

SURFACE TREATMENT

The requirements for surface treatment vary with the location of the house and the degree of enclosure around the supporting steelwork.

For three sources of corrosion, and depending on whether the house is in an exposed or protected position, a level of corrosion potential may be established based on the distance of the house from the source of corrosion Figure 1, Table 1. The degree of enclosure of the supporting steelwork must then be considered. If it is enclosed by masonry walls (which include provision for sub-floor ventilation) with a maximum size/area of openings as shown in Figure 2, it is deemed to be 'enclosed'. Otherwise it is deemed to be 'unenclosed'.

The required surface treatment for each level of corrosion potential and for 'enclosed' or 'unenclosed' steelwork can then be determined from Table 2. Finally, the required treatment can be determined from Table 3.

TABLE 1

LEVELS OF SURFACE TREATMENT

Distance From Source of Corrosion:	House Site in:	
	Protected Position*	Exposed Position
Ocean OR Heavy industrial area		
Over 3 km	Level 1	Level 1
1.5–3 km	Level 1	Level 2
0.75–1.5 km	Level 2	Level 3
Within 0.75 km	Level 3	Level 3
Salt-water bay		
Over 1.5 km	Level 1	Level 1
0.75–1.5 km	Level 1	Level 2
Within 0.75 km	Level 2	Level 2

*A protected position is one that is more than 0.5 km from the nearest location that is in line of sight of the source of corrosion Figure 1.

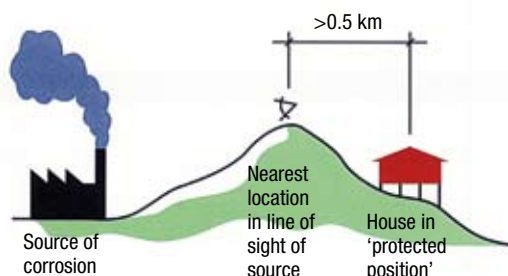


Figure 1 Definition of a 'protected position'

TABLE 2

SURFACE TREATMENT TYPE

Degree of Enclosure	Level of corrosion potential		
	Level 1	Level 2	Level 3
Enclosed	A	B	C
Unenclosed	B	C	D

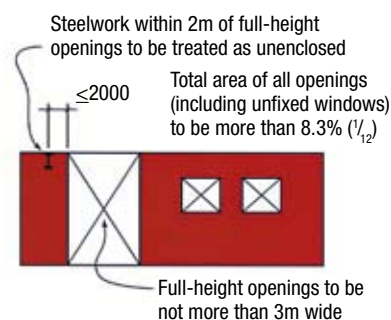


Figure 2 Maximum extent of openings in masonry walls for steelwork to be deemed to be 'enclosed'

TABLE 3

TREATMENTS REQUIRED TO ACHIEVE REQUIRED SURFACE TREATMENT TYPE

Surface Treatment Type	Black Steel	Galvanised Steel
A	No protection required.	No additional protection required.
B	Remove loose scale by hand or power wire brushing. Paint with one coat of a rust inhibitive alkyd primer or equivalent.	No additional protection required.
C	Prepare surface by power wire brushing or abrasive grit blasting. Apply one coat of a rust inhibitive alkyd primer, followed by one finish coat of all-weather gloss acrylic paint.	No additional protection required.
D	Prepare surface by abrasive grit blasting or pickling (class 2 1/2) followed by one of the following: • Apply one coat of an inorganic zinc silicate, followed by one coat of all-weather gloss acrylic with UV protector. • Hot dip galvanising. • Epoxy high corrosion-resistant system or equivalent.	Apply primer coat followed by a finish coat, both of zinc dust or zinc oxide type. Both coats may either be brushed or sprayed. In the case of decking, the treatment should be applied to the underside before installation.

*Note: For lintels supporting masonry some building authorities may require a higher level of surface treatment.



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