



Steel Structure Condition Rating Guide

Gives asset owners one consistent way to rate and record the visible condition of steel structures, so each inspection compares with the last and the budget goes to the worst first.

FOR Council and public asset owners, quarry and mine site asset managers, and maintenance planners.

DOCUMENT
VS-CL-004

VERSION
v1.0

DATE
8 October 2026

PAGES
4

HOW TO USE THIS GUIDE

Rate each element separately and record it on the sheet in section 5. A rating records visible condition only, not structural capacity. Road and rail bridges follow their owner's bridge inspection system.

KEY  Ratings 1 (good) to 5 (severe). ☐ Y ☐ N ☐ N/A Every N gets a note. **1** Inspection points on the diagram.

Abbreviations MT magnetic particle testing · PT penetrant testing · NDT non-destructive testing · RHS / CHS hollow sections

JOB DETAILS

Structure and asset ID	Site and location	Structure type and age (if known)
Weather and access on the day	Inspected by	Date

1 THE SCALE Condition rating scale

Rate what you can see. When an element sits between two ratings, record the worse one.

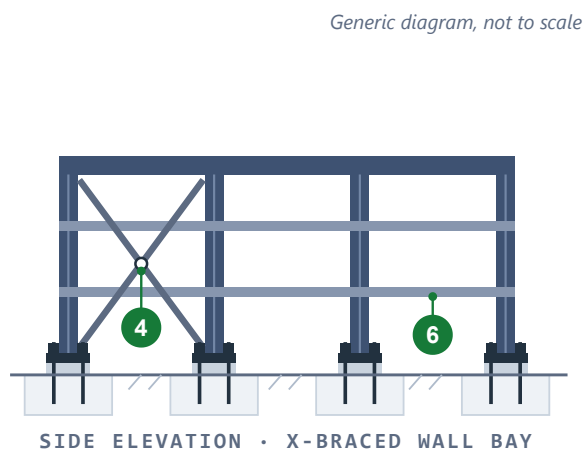
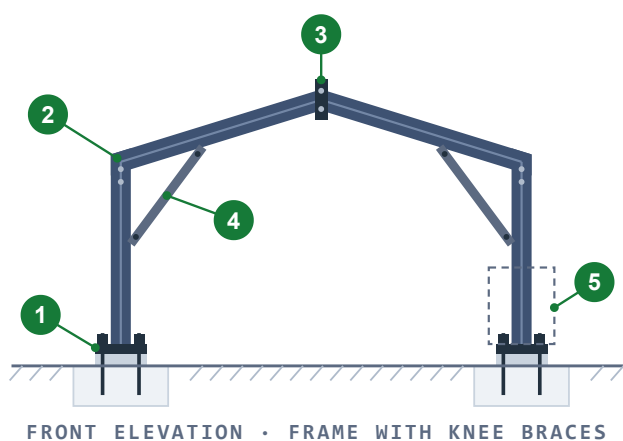
RATING	CONDITION	WHAT YOU TYPICALLY SEE	USUAL NEXT STEP
1 Good	As built or as last maintained.	Coating intact. No visible corrosion, cracking, distortion or loose fixings.	Routine inspection at the normal interval.
2 Fair	Early deterioration, no loss of function.	Local coating breakdown or light rust. No measurable loss. Fixings tight.	Record and monitor. Plan coating maintenance.
3 Poor	Deterioration that will grow if left.	Coating failure, active corrosion with scale, loose or corroded bolts, minor dents.	Thickness readings at marked points. Repair in the next budget cycle.
4 Very poor	Damage that may affect capacity.	Measurable section loss, holes, cracking at welds or bolt holes, bent or missing members.	Prompt engineering assessment. Decide under your procedures whether to restrict use.
5 Severe	Failed or close to failure.	A member, connection, base or anchor that appears to have failed or separated, or is still moving.	Isolate the area under your procedures. Get engineering advice immediately.

2 WHAT TO INSPECT Inspection items

Mark Y when inspected, N when not, and N/A where the element is not present. Inspect every element, even where the structure looks sound from the ground.

#	ELEMENT	WHAT TO LOOK FOR	POINT / RECORD	Y	N	N/A	NOTES, RATING
2.1	Column bases	Base plate and holding-down bolt corrosion and section loss, loose or missing nuts, cracked grout, spalled concrete.	Point 1	☐	☐	☐	
2.2	Connections	Missing, loose or corroded bolts, rust staining from joints, cracks at weld toes and bolt holes, distorted plates or cleats.	Points 2 and 3	☐	☐	☐	
2.3	Bracing	Bent, slack or disconnected braces and missing gusset bolts. A slack brace changes how the whole frame carries load.	Point 4	☐	☐	☐	
2.4	Corrosion and section loss	Pitting, scale, laminated rust and holes, worst at water traps and bases. RHS and CHS can corrode from the inside.	Points 1 and 6 section 4	☐	☐	☐	
2.5	Coatings	Breakdown, blistering, flaking, rust bleed at edges, bolts and welds, and impact damage. Note the coating type if known.	Coating specification	☐	☐	☐	
2.6	Cracking	At weld toes, copes, holes, section changes and old repairs. A rust line along a weld can mark a crack. Confirm by MT or PT.	Points 2 and 3	☐	☐	☐	
2.7	Deformation and impact	Bent or twisted members, dents, out-of-plumb columns, sagging beams, and impact damage near traffic and plant.	Point 5	☐	☐	☐	
2.8	Repairs and additions	Whether repairs are holding, and anything added since construction (signs, pipes, hoists, equipment) that changes the loads.	Repair records drawings	☐	☐	☐	

3 WHERE TO LOOK Inspection points on a typical frame



Generic diagram, not to scale

- | | | |
|---------------------------------------|--|--------------------------------------|
| 1 Base plates, bolts and grout | 2 Column-to-rafter (knee) joint | 3 Apex connection |
| 4 Knee braces and X-bracing | 5 Impact zone near traffic | 6 Water traps: girts and laps |

4
MEASURE, DON'T GUESS

Thickness readings

A thickness reading is only useful if the next one is taken at the same spot, the same way.

- 01** Mark each spot on the steel and on a sketch or photo with a point ID, so the next reading lands in the same place.
- 02** Use the same instrument type and probe each visit. Check it on a reference block before the first reading and record the check.
- 03** On painted steel, use a coating-excluding gauge mode or clean the spot to bare metal. Record which, and repeat it next time.
- 04** Take several readings at each spot and record the lowest, with the date and the name of the reader.
- 05** Compare each spot with its last reading. The change between visits gives the loss rate. One reading does not.
- 06** A reading is a measurement, not a verdict. Whether the remaining section is adequate is an engineering assessment.

POINT ID	MEMBER AND LOCATION	NOMINAL (mm)	INSTRUMENT AND MODE	DATE	READER	READING (mm)	LAST (mm)	CHANGE (mm)
T-01 (example)	Column C2, outer flange, 300 mm above base plate, paint-marked		Ultrasonic gauge, coating-excluded mode					

5
RECORD

Condition record sheet

Photos: one wide shot per structure with its asset ID in frame, a close-up of each defect with a tape or scale in frame, and the same angles in the same order every visit.

STRUCTURE ID	ELEMENT	POINT	RATING 1-5	PHOTO REF	WHAT YOU SAW	NEXT ACTION

COMMON GAPS WE SEE

Where condition surveys usually go wrong

01 Rating the paint, not the steel.

Rate coating and steel separately. Sound paint can hide pitting at a crevice, and rust bloom can sit on steel that has lost little.

03 The base is under the spillage.

Bases buried in material or soil are where section loss is worst and least seen. Clean them down before rating.

05 Bracing treated as secondary.

A slack or disconnected brace removes a stability path the design relies on. Rate bracing as a primary item.

02 Readings that cannot be repeated.

Unmarked spots, a different gauge, or through-coating one visit and bare metal the next, turn the trend into noise.

04 Hollow sections rotting from inside.

Water enters RHS and CHS through open ends, holes and failed caps. The outside can look sound until the wall is gone.

06 Loads nobody designed for.

Record signs, pipes and conveyors added since construction. Any hoist, lifting beam or anchor point goes to an independent registered engineer.

SIGN-OFF

ROLE	NAME	SIGNATURE	DATE
Inspected by			
Reviewed by (asset manager)			
Next inspection due			

Signing records that the elements listed were inspected and rated on the date shown. A rating is not a structural assessment or a certification of the structure.

NEXT STEP

Have your structures inspected and rated

Veristruct carries out condition inspections of steel structures: photo log, condition ratings, thickness surveys through your NDT provider or one Veristruct coordinates, and 3D scan baselines where a measured record is needed. You get a condition register and a priority list set against your budget cycle.

SERVICES Asset Management & Reliability Engineering • Digital Inspection & Asset Intelligence

Veristruct prepares the full technical package and coordinates independent review and certification through registered engineering partners. Work in or for QLD, VIC, ACT or TAS is delivered with a registered engineer engaged before work starts.

TALK TO

Joel Marshall

Principal, Veristruct Pty Limited
Engineering Associate (GradAIEAust)

📞 0491 710 796

✉️ Enquiries@VeristructEng.com

🌐 [VeristructEng.com](https://www.VeristructEng.com)

Send the structure list, locations and any drawings. You get a fixed-price quote for a defined scope.

IMPORTANT

General guidance only. A condition rating records what was visible on the day. It is not a structural assessment and does not establish whether a structure can carry its loads. Restricting use or isolating an area is decided under your own procedures. Get engineering advice for any element rated 4 or 5.

REVISION HISTORY

v1.0 8 October 2026 First issue.