

TEST REPORT

Lucideon Reference:	19307 (QT-54391/2/GMB)/Ref. 4/Supp1
Project Title:	Testing of Posi-Glaze Balustrade System Incorporating 21.5 mm Sentry Glass in Accordance with BS 6180:2011
Client:	Pure Vista Ltd Pendewey Stony Lane Bodmin Cornwall PL31 2QX
For the Attention of:	Mr Adam Oakes
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Purchase Order No.:	2283
Work Location:	Lucideon UK

This report supersedes the report issued on 31.01.19.

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Dr Paul Wood Consultancy Team Reviewer

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Miss Lisa Cobden Consultancy Team Project Manager



1 INTRODUCTION	Page 3	Lucideon Limited were commissioned by the testing in accordance with BS 6180:2011 Bar balustrade system to be classified for use included within the Standard.
2 TEST SAMPLES	3	The testing was carried out at Lucideor Stoke on Trent.
3 TEST PROGRAMME	3	This report summarises the test results obta not provide interpretation of those results.
4 TEST PREPARATION	3	2 TEST SAMPLES
5 TEST METHOD	3	A single system was tested designated as folloPosi-Glaze.
6 RESULTS	4	The system had been designed and intender standing balustrades. The system and glass
TABLES	5-6	3 TEST PROGRAMME
PLATE	7	A horizontal line load was applied to the syste – 21.5 mm Sentry Glass 1000 mm x 150
CHART	8	Tests were conducted under the following con
APPENDIX A - Drawing		 Load Application 1100 mm Deflection I

- Load Application 1100 mm Deflection Recorded at 1500 mm.

4 TEST PREPARATION

The channel was bolted to the top of a concrete block, which was fixed to the floor of the test facility.

The 1000 mm length of channel was bolted to the block using Fischer chemical anchors incorporating M12 bolts at 200 mm centres, 100 mm from the end and 200 mm thereafter. The clamps were installed at 4 clamps per metre, spaced at 100 mm from the edge with 200 mm between clamps.

5 TEST METHOD

A horizontal imposed line load was applied to the glass at the specified heights, all of which were measured from the datum level of the floor. In each instance deflection was recorded at the horizontal centre of the panel and specified height. The load was applied

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ne client, Pure Vista Ltd, to carry out load arriers in and about buildings, to allow their in accordance with the Code of Practice

n's facilities at Queens Road, Penkhull,

ained during the test programme and does

lows:

ed to be used as the base mount for free was installed by Pure Vista personnel.

ems using the following glazed sections: 0 mm (w x h).

ditions:

Recorded at 1350 mm.



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via a hydraulic ram. A hardwood timber baton was used to distribute the load uniformly across the width of the glass panel. Deflection was measured using a linear voltage displacement transducer (see Plate 1). The samples were tested until destruction occurred or until 25 mm of deflection was recorded at which point the test was stopped.

6 RESULTS

The tests were carried out in accordance with the guidance given in BS 6180:2011 Barriers in and about buildings - Code of Practice. The Standard states that the maximum allowable deflection for a free standing glass protective barrier panel when loaded at a minimum height of 1100 mm is 25 mm. Testing at a height above this is seen as a more onerous test than one which is conducted at 1100 mm.

The loads achieved by the Pure Vista systems tested under horizontal imposed line loads are given in Table 1. All figures quoted in the Table contain no safety factors and are direct loads as achieved by the system under test conditions.

TABLES

Table 1 - Summary of Performance of Pure Vista Posi-Glaze Balustrade System Mounted into Concrete Tested under Uniformly Distributed Horizontal Imposed Line Load

Glass Type	Load Application (mm)	Transducer Position (mm)	Imposed Line Load at 25 mm Deflection (kN/m)	Load for	Deflection at Working Line Load for System (mm)
21.5 mm Sentry	1100	1350	1.63	1.50	21.46
21.5 mm Sentry	1100	1500	1.39	0.74	10.52

 Table 2 - Summary of Suitability of Pure Vista Posi-Glaze System Chemically Fixed into
 Concrete in Accordance with Table 2 of BS 6180:2011

	Examples of Specific Use		21.5 mm Se	entry Glass
Type of Occupancy for Part of the Building		Horizontal Uniformly Distributed Line Load (kN/m)	Loaded at 1100 mm Deflection Measured at 1350 mm	Loaded at 1100 mm Deflection Measured at 1500 mm
Domestic and residential	(i) all areas within or serving exclusively one single family dwelling including stairs, landings, etc. but excluding external balconies and edges of roofs	0.36	~	~
activities	(ii) other residential, i.e. houses of multiple occupancy and balconies, including Juliette balconies and edges of roofs in single family dwellings	0.74	✓	~
Offices and work areas not included elsewhere, including storage areas	(iii) light access stairs and gangways not more than 600 mm wide	0.22	✓	~
	(iv) light pedestrian traffic routes in industrial and storage buildings except designated escape routes	0.36	✓	~
	(v) areas not susceptible to overcrowding in office and institutional buildings, also industrial and storage buildings except as given above	0.74	✓	V

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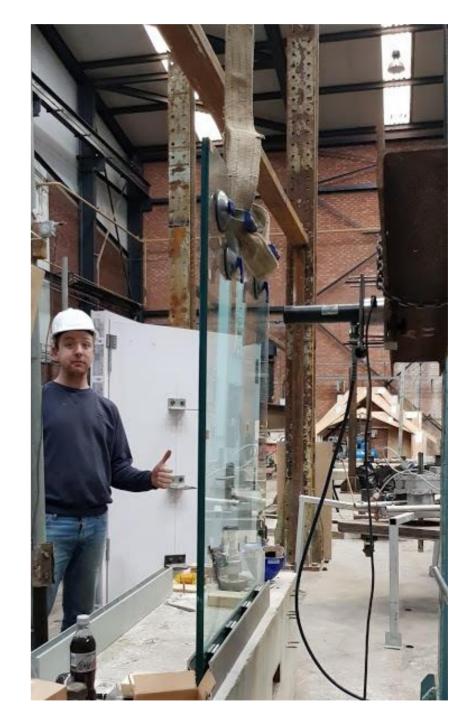
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	Examples of Specific Use	Horizontal Uniformly Distributed Line Load (kN/m)	21.5 mm Sentry Glass		
Type of Occupancy for Part of the Building			Loaded at 1100 mm Deflection Measured at 1350 mm	Loaded at 1100 mm Deflection Measured at 1500 mm	
Areas where people might congregate	(vi) areas having fixed seating within 530 mm of the barrier, balustrade or parapet	1.50	~	х	
Areas with tables or fixed seating	(vii) restaurants and bars	1.50	√	x	
Areas without	(viii) stairs, landings corridors ramps	0.74	~	✓	
obstacles for moving people and not susceptible to overcrowding	(ix) external balconies including Juliette balconies and edges of roofs; footways and pavements within building cartilage adjacent to basement/sunken areas	0.74	✓	✓	
Areas susceptible to overcrowding	(x) footways or pavements less than 3 m wide adjacent to sunken areas	1.50	✓	х	
	(xi) theatres, cinemas, discotheques, bars, auditoria, shopping malls, assembly areas, studios; footways or pavements greater than 3 m wide adjacent to sunken areas	3.00	x	x	
	(xii) grandstands and stadia	(Note 1)	-	-	
Retail areas	(xiii) all retail areas including public areas of banks/building societies or betting shops	1.50	√	x	
Vehicular	(xiv) pedestrian areas in car parks, including stairs, landings, ramps, edges of internal floors, footways, edges of roofs	1.50 (Note 2)	¥	x	
	(xv) horizontal loads imposed by vehicles	3.0 (Note 2)	-	-	

NOTE: The results given in this report apply only to the samples that have been tested.

END OF REPORT

PLATE









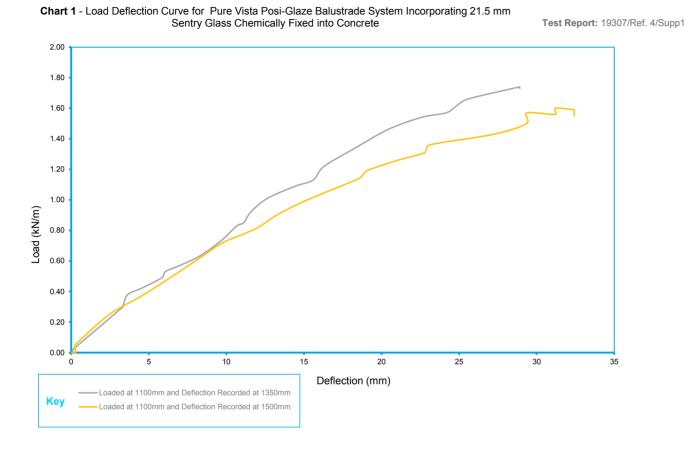
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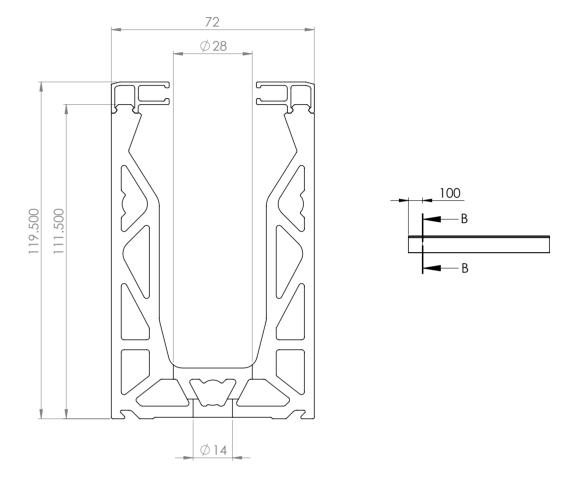
Plate 1 - Generic Test Configuration

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APPENDIX A - Drawing





SECTION B-B SCALE 1 : 1



 Voltage
 Voltage



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