

## Certificate of Product Approval

Certificate Number: 1454a

Issue: 01

### CRH Fencing & Security Group (UK) Limited t/a Heras

Hérons Way  
Carr Hill Industrial Estate  
Balby  
Doncaster  
DN4 8WA

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirements of the standard(s) detailed below:

#### Products

Pallas Xtra  
Zenith  
TangoRail TR100  
TangoRail TR200  
TangoRail TR150  
TangoRail TR250  
TangoRail TR300F  
TangoRail TR300P  
TangoRail TR400  
security fencing systems

#### Standards

##### LPS 1175: Issue 6

Requirements and testing procedures for the LPCB approval and listing of intruder resistant building components, strongpoints, security enclosures and free-standing barriers

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Signed for LPCB

Paul Dillon  
Verifier

15 January 2018  
Date of Issue

15 January 2018  
Date of First Issue



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## Appendix to Certificate No: 1454a

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### Security Fencing Systems

Product Name	Type	Nominal Height (m)	Post Centres (m)	Maximum Gradients	Angles In Fence Line <sup>1</sup>	Security Rating	LPCB ref. No.
Pallas Xtra	Welded mesh security fencing system	1.8, 2.0, 2.4 and 3.0	2.53	0° <sup>2</sup>	175° to 185° and 265° to 275°	1	1454a/01
Zenith	Welded mesh security fencing system	1.8	2.44	0.7°	175° to 185° and 265° to 275°	1	1454a/02
		2.0		4.67°			
		2.4		13.8°			
		3.0		23.5°			
		4.2		37.6°			
		5.2		37.6°			
TangoRail TR100	Railings	1.8, 2.0, 2.1 and 2.4	2.84	16.5° <sup>3</sup>	75° to 105°, 165° to 195° and 255° to 265°	1	1454a/03
TangoRail TR200	Railings	1.8, 2.0, 2.1 and 2.4	2.84	16.5° <sup>3</sup>	75° to 105°, 165° to 195° and 255° to 265°	1	1454a/04
TangoRail TR150	Railings	1.8, 2.0, 2.1 and 2.4	2.755	17° <sup>3</sup>	75° to 105°, 165° to 195° and 255° to 265°	1	1454a/05
TangoRail TR250	Railings	1.8, 2.0, 2.1 and 2.4	2.755	17° <sup>3</sup>	75° to 105°, 165° to 195° and 255° to 265°	1	1454a/06
TangoRail TR300F	Railings	1.8, 2.0, 2.1 and 2.4	2.84	16.5° <sup>3</sup>	75° to 105°, 165° to 195° and 255° to 265°	1	1454a/07
TangoRail TR300P	Railings	1.8, 2.0, 2.1 and 2.4	2.84	16.5° <sup>3</sup>	75° to 105°, 165° to 195° and 255° to 265°	1	1454a/08
TangoRail TR400	Railings	1.8, 2.0, 2.1 and 2.4	2.84	16.5° <sup>3</sup>	75° to 105°, 165° to 195° and 255° to 265°	1	1454a/09

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## Appendix to Certificate No: 1454a CRH Fencing & Security Group (UK) Limited t/a Heras

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### Principle Components for Pallas Xtra and Zenith Fencing Systems<sup>4</sup>

Component	Type	Description	Fencing System	
			Pallas Xtra	Zenith
Panels	Pallas Xtra welded mesh panels	Welded mesh formed from nominal 6 mm diameter steel vertical wires at 50 mm centres and pairs of 8 mm diameter horizontal wires at 200 mm centres	✓	
	Zenith welded mesh panels	Welded mesh formed from nominal 4 mm diameter steel wires at 76.3 mm (3 inch) vertical centres and 12.7 mm (1/2 inch) horizontal centres		✓
Panel clamp bars	Hexafix clamp bars	40 mm by 5 mm slotted steel clamp bars secured using M8 by 40 mm shear drive bolts	✓	
	Zenith clamp bars	40 mm by 5 mm slotted steel clamp bars secured using M8 cup square bolts and shear nuts		✓
Posts	Hexafix RHS intermediate posts	60 by 40 mm by 3 mm RHS posts with integral panel mounting clips	✓ <sup>5</sup>	
		80 by 40 mm by 3 mm RHS posts with integral panel mounting clips	✓ <sup>6</sup>	
	Hexafix RHS corner posts	60 by 60 mm by 2 mm SHS posts with integral panel mounting clips	✓ <sup>5</sup>	
		80 by 80 mm by 2 mm SHS posts with integral panel mounting clips	✓ <sup>6</sup>	
	Zenith intermediate posts	60 by 60 mm by 2 mm SHS posts for use on 1.8 m, 2.0 m and 2.4 m high fences		✓
	Zenith intermediate posts	80 by 40 mm by 3 mm RHS posts for use on 3.0 m high fences		✓
	Zenith intermediate posts	80 by 40 mm by 3 mm RHS posts for use on 4.2 m high fences		✓
	Zenith intermediate posts	100 by 100 mm by 4 mm SHS posts for use on 5.2 m high fences		✓
	Zenith corner posts	60 by 60 mm by 2 mm SHS posts for use on 1.8 m, 2.0 m and 2.4 m high fences		✓
	Zenith corner posts	80 by 80 mm by 3 mm RHS posts for use on 3.0 m and 4.2 m high fences		✓
U clamp sets	U- clamp set	Three U-clamp sets comprising 5 mm diameter by 95 mm long steel U-clamps, plastic bases, steel retaining plates, M6 shear nuts and plastic covers	✓ <sup>5</sup>	
		Five U-clamp sets comprising 5 mm diameter by 115 mm long steel U-clamps, plastic bases, steel retaining plates, M6 shear nuts and plastic covers	✓ <sup>6</sup>	

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### Principle Components for TangoRail Fencing Systems<sup>4</sup>

Component	Type	Description	Fencing System						
			TangoRail TR100	TangoRail TR200	TangoRail TR150	TangoRail TR250	TangoRail TR300F	TangoRail TR300P	TangoRail TR400
Finials	Fullered	Fullered finial					✓		
	Point	Point top finial						✓	
Fishplates	Intermediate fishplate	Fishplate used to attach rails to intermediate posts. These form angles in the fence between 165° and 195° <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓
	Corner fishplate	Fishplate used to attach rails to intermediate posts. These form angles in the fence between 75° and 105° and between 255° and 265° <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓
Pales	Standard capped pales	25.5 mm (outer diameter) steel tubes at 125 mm centres	✓						
	Standard mitred pales	25.5 mm (outer diameter) steel tubes at 125 mm centres		✓					
	TR300 pales	25.5 mm (outer diameter) steel tubes at 125 mm centres					✓	✓	
	Security capped pales	25.5 mm (outer diameter) steel tubes at 103 mm centres			✓				

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Component	Type	Description	Fencing System						
			TangoRail TR100	TangoRail TR200	TangoRail TR150	TangoRail TR250	TangoRail TR300F	TangoRail TR300P	TangoRail TR400
Pales (continued)	Security mitred pales	25.5 mm (outer diameter) steel tubes at 103 mm centres				✓			
	Square bar capped pales	25 mm by 25 mm steel tubes at 125 mm centres							✓
Posts	HD rolled formed posts	HD rolled formed post of nominal cross section 117 mm by 43.5 mm	✓	✓	✓	✓	✓	✓	✓
Rails	HD1 rails	55 mm by 52 mm by 1.5 mm rail	✓	✓			✓	✓	
	HD2 rails	55 mm by 52 mm by 1.5 mm rail			✓	✓			
	HD3 rails	55 mm by 52 mm by 1.5 mm rail							✓

### Approved Assembly and Installation Drawings for Pallas Xtra and Zenith Fencing Systems<sup>7</sup>

Document Ref.	Revision / Issue Date	Title / Contents	Fencing System	
			Pallas Xtra	Zenith
-	Received October 2012	Pallas Xtra Installation Details and Fence Specification (2 pages)	✓	
3.0 m high Pallas Xtra detail	0 25/9/12	3.0 Pallas Xtra system in ground spec fence detail	✓	
Form 39	0 7/7/10	Customer information (Zenith)		✓
ref_pal_1	C 19/10/12	Pallas Xtra specification 1.8 m, 2.0 m, 2.4 m, 3.0 m high fence installation details	✓	
ref_pal_3	0 19/3/09	Hexafix system External corner assembly	✓	

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Document Ref.	Revision / Issue Date	Title / Contents	Fencing System	
			Pallas Xtra	Zenith
ref_zen_1	B 20/2/13	Zenith system specification All heights. Installation details		✓
ref_zen_3	0 16/3/09	Zenith system in ground spec corner arrangement		✓

### Approved Assembly and Installation Drawings for TangoRail Fencing Systems<sup>7</sup>

Document Ref.	Revision / Issue Date	Title / Contents	Fencing System						
			TangoRail TR100	TangoRail TR200	TangoRail TR150	TangoRail TR250	TangoRail TR300F	TangoRail TR300P	TangoRail TR400
Form 42 (TangoRail TR100, TR200 and TR400)	11/11/10	Customer information (Contour Capped / Mitred / Square Bar)	✓	✓					✓
Form 42 (TangoRail TR150 and TR250)	11/11/10	Customer information (Contour Capped / Mitred / Square Bar)			✓	✓			
Form 42 (TangoRail TR300F and TR300P)	11/11/10	Customer information (Contour Point Top / Fullered Top)					✓	✓	

#### Notes:

1. The 'angles in fence line' define the range of angles covered by the scope. These are measured between the attack faces of two adjacent fence posts.
2. The fencing system is only approved for installation into flat level ground.
3. The gradient is based on a maximum rake of 0.8 m along the length of the rail. It relates to the 2.0 m and 2.4 m high fences. The scope of approval for the 1.8 m high fences only covers fences installed on flat level ground.
4. The fencing system should only be constructed using components supplied by Heras.
5. These components are used to construct 1.8 m, 2.0 m and 2.4 m high Pallas Xtra fences but not 3.0 m high Pallas Xtra fences.
6. These components are used to construct 3.0 m high Pallas Xtra fences but not 1.8 m, 2.0 m or 2.4 m high Pallas Xtra fences.
7. The fencing systems are approved for installation into foundations buried in the ground, as detailed on the documents listed in the table above titled 'Approved Assembly and Installation Drawings'. The approval does not cover the use of base plated posts surface mounted on top of the ground.
8. It is important to ensure the local ground onto/into which the fence is installed offers compatible strength.

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