TEST REPORT

Lucideon Reference:	174989 (QT-47953/1/GMB & QT-48520/1/GMB)/Ref. 7
Project Title:	Testing of Pure Vista Posi-Glaze Balustrade System 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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Work Location:	Lucideon UK

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1 INTRODUCTION

Lucideon were commissioned by the client, Pure Vista Ltd, to carry out load testing in accordance with BS 6180:2011 Barriers in and about buildings, to allow their balustrade system to be classified for use in accordance with the Code of Practice included within the standard.

The testing was carried out at Lucideon's facilities at Queens Road, Penkhull, Stoke on Trent.

This report summarises the test results obtained during the test programme and does not provide interpretation of those results.

2 TEST SAMPLES

Posi-glaze

The system had been designed and intended to be used as the base mount for free standing balustrades. The systems and glass were installed by Pure Vista personnel.

3 TEST PROGRAMME

A horizontal line load was applied to the system using the following glazed section:

- Posi-glaze.
  - 17.5 mm PVB Laminated Glass.

4 TEST PREPARATION

The channel was bolted to the top of a piece of 10 mm thick steel C-section, which was welded to a steel anvil which in turn was bolted to the floor of the test facility. The 1.00 m length of Posi-glaze channel was bolted to the steel section at 200 mm centres using 12 mm bolts set in pre drilled counter sunk holes.

The appropriate thickness glass panel was fitted into the channel using the glass slip clamping system and clamping bar. The clamps were fitted at 4 per metre and spaced 100 mm from the edge with 200 mm between the clamps.

5 TEST METHOD

A horizontal imposed line load was applied to the glass at a height of 1.2 m above the datum level of the floor and the deflection measured at the top central point of the glass panel. The load was applied via a hydraulic ram and the deflection measured using a linear voltage displacement transducer.

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6 RESULTS

The tests were carried out in accordance with the guidance given in BS 6180 Barriers in and about buildings – Code of Practice. The standard states that the maximum allowable deflection for a free standing glass protective barrier panel is 25 mm.

Table 2 of BS 6180 Barriers in and about buildings – Code of Practice categorises parapets, barriers and balustrades for areas of use depending on the loads they have achieved under testing.

The loads achieved by the Pure Vista system tested under horizontal imposed line load to the maximum deflection of 25 mm 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 2 summarises the suitability of the tested systems in accordance with Table 2 of BS 6180:2011.

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

END OF REPORT

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Table 1 - Summary of Performance of Pure Vista Posi-Glaze Balustrade Mounting Section Tested under Horizontal Imposed Line Load

Glass Span (mm)	Glass Type	Test Height (mm)	Imposed Line Load at 25 mm Deflection (kN/m)	Working Line Load for System (kN/m)	Deflection at Working Line Load for System (mm)
1000	17.5mm Laminated PVB	1200	1.06	0.74	15.38

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

Type of Occupancy for Part of the Building	Examples of Specific Use	Horizontal Uniformly Distributed Line Load (kN/m)	Posi-glaze
			17.5mm PVB Laminated
Domestic and residential activities	(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	✓
	(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	✓
Areas where people might congregate	(vi) areas having fixed seating within 530 mm of the barrier, balustrade or parapet	1.50	X
Areas with tables or fixed seating	(vii) restaurants and bars	1.50	X
Areas without obstacles for moving people and not susceptible to overcrowding	(viii) stairs, landings corridors ramps	0.74	✓
	(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	X
	(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
	(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	(Note 1)	-

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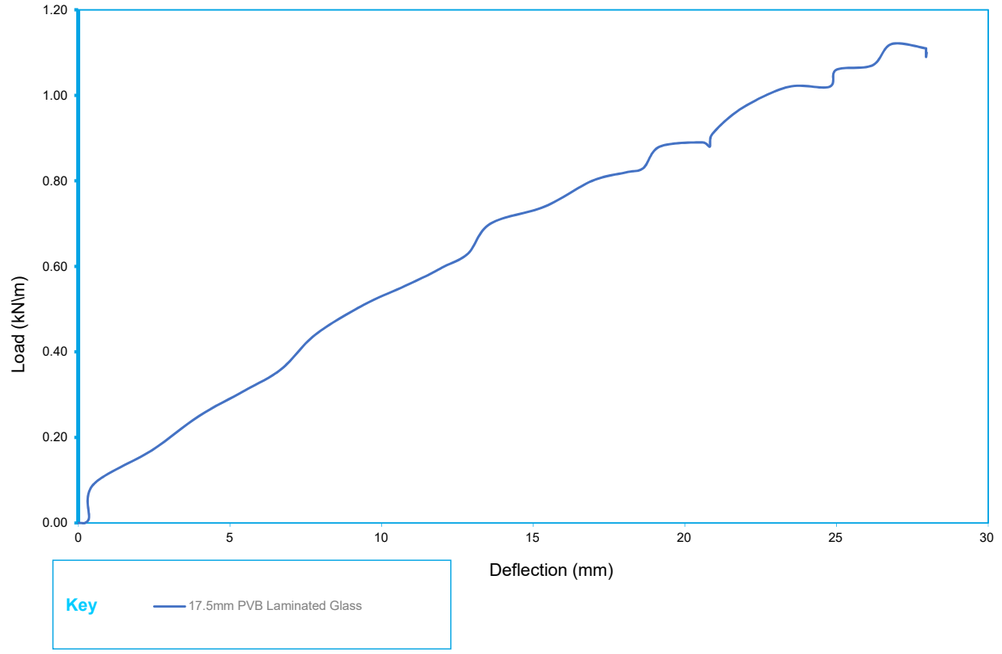
Chart 1 - Load Deflection Curve for Pure Vista Posi-Glaze Balustrade System Fixed into Steel with the Application of a Horizontal Uniformly Distributed Line Load Applied at Height of 1.2 m



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