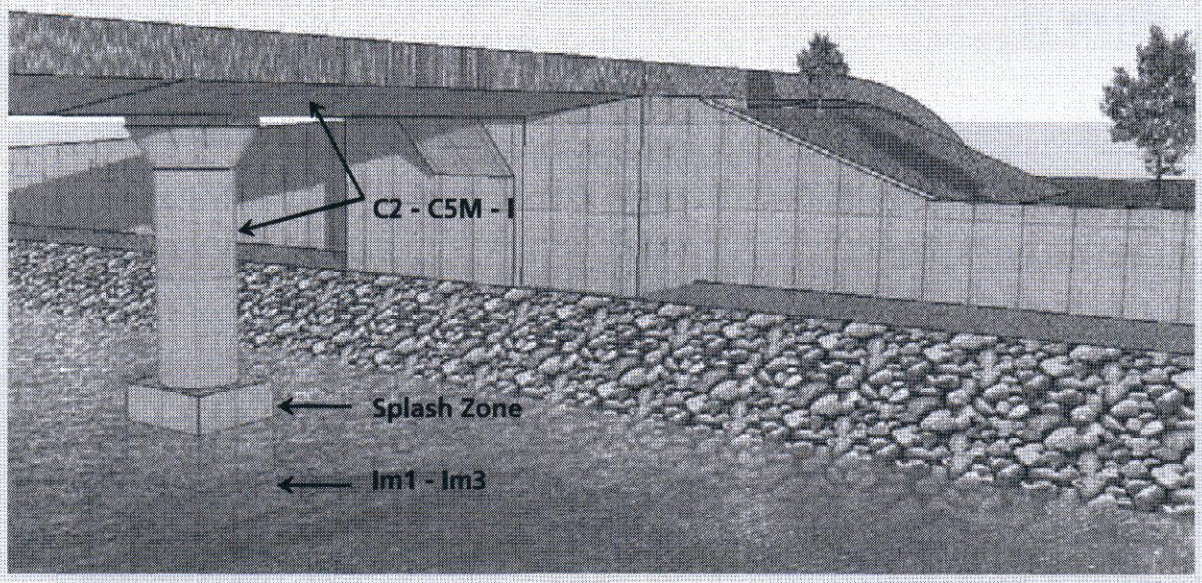
Understanding the corrosivity categories

Identifying the optimum protective coating for a concrete structure depends on the corrosivity of the atmosphere, the water and the soil in which it exists. The corrosivity of atmosphere refers to the extent of corrosion suffered by a structure caused by exposing it to the atmosphere.

ISO 12944 Atmospheric corrosivity categories	
Corrosivity category	**Typical environments**
C1 - very low	Climate-controlled indoor environments.
C2 - low	Atmospheres with low level of pollution. Mostly rural areas.
C3 - medium	Urban and industrial atmospheres, moderate sulphur dioxide pollution. Coastal areas with low salinity.
C4 - high	Industrial and coastal areas with moderate salinity.
C5-I - very high (industrial)	Industrial areas with high humidity and aggressive atmospheres.
C5-M - very high (marine)	Coastal and offshore areas with high salinity.
Categories for water and soil	
Corrosivity category	**Environment**
Im 1	Fresh water
Im 2	Sea or brackish water
Im 3	Soil

The example below illustrat s specific areas of a concrete bridge that are subject to different corrosivity categories.



Concrete bridges will normally be split in two or three areas for concrete protection.

Foundation : Im 1 - Im 2 - Im 3
Column and bridge: C2 - C5M - I
Splash zone area : Special system