

Declaration of Performance



**CARBON NEUTRAL
SUSTAINABLE
RECYCLED**

- 1 Product** Road traffic noise reducing device
- 2 Unique Product Reference** TENB45R & POST Tilon Environmental Noise Barrier 45mm Reflective
- 3 Intended use** Acoustic panel and post - to reduce noise along highway, traffic and rail corridors
- 4 Manufacturer** Tilon CG Ltd, Unit 23 Rassau Industrial Estate, Ebbw Vale, Blaenau Gwent. NP23 5SD
- 5 Assessment and verification of constancy performance** System 3, Annex V of EU Regulation 303/2011
- 6 Notified body** MFPA Leipzig GmbH, Hans-Weigel-Straße 2b, 04319 Leipzig, (NANDO certification number NB0800)
BSI Assurance UK Ltd, Kitemark Court Davy Avenue Knowlhill, Milton Keynes MK5 8PP (NANDO certification number NB0086)
- 7 Testing standards** BS EN14388 (2005), BS EN 1793 (1998), BS EN 1794 (2003)
- 8 Quality Management System** ISO9001 (2015) Quality Assurance audited by SGS (UKAS certification number 0005) management system,
Scope Initial factory production control and continuous surveillance, assessment and evaluation of factory production control. Certificate number GB16/871271 for the factory control and management system
- 9 Declared performance** To comply with BS EN 14388 (2005)

Harmonised standard BS EN 14388: 2005		
Essential Characteristics	Declared Performance	Accredited Harmonised Technical Specification and report number
Airborne sound insulation DLR	26dB	Salford Uni. EN1793-2 2012 41078-1 9/4/19 Leipzig ITT ATP report 2.1/18-293-1 in compliance with BS EN 1793-2 1998 & 2012
Resistance to loads		
Self weight - acoustic element		
Dry weight	0.129kN/m ² (0.129kN/m ²)	Leipzig EN1794-1 2003 PB2.1-18-293-1-1 9/4/19 (Leipzig EN1794-1 2011 PB2.1-18-293-1-1 9/4/19)
Reduced wet weight	0.134kN/m ² (0.134kN/m ²)	Leipzig EN1794-1 2003 PB2.1-18-293-1-1 9/4/19 (Leipzig EN1794-1 2011 PB2.1-18-293-1-1 9/4/19)
Wet weight	0.135kN/m ² (0.135kN/m ²)	Leipzig EN1794-1 2003 PB2.1-18-293-1-1 9/4/19 (Leipzig EN1794-1 2011 PB2.1-18-293-1-1 9/4/19)
Maximum vertical load - element	19.6kN/m (19.6kN/m)	Leipzig EN1794-1 2003 PB2.1/18-293-1-2 9/4/19 (Leipzig EN1794-1 2011 PB2.1/18-293-1-2 9/4/19)
Impact of stones	Pass (Pass)	Leipzig EN1794-1 2003 PB2.1/18-293-1-3 9/4/19 (Leipzig EN1794-1 2011 PB2.1/18-293-1-3 9/4/19)
Risk of fallen debris	Class 3 (Class 2)	Leipzig EN1794-2 2003 PB2.1/18-293-1-4 9/4/19 (Leipzig EN1794-2 2011 PB2.1/18-293-1-4 9/4/19)
Maximum normal 90 degree load - acoustic element (wind,static self weight)	1kN/m ²	BSI Assurance UK Ltd in compliance with BS EN 1794-1 EN1794-1 2003 The David French Partnership 14851
Maximum normal 90 degree load - structural element (wind,static self weight)	See table 1	BSI Assurance UK Ltd in compliance with BS EN 1794-1 EN1794-1 2003 The David French Partnership 14851
Maximum normal 90 degree load - acoustic element (dynamic snow clearance)	12.7kN / (2m x 2m) (12.7kN / (2m x 2m))	Leipzig EN1794-1 2003 PB2.1/18-293-1-6 9/4/19 (Leipzig EN1794-1 2011 PB2.1/18-293-1-6 9/4/19)
Maximum normal 90 degree load - structural element (dynamic snow clearance)	See table 1	BSI Assurance UK Ltd in compliance with BS EN 1794-1 EN1794-1 2003 The David French Partnership 14851

Light reflectivity		NPD	EN1794-2 2003
		Class 3	Leipzig EN1794-2 2011 PB2.1/18-293-1-7 9/4/19
Resistance to brush fire		Class 1	Leipzig EN1794-2 2003 PB3.1/19-095-1 29/4/19
		(Class 1)	(Leipzig EN1794-2 2011 PB3.1/19-095-1) 29/4/19
		Class 1	Leipzig EN1794-3 2016 PB3.1/19-095-1 29/4/19
Environmental protection / release of dangerous substances		NPD	
Means of escape		NPD	
Durability:	Acoustic characteristic (service life)	40 years	
	Non-acoustic characteristics (service life)	40 years	

Key

Standards harmonized at 2005

Standards that have been superceded but NOT harmonized

10 Declaration

The performance of the products identified in Points 1 and 2 above is in conformity with the declared performance in Point 9

Signed on behalf of the manufacturer by



Position

BUSINESS DEVELOPMENT MANAGER

Date and place of issue

29th November 2019

Tilon CG Ltd. Unit 23 Rassau Industrial Estate, Ebbw Vale, NP23 5SD

Document No. QF39

ISSUED BY H.ANDREWS 180419

Table 1:

Schedule of Posts and Capacities in accordance with:

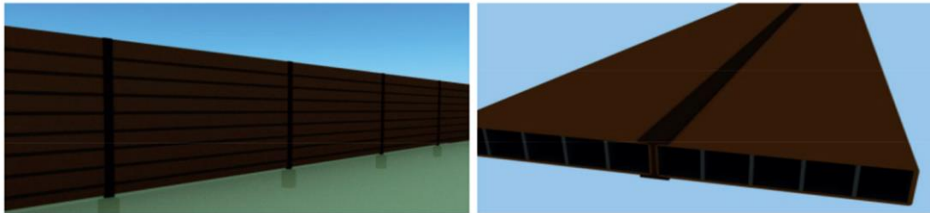
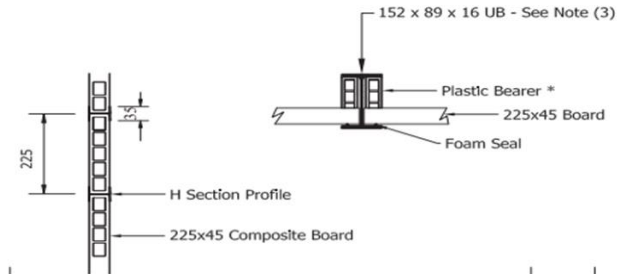
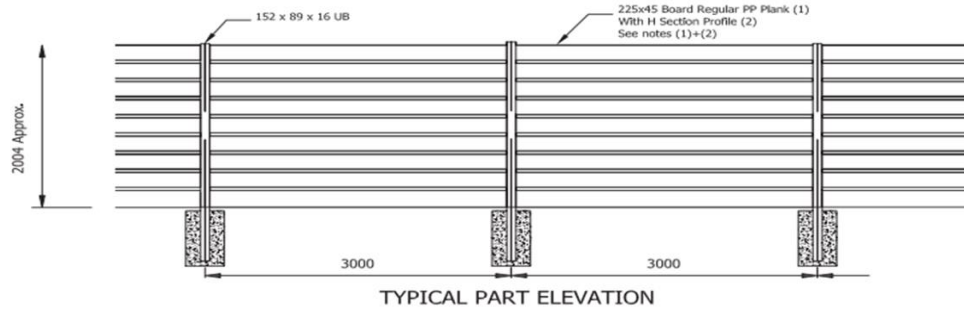
- BSEN 1990: Basis of Structural Design
- BSEN 1991-1-1 & NA: Actions on structures: Densities of Steel Structures, Self Weight
- BSEN 1993-1-1 & NA: Design of Steel Structures: General Rules
- BSEN 1794-1: Road Traffic Noise Reducing Devices – Non Acoustic Performance


Barrier Height m	Post Size	Normal Load at 3.0m centres (kN/m ² SLS)	Distributed Load (kN/m ULS)	Snow Load (kN/m SLS)
1.5	127x76 UB 13	4.3	23.16	13
2	127x76 UB 13	2.4	23.16	12
2.5	127x76 UB 13	1.6	23.16	10
3	127x76 UB 13	0.9	23.16	10
3.5	152x89 UB 16	0.95	33.83	14
3.5	178x102 UB 19	1.4	47.03	21
4	178x102 UB 19	0.9	47.03	21
4	203x102 UB 23	1.3	64.35	28
4.5	203x102 UB 23	0.95	64.35	28
4.5	203x133 UB 30	1.1	83.88	31

* Dimension to sult final post dimensions

NOTES:

- (1) MATERIALS OF CONSTRUCTION RECYCLED
POLYPROPYLENE 70% WT CHOPPED
STRAND GLASS FIBRE 30% WT
UVSTABILISED HDPE OUTERSKIN IN
BROWN.
- (2) PP UV STABILISED IN BROWN.
- (3) POST DIMENSIONS SUBJECT TO FINAL
DESIGN



Revision	Description	By	Date	
-	-	-	-	
STATUS:				
		d. Tilon CG Ltd v. Unit 23, Rassau Ind. Est. Ebbw Vale Gwent, Wales, UK. NP23 5SD		
		Tel: +44 (0) 1495 300 030 Email: sales@tilon.co.uk		
		Design	RF	25/02/19
		Checked	MI	25/02/19
DRAWING TITLE:		Scale		
Tilon Reflective Noise Barrier TENB45R		NTS		
PROJECT:		Project No.	Drawing No.	
			Rev.	
			-	