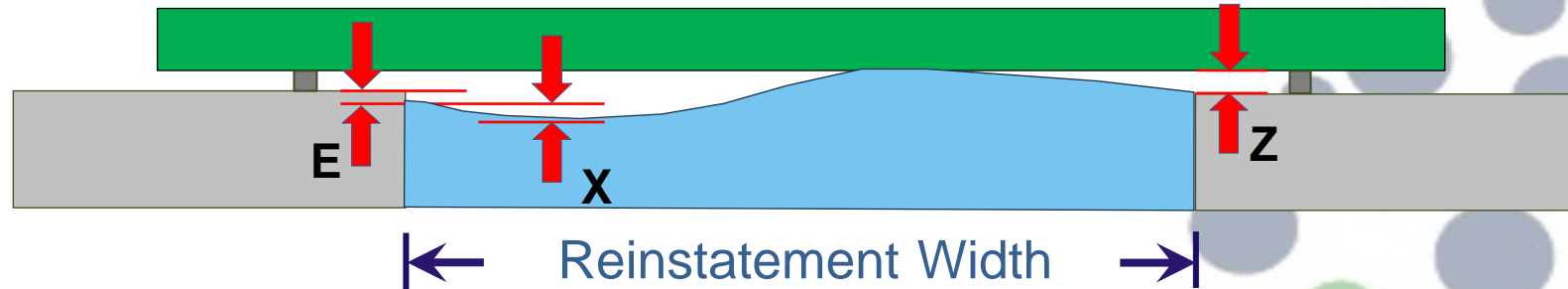


Combined Surface Depression & Surface Crowning (C)

Where an area of surface depression (X) abuts an area of surface crowning (Z), then the area of surface depression and surface crowning should be measured separately and as shown.

Combined Defect $C = X$ and $C = Z$

4.4 Combined Edge Depression, Surface Depression & Surface Crowning



Combined Edge Depression, Surface Depression & Surface Crowning

Where an area of surface crowning (Z) abuts an edge depression (E) and an area of surface depression (X), then the area of combined depression and combined crowning should be measures separately and as shown.

Combined Defect (Depression) $C = E + X$ where $E \leq 5\text{mm}$
 (Maximum allowable tolerance for (E) Edge Depression = 5mm)

Combined Defect (Crowning) $C = Z$

Revised Table 6.8.2 Intervention Limits

Intervention	Reinstatement Width (mm)						
	≤400	>400 & ≤500	>500 & ≤600	>600 & ≤700	>700 & ≤800	>800 & ≤900	>900
Edge Depression	5	5	5	5	5	5	5
Surface Depression	8	10	11	13	15	15	15
Surface Crowning	8	10	12	15	15	15	15
Combined Defect	10	10	10	12	12	12	12

Note 1; This table applies to bituminous and concrete surfaces.

Note 2; The longitudinal profile of the reinstated trench/surface shall comply with Series 700 of the TII Specification for Road Works for surface regularity requirements. Where it is considered that due to the existing vertical profile of the road, the requirements of Series 700 are not achievable, requirements for longitudinal profile must be agreed with the Authority in advance of any works.

Note 2; The longitudinal profile of the reinstated trench/surface shall comply with Series 700 of the TII Specification for Road Works for surface regularity requirements. Where it is considered that due to the existing vertical profile of the road, the requirements of Series 700 are not achievable, requirements for longitudinal profile must be agreed with the Authority in advance of any works.

Standing Water Test:

Where the defect results in standing water following rainfall or as determined by the authority.

This is tested by applying water over the surface area of the reinstatement to determine whether standing water is present.

Intervention is required if results show standing water wider than 500mm or exceeding one square metre in area remains for a period of 2 hours or more.



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