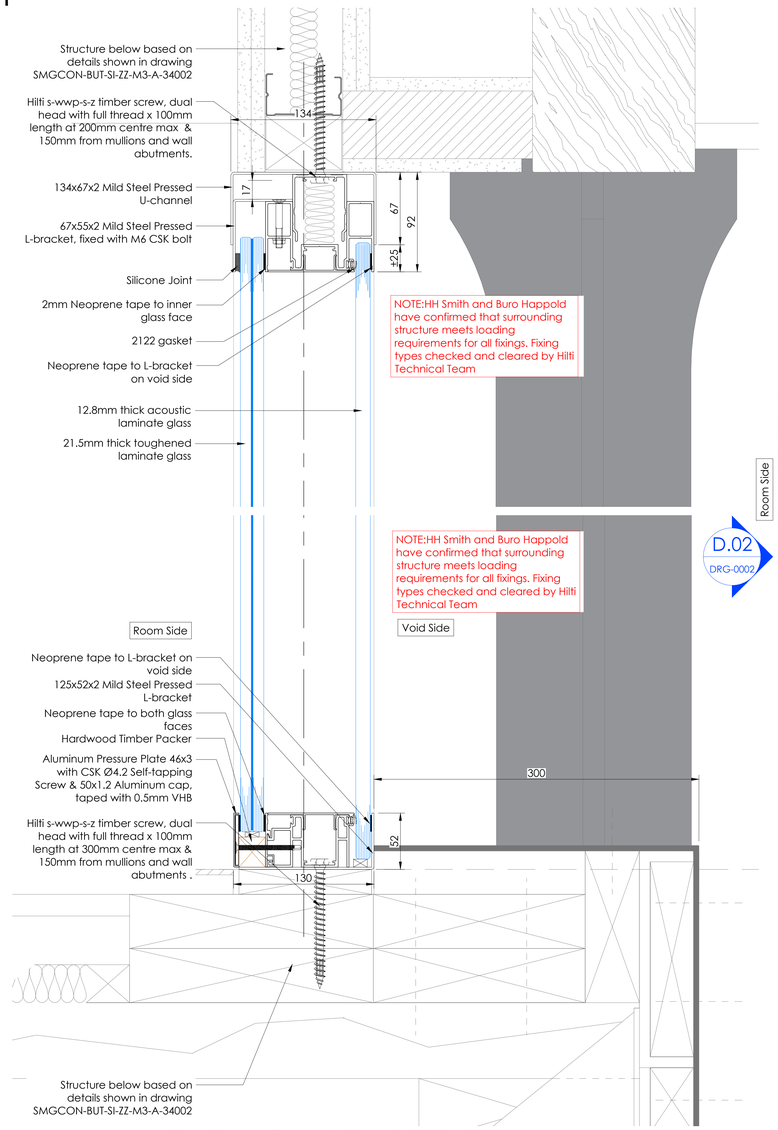
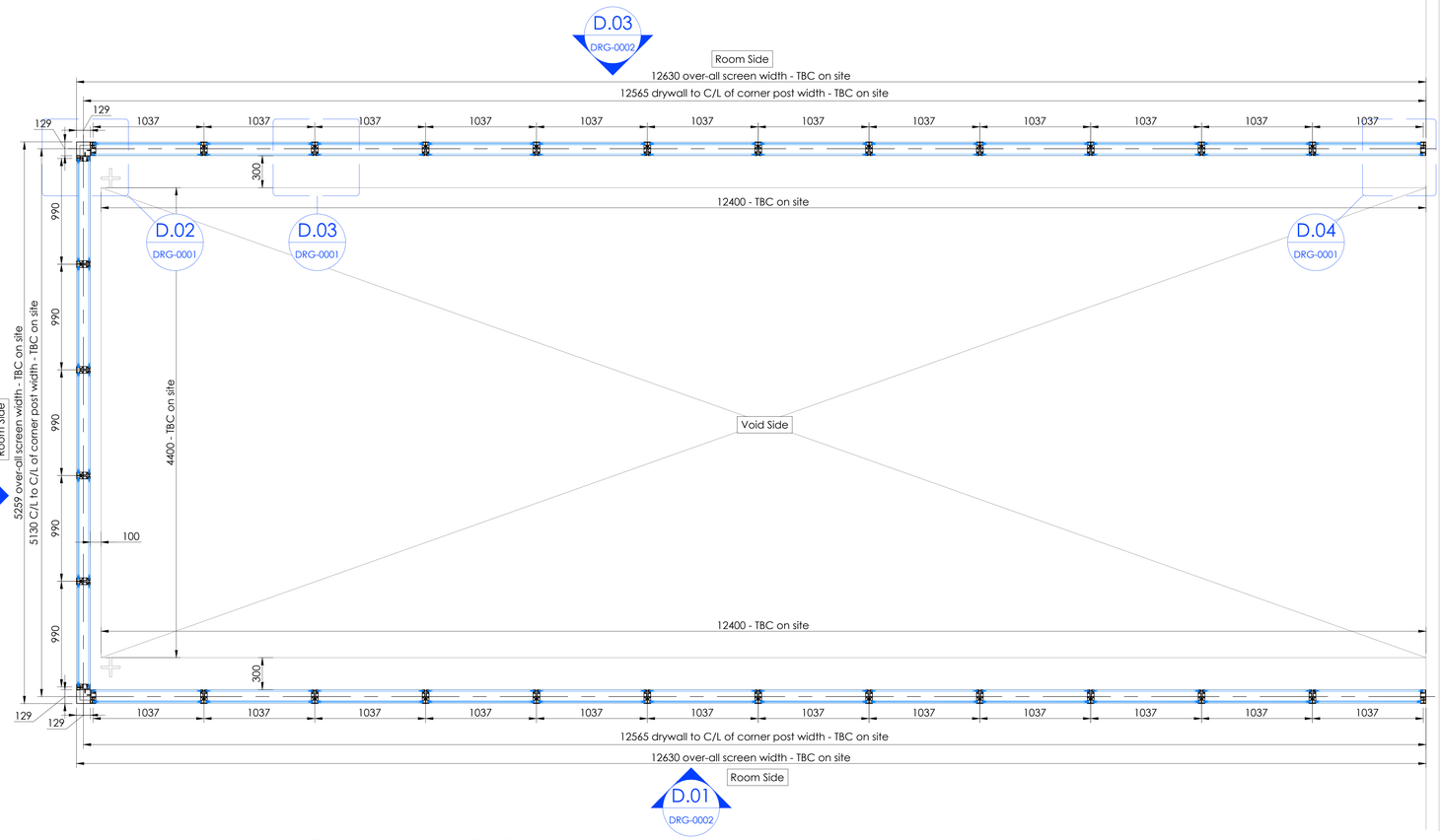


1 Section - Revolution 100 D/G Guarded Screen

Scale 1:2



5 Plan - Revolution 100 D/G Guarded Screen Overview

Scale 1:20

Line Load Calculation

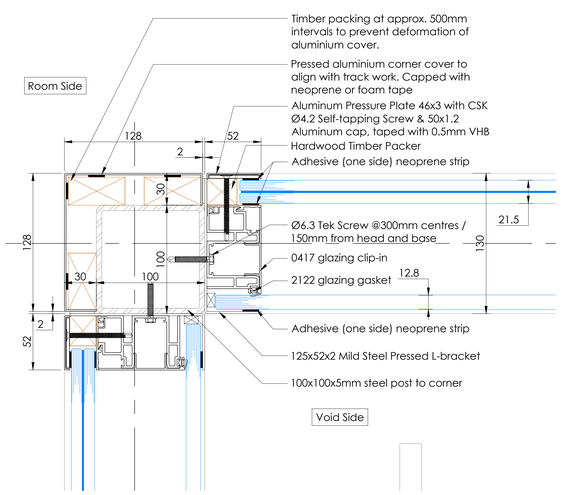
Four edge supported pane		Single glazed	
Line Load N/m run			1500
Concentrated Load N			1500
Uniform Load N/m2			1500
Height of Pane mm			2400
Width of Pane mm			1200
Height of line load above bottom edge			1200
Thickness of loaded pane mm	19.4	Allowable stress N/mm2	59
Allowable deflection mm	Partition:	(36.92)	Guarding: 25
Stress in loaded pane N/mm2			11.45
Maximum deflection mm			1.51

Wind Load Calculation

Four edge supported pane		Single glazed	
Line Load N/m run			0
Concentrated Load N			0
Uniform Load N/m2			600
Height of Pane mm			2400
Width of Pane mm			1200
Height of line load above bottom edge			2400
Thickness of loaded pane mm	19.4	Allowable stress N/mm2	59
Allowable deflection mm	Partition:	(36.92)	Guarding: 25
Stress in loaded pane N/mm2			1.62
Maximum deflection mm			0.36

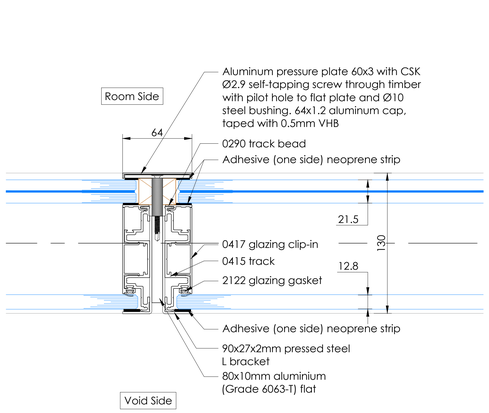
Redundancy Calculation

Four edge supported pane		Single glazed	
Line Load N/m run			1500
Concentrated Load N			1500
Uniform Load N/m2			1500
Height of Pane mm			2400
Width of Pane mm			1200
Height of line load above bottom edge			1200
Thickness of loaded pane mm	9.7	Allowable stress N/mm2	59
Allowable deflection mm	Partition:	(36.92)	Guarding: 25
Stress in loaded pane N/mm2			45.8
Maximum deflection mm			12.07



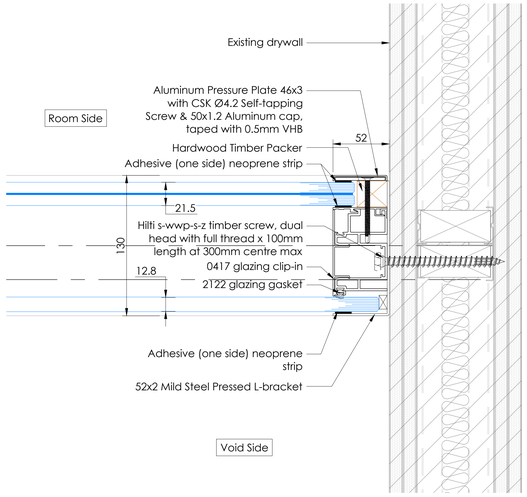
2 Plan - Revolution 100 D/G Corner Detail

Scale 1:2



3 Plan - Revolution 100 D/G Mullion Detail

Scale 1:2



4 Plan - Revolution 100 D/G Wall Abutment Detail

Scale 1:2

NOTE: HH Smith and Buro Happold have confirmed that surrounding structure meets loading requirements for all fixings. Fixing types checked and cleared by Hilti Technical Team

A0 Layout (1189mm x 841mm)

Safety Health & Environmental Information Box

Construction Risks

This project uses only materials that have been used in this manner before. From a Designers viewpoint
Optima do not envisage any specific Construction issues to communicate.

Maintenance / Cleaning Risks

Optima, in the main, provide office partitioning. The components (specifically the glass are tested to the relevant national or international standards of the day). As such CLEANING and MAINTENANCE of this product reveal no specific risks. However, Optima would point out that all persons involved with maintenance and cleaning should themselves be subject to their own employer's specific risk assessment process. Special care should be taken if working at height. In such cases the regulations of the day apply. Optima do not recommend any loadings against its products.

Demolition / Adaptation Risks

From the viewpoint of a Designer, Optima have identified no significant risks for demolition and adaptation.
However, the usual risk assessments are presumed as implemented by the company proposing demolition and/or adaptation.

Environmental / Recycling

Much of the Optima range of project is relocate- able. See original terms and conditions for clarification.
Environmental issues are subject to the law of the day.

In addition to the hazards / risks normally associated with the types of work detailed on this drawing take note of the above.
It is assumed that all works on this drawing will be carried out by a competent contractor working where appropriate, to an approved method statement.

CDM Communication Symbols

1.5kN/m guarded screen

Structural Loading

Structural loading requirement taken from documentation provided by architect / main contractor.

Structural load of screen is

1.5kN/m

	Is this a line load only screen?
✓	Is this a guarded screen?
✓	Glass calculations included on drawing.
✓	Structural engineer has been consulted by main contractor.
	Structural engineer has been consulted by Optima.
	Calculations submitted as a seperate document. Please refer to document reference below:

General Information Table

Type Reference	
Partition	*Revolution 100 D/G guarded*
Door	*N/A*
Deflection	*±25mm*
Floors	*TBC*
Reference No.	
Partition No.	*N/A*
Door No.	*N/A*
Acoustic Rating	
Partition	*Rw52dB (based on 16.8mm & 12.8mm thick acoustic laminate glass performance)*
Door	*N/A*
Tech Panel	*N/A*
Ironmongery Set Reference	*N/A*
Framework Finish	
Partition	*RAL 7012 Basalt Grey*
Door	*N/A*
Tech Panel	*N/A*
Upper Deflection Head Finish	*RAL 7012 Basalt Grey*
Lower Deflection Head Finish	*RAL 7012 Basalt Grey*
Structural Loads	*1.5kN/m guarded*
Glass Specification	
Partition	*21.5mm thick toughened laminate and 13.5mm thick toughened laminate*
Door	*N/A*
Glass Engagement (Fire Only)	*N/A*
Manifestation	*Compliant dots Opal Frost finish TBC*

Barrier Statement

BS 6180:2011, section 6.5, recommends that barrier fixings, attachments and anchorages should be designed to withstand a greater load than the design loading for the barrier generally. This is intended to ensure that under an extreme load condition, barriers show indications of distress by distortion, before there is any possibility of sudden collapse due to failure of the fixings. A 50% increase in the design load on fixings is recommended.

NOTE - Please read in conjunction with drawing 251589-OPN-ZZ-XX-DR-X-0002.

Rev	Date	Description	Dr	App	Ck
02	13.11.25	Construction Issue	CM	CT	
01	09.10.25	Issued for construction	CM	CT	GM
00	03/10/25	Issued for approval	AR	CT	GM/PS

GA Reference Colour: N/A

Status:

Construction Issue

Optima

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Project Number: OPNW251589

Project Name: Science & Industry Museum

Title: Revolution 100 Double Glazed Guarded Screen - 1.5kN/m - Drawing 1 of 2

Scale @ A0:	Drawing No.:	Revision:
1:2/1:20	251589-OPN-ZZ-XX-DR-X-0001	02