Project:	CDY	Project No:	HLN.0262
Submitted by:	BAM	Date:	19-07-16
Submitted to:	Argent, HS, G+T, BAMD	Ref No:	010A
Туре:	Sample: x Benchmark: Mod	k-up:	
Description: Dark Blue Grey Slate produced by Cwt-y-Bugail Slate quarry in North Wales — County 7mm nominal thickness. Supersedes Sample Sheet 010  This is a sample of Genuine Dark Blue Crey State produced from Cwt-y-Bugail State Quarry in North Wates. The manufacturing process at Cwt-y-Bugail so firing states under Allemark. World 14001:2004. Welsh State roofing states under Allemark licence KM0014 in accordance with BS EN 1276-1-2014. Welsh State roofing states under Allemark. Welsh/State recommends that all the slates for a roof area are sorted and graded at the same time to ensure an even distribution of the natural variations that occur in our slates.  County 7mm Nominal Thickness			
Location for Inspection:  KX Sample Store  Storage Location after Inspection: (must be suitable)  KX Sample Store			
To be Built into the Works? no If YES Location:			
Applicable Certification(s) (e.g. BS, BBA cert etc)			
Purpose: Approval			
Project Team Comments:			
Approval Status A B C Re-submittal Date Required Not Required  Legend: A – Approved; B – Approved with Comments; C – Rejected			
Sample Approved By:			
Signed:	Name: of	Da	te:

<b>₩</b> ba	ım	Sample/Benchmark Approval	Form: Rev:	300-43 1
Signed:	Name: _	of	Date:	
Signed:	Name:	of	Date:	
Distribution	Client x Arch x	Other (specify) G+T CMT		

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Project:	CDY		Project No:	HLN.0262
Submitted by:	BAM		Date:	02/08/17
Submitted to:	Camden Planning		Ref No:	013A
Туре:	Sample: x Benchma	ark: Mock	k-up:	
Description; PP	C aluminium copper tone standing sea	m cladding panels		
Location; Roof of	cheeks, refer to drawings			
IGP-HWF classi	ic 5903			
- 5903E81872F	3F, (1513898)			
- Medium Bronz	e			
- Glattverlaufend	d, Perlglimmer, Matt, Clean Effekt, 15 I	Min/1800C		
- Glattverlaufend, Perlglimmer, Matt, Clean Effekt, 15 Min/1800C     V 0.5 to   V 0.5 to				
Location for Insp	pection:	Storage Location after	er Inspection: (mu	ıst be suitable)
BAM Canal Reach offices  BAM Canal Reach offices				
To be Built into the Works? no If YES Location:				
Applicable Certification(s) (e.g. BS, BBA cert etc)				

Form: 300-43 Rev: 1

Purpose:			
Approval			
Project Team Comm	ents:		
Approval Status  Legend: A – Approved; B	A B C  – Approved with Comments; (	Re-submittal Date Ro	equired Not Required
Sample Approved E	By:		
Signed:	Name:	of	Date:
Signed:	Name:	of	Date:
Signed:	Name:	of	Date:
Distribution Client x Arch x Other (specify) G+T CMT			

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Form: Rev: 300-43

Project:	CDY	Project No: HLN.0262	
Submitted by:	BAM	Date:	02-08-16
Submitted to:	Argent, HS, G+T, BAMD	Ref No:	019
Type:	Sample: x Benchmark: Mo	ck-up:	

Rooflight Double Glazing sample available to view;

Outside: 10mm ipasol neutral 62/29, low iron Cavity; 16mm aluminium-spacer black, air Inside; 88.4 laminated glass, PVB, low iron

Data sheet attached

Purpose:



Location for Inspection:	Storage Location after Inspection: (must be suitable)	
BAM Site sample store	BAM Site sample store	
To be Built into the Works? no If YES Location:		
Applicable Certification(s) (e.g. BS, BBA cert etc)		

Form: Rev: 300-43

Approval				
Project Team Comments:				
Approval Status A B C Legend: A – Approved; B – Approved with Comments; C – Re	Re-submittal Date Required Not Required			
Sample Approved By:				
Signed: Name:	of Date:			
Signed: Name:	of Date:			
Signed: Name:	of Date:			
Distribution Client x Arch x Other (spec	cify) G+T CMT			

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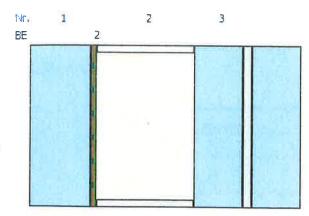
### **Calculation SommerGlobal** 2187266 - 1

Project: 2016\_07\_15

Position: 01

Layer assembly (external to internal)
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No.	CL	Name	mm
1		ipawhite	10,00
2	2	ipasol ultraselect 62/29 (εn=1%)	,
3		Air	16,00
4		ipawhite	8,00
5		PVB-Foil	1,52
_6		ipawhite	8,00
			43,52



Rw(C;Ctr) dB = npd

### Transmittance, reflectance, absorption

 $\mathbf{p}_{\mathsf{v}} =$ 0,10 (external light reflectance)

 $\mathbf{\rho}'_{V} = 0.11$  (internal light reflectance)

 $\mathbf{p}_{e} = 0.44$  (external solar direct reflectance)

 $\mathbf{p}_{\mathbf{p}}' = 0.34$  (internal solar direct reflectance)

 $T_{UV} =$ **0,00** (ultraviolet transmittance)

**0,62** (light transmittance)

T\_ = **0,27** (solar direct transmittance)

 $R_a =$ 90 (genaral colour rendering index)

 $\mathbf{q}_{e}$  1 = 0,28; 3 = 0,01 (solar direct absorptance)

#### **EN 410**

EN 13363-2

0,34 (Shading Coefficient, g/0,87)

b-Factor = 0,37 (VDI 2078, g/0,80)

**0,02** (secondary internal heat transfer factor)

0,30 (total solar energy transmittance (solar factor))

**EN 673** Installation angle = 90° vertical

 $T_{e} = 5,00 \, ^{\circ}\text{C}$ 

Uq = 1,3 W/m2K (heat flow coefficient)

 $E_S = 300,0 \text{ W/m}^2$  Height of installation = 1,50 m

 $g_{th} = 0.017$  (thermal radiation factor)

 $g_c = 0.013$  (convection factor)

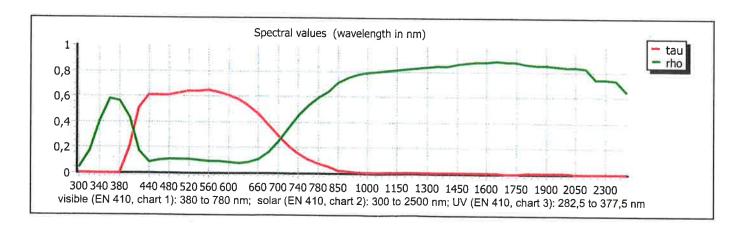
 $g_{v} = 0,000$  (ventilation factor)

18 W/m<sup>2</sup>K h<sub>c.e</sub>=

 $h_{c,i} = 3.6 \text{ W/m}^2\text{K}$ 

**q**<sub>i</sub> = **0,030** (secondary internal heat transfer factor)

**0,30** (total solar energy transmittance (solar factor))



Variations of the light and radiation characteristics are possible caused by the chemical composition of glass and the production process. The specified values consider accredited tolerances of the finished product, the basic glass and the coating in accordance to the respective product standards.

Calculation basis: EN 410, EN 673, EN 13363-2. The result is no information about the technical feasibility.

 $T_i = 20,00 \, ^{\circ}C$ 



Form: Rev: 300-43 1

Project: Kings Cross CDY Project No: HLN.0262						
Submitted by:	BAM		Date:	19/10/2016		
Submitted to:	Argent / HS / BAMD			Ref No:	040	
Туре:	Sample: X	Benchma	ark: Mo	ck-up:		
Description:						
Roof light 100% fri	t RAL 7024					
12		FRENER & REIFER Gml Via Alfred Ammon Str	bH   Srl FREI	MER		
		39042 Brixen   Bressa Italy	none (97)	FER		
		www.frener-reifer.cor		ADEN		
			FASS			
		COAL DROPS - I	ondon Date: 26.	09.2016		
		Solid frit sample color RAL 7024	- Graphite grey	2001		
Location for Inspection: <b>Heatherwick Studio</b> Storage Location after Inspection: (must be suitable)						
F+C office						
To be Built into the Works? no If YES Location:						
Applicable Certification(s) (e.g. BS, BBA cert etc)						
Purpose: Approval						
We request approval of the above and confirm that it has been completed in accordance with all relevant drawings and specifications.						
Signed: Mú	chelle Jarvis	Name: _	Michelle Jarvis	Date: _	19/10/2016	
Project Team Comments:						

Form: 300-43 Rev: 1

Approval Status A B Legend: A – Approved; B – Approved with Com	C Re-submittal E	Date Required
Sample Approved By:		
Signed: Name:	of	Date:
Signed: Name:	of	Date:
Signed: Name:	of	Date:
Distribution Client Arch	Other (specify)	

Photographs and relevant documentation should include the Ref no. and either be incorporated with, or attached to, this document.

Project:	CDY		Project No:	HLN.0262		
Submitted by:	BAM	Date:	02/08/17			
Submitted to:	Camden Planning	Ref No:	096A			
Туре:	Sample: x Benchmark:	Mock	k-up:			
Type: Sample: x Benchmark: Mock-up:  Description: Latchways Walksafe plank system Colour; Silver Location Roof Cheeks, refer to drawings;						
Location for Inspection:  BAM site office Canal Reach  Storage Location aft BAM site office Canal				ıst be suitable)		
To be Built into the Works? no If YES Location:						
Applicable Certification(s) (e.g. BS, BBA cert etc)						
Purpose: Approval						
Project Team Comments:  Approval Status A B C Re-submittal Date Required Not Required  Legend: A – Approved; B – Approved with Comments; C – Rejected						
∟оувна. A – Арргоv	od, D. Approved with Confinents, C - Nejected					

Sample Approved By:					
Signed:	Name:	of	Date:		
Signed:	Name:	of	Date:		
Signed:	Name:	of	Date:		
Distribution	Client x Arch x	Other (specify) G+T CMT			

Project:	CDY		Project No:	HLN.0262		
Submitted by:	BAM	Date:	26/07/17			
Submitted to:	Camden Planning	Ref No:	108			
Type:	Sample: x Benchmark:	Mock	k-up:			
Type: Sample: x Benchmark: Mock-up:  Description; Brushed Kebony  .						
Location for Insp BAM Canal Rea		er Inspection: (mu	ust be suitable)			
To be Built into the Works? no If YES Location:						
Applicable Certification(s) (e.g. BS, BBA cert etc)						
Purpose: Approval						
Project Team Comments:  Approval Status A B C Re-submittal Date Required Not Required  Legend: A – Approved; B – Approved with Comments; C – Rejected						

Form: 300-43 Rev: 1

Sample Approved By:			
Signed:	Name: _	of	Date:
Signed:	Name:	of	Date:
Signed:	Name: _	of	Date:
Distribution	Client x Arch x	Other (specify) G+T CMT	

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