

Assessment of reference service life and performance classification in accordance with BS7543 to provide assistance in estimating building service life planning to BS15686-1.

Reference	Service Life	Design Life				Effects of Failure							
		1	2	3	4	A	B	C	D	E	F	G	H
Façade													
Smarts extruded aluminium profiles	Indefinite	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Smart ironmongery, locks and handles	25 Years	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Surface Finishes													
Smarts Anodised Finish	60 Years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smart powder coating adhesion	60 Years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smart Powder coating finish gloss retention and colour fastness	40 Years	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Weathering													
Smart Sealants	25 Years	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smarts glazing gaskets	40 Years	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infills													
Insulating glass units	25 Years	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Design Life BS 7543:2015 Table 1

1	Short Term	<i>Shorter life than the building and readily replaceable.</i>
2	Replaceable	<i>Shorter life than the building and replacement can be envisaged at design stage.</i>
3	Maintainable	<i>Last with periodic treatment, for the life of the building.</i>
4	Lifelong	<i>Lasts for the life of the building</i>

Effects of failure BS 7543:2015 Table 2

A	Danger to life	E	Costly because repeated
B	Risk of injury	F	Interruption to building use
C	Danger to health	G	Security Compromised
D	Costly Repair	H	No exceptional problems

Reference

Service life to BS7543 reference service life. Based on known life expectancy for a reference set of particular 'in-use' conditions collated from publically available sources. Service life expectancy is based on correct maintenance and specific environment conditions. The reference environment is external class C3 (urban industrial, coastal low salinity) and internal environment Class C1 (normal heated). Note life expectancy of IGU does not include breakages due to nickle sulphide inclusions. This document is for guidance on expectations and does not constitute any form of guarantee or warranty but does provide valuable information for service life planning.

BS 7543:2015.	Guide to durability of buildings and building elements, products and components.
ISO 15686-1	Buildings and constructed assets -- Service life planning -- Part 1: General principles and framework
EN ISO 12944-2	Paints and varnishes. Corrosion protection of steel structures by protective paint systems.
	Classification of environments