Forterra	
Declaration of Performance Certificate Number: DOP/F/FP/SC-Retaining Walls/RW 1x1	CE
The undersigned, representing the following: FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA	FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA 13
Confirms that:	FPC Certificate No.:1333-CPR-00138
Retaining Walls:- RW 1x1 Manufacturing Plant: Somercotes	BS EN 15258:2008 Retaining Wall Elements Precast element for gravity retaining wall
13	Product Name: RW 1x1
FPC Certificate No.:1333-CPR-00138	Concrete:
Category 1: 1000 x 1000 Retaining Wall Elements Provision to which the prodcut conforms: Standard: Annex ZA of BS EN 15258:2008 Regulation (EU) No. 305 / 2011	$\label{eq:response} \begin{array}{llllllllllllllllllllllllllllllllllll$
$\label{eq:concrete:} \begin{array}{llllllllllllllllllllllllllllllllllll$	Mechanical Resistance (design values): Bending moment capacity (of the critical section)
Tensile yield strength	Shear capacity (of the critical section)
(of the critical section)	Material safety factors applied in strength calculation:
For concrete $\gamma c = 1.50$ For steel $\gamma s = 1.15$	For concrete
For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation	For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation
Technical documentation: Technical File*	Technical documentation: Technical File *
* Available on request Note information on Dangerous Substances will only be given when and where required in the appropriate form	* Available on request
The performance of the product identified above is in conformity with the declared values, when installed in accordance with the manufacture's instructions.	
Signed on behalf of the manufacture: head that Full name: Matthew Clay	
Position: Managing Director (Design Solution) Date: 05 October 2015	
Version: 1	Version: 1

Forterra	
Declaration of Performance Certificate Number: DOP/F/FP/SC-Retaining Walls/RW 1.5x1	CE
The undersigned, representing the following: FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA	FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA 13
Confirms that:	FPC Certificate No.:1333-CPR-00138
Retaining Walls:- RW 1.5x1 Manufacturing Plant: Somercotes	BS EN 15258:2008 Retaining Wall Elements Precast element for gravity retaining wall
13	Product Name: RW 1.5x1
FPC Certificate No.:1333-CPR-00138 Conforms to harmonised European Standard: BS EN 15258:2008	Category 1: Retaining Wall Elements Compressive strengthf _{rx} = C40/50 N/mm ²
Category 1: 1500 x 1000 Retaining Wall Elements	
Provision to which the prodcut conforms: Standard: Annex ZA of BS EN 15258:2008 Regulation (EU) No. 305 / 2011	Reinforcing Steel:Ultimate tensile strength $f_{ik} = 650 \text{ N/mm}^2$ Tensile yield strength $f_{yk} = 500 \text{ N/mm}^2$
Concrete: Compressive strength Reinforcing Steel: Ultimate tensile strength f _{ik} = 650 kN/m ² Tensile yield strength f _{yk} = 500 kN/m ² Mechanical Resistance(design values): Description provent encoder	Mechanical Resistance (design values): Bending moment capacity (of the critical section)
Joint and reparting moment capacity 9.5 kNm Shear capacity (of the critical section)	Material safety factors applied in strength calculation: For concrete
For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation	For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation
	Technical documentation: Technical File *
Available on request Note information on Dangerous Substances will only be given when and where required in the appropriate form.	* Available on request
The performance of the product identified above is in conformity with the declared values, when installed in accordance with the manufacture's instructions.	
Signed on behalf of the manufacture: hat full name: Matthew Clay	
Position: Managing Director (Design Solution) Date: 05 October 2015	
Version: 1	Version: 1

Forterra	
Declaration of Performance Certificate Number: DOP/F/FP/SC-Retaining Walls/RW 1.75x1	C E
The undersigned, representing the following: FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA	FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA 13
Confirms that:	FPC Certificate No.:1333-CPR-00138
Retaining Walls:- RW 1.75x1 Manufacturing Plant: Somercotes	BS EN 15258:2008 Retaining Wall Elements Precast element for gravity retaining wall
13	Product Name: RW 1 75x1
FPC Certificate No.:1333-CPR-00138	Category 1: Retaining Wall Elements
Conforms to harmonised European Standard: BS EN 15258:2008	Compressive strength $f_{ck} = C40/50$ N/mm ²
Category 1: 1750 x 1000 Retaining Wall Elements Provision to which the prodcut conforms: Standard: Annex ZA of BS EN 15258:2008 Regulation (EU) No. 305 / 2011	Reinforcing Steel:Ultimate tensile strength $f_{ik} = 650 \text{ N/mm}^2$ Tensile yield strength $f_{yk} = 500 \text{ N/mm}^2$
Concrete: $f_{ck} = C40/50$ N/mm² Reinforcing Steel: $f_{ik} = 650$ kN/m² Ultimate tensile strength	Mechanical Resistance (design values): Bending moment capacity (of the critical section)
(of the critical section)	Material safety factors applied in strength calculation: For concrete
For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation Technical documentation: Technical File*	For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistar and other NDPs see the Technical documentation
* Available on request	Technical documentation: Technical File *
Note information on Dangerous Substances will only be given when and where required in the appropriate form.	* Available on request
The performance of the product identified above is in conformity with the declared values, when installed in accordance with the manufacture's instructions.	
Signed on behalf of the manufacture: hat the full name: Matthew Clay	
Position: Managing Director (Design Solution) Date: 05 October 2015	
Version: 1	Version: 1

Forterra	
Declaration of Performance Certificate Number: DOP/F/FP/SC-Retaining Walls/RW 2x1	
The undersigned, representing the following: FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA	FORTERA 5 Grange Park Court, Roman Way Northampton NN4 5EA 13
Contirms that: Retaining Walls:- RW 2x1 Manufacturing Plant: Somercodes	BS EN 15258:2008 Retaining Wall Elements Precast element for gravity retaining wall
FPC Certificate No.:1333-CPR-00138 Conforms to harmonised European Standard: BS EN 15258:2008	Category 1: Retaining Wall Elements Concrete: Compressive strength f _{ck} = C40/50 N/mm ²
Category 1: 2000 x 1000 Retaining Wall Elements Provision to which the prodcut conforms: Standard: Annex ZA of BS EN 15258:2008 Regulation (EU) No. 305 / 2011	Reinforcing Steel:Ultimate tensile strength f_{tk} =650 N/mm²Tensile yield strength f_{yk} =500 N/mm²
Concrete: Compressive strength fck C40/50 N/mm² Reinforcing Steel: Ultimate tensile strength f_{tk} 650 kN/m² Tensile yield strength f_{yk} 500 kN/m² Mechanical Resistance(design values): Berding memory capacity	Mechanical Resistance (design values): Bending moment capacity (of the critical section)
(of the critical section)	Material safety factors applied in strength calculation: For concrete
For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation Technical documentation: Technical File*	For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation
* Available on request	Technical documentation: Technical File *
Note information on Dangerous Substances will only be given when and where required in the appropriate form.	* Available on request
The performance of the product identified above is in conformity with the declared values, when installed in accordance with the manufacture's instructions. Signed on behalf of the manufacture:	
Position: Managing Director (Design Solution) Date: 05 October 2015	
Version: 1	Version: 1

Forterra	
Declaration of Performance Certificate Number: DOP/F/FP/SC-Retaining Walls/RW 2.5x1	
The undersigned, representing the following: FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA	FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA 13
Confirms that:	FPC Certificate No.:1333-CPR-00138
Retaining Walls:- RW 2.5x1 Manufacturing Plant: Somercotes	BS EN 15258:2008 Retaining Wall Elements Precast element for gravity retaining wall
13	Product Name: RW 2.5x1
FPC Certificate No.:1333-CPR-00138 Conforms to harmonised European Standard: BS EN 15258:2008	Category 1: Retaining Wall Elements Compressive strengthfrk = C40/50 N/mm ²
Category 1: 2500 x 1000 Retaining Wall Elements	
Provision to which the product conforms: Standard: Annex ZA of BS EN 15258:2008 Regulation (EU) No. 305 / 2011	Reinforcing Steel: Ultimate tensile strength $f_{tk} =$ $f_{yk} =$ 650 N/mm^2 Tensile yield strength $f_{yk} =$ 500 N/mm^2
Concrete: Compressive strength	Mechanical Resistance (design values):
Remorcing Steel: Ultimate tensile strength f_{ik} 650 kN/m ² Tensile vield strength f_{ik} 500 kN/m ²	(of the critical section)
Mechanical Resistance(design values):	Shear capacity (of the critical section)
(of the critical section)	Material safety factors applied in strength calculation:
For concreteγc = 1.50 For steelγs = 1.15	For concreteγc = 1.50 For steelγs = 1.15
For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation	For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistanc and other NDPs see the Technical documentation
Technical documentation: Technical File*	Technical documentation: Technical File *
* Available on request	* Available on request
Note information on Dangerous Substances will only be given when and where required in the appropriate form.	
The performance of the product identified above is in conformity with the declared values, when installed in accordance with the manufacture's instructions.	
Signed on behalf of the manufacture: headfuller Full name: Matthew Clay	
Position: Managing Director (Design Solution) Date: 05 October 2015	
Version: 1	Version: 1

Forterra	
Declaration of Performance Certificate Number: DOP/F/FP/SC-Retaining Walls/RW 3x1	CE
The undersigned, representing the following: FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA	FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA 13
Confirms that:	FPC Certificate No.:1333-CPR-00138
Retaining Walls:- RW 3x1 Manufacturing Plant: Somercotes	BS EN 15258:2008 Retaining Wall Elements Precast element for gravity retaining wall
13	Product Name: RW 3x1
FPC Certificate No.:1333-CPR-00138	Category 1: Retaining Wall Elements Concrete: Compressive strength
Category 1: 3000 x 1000 Retaining Wall Elements Provision to which the prodcut conforms: Standard: Annex ZA of BS EN 15258:2008 Regulation (EU) No. 305 / 2011	Reinforcing Steel:Ultimate tensile strength $f_{ik} = 650 \text{ N/mm}^2$ Tensile yield strength $f_{yk} = 500 \text{ N/mm}^2$
Concrete: Compressive strength $f_{ck} = C40/50$ N/mm ² Reinforcing Steel: Ultimate tensile strength $f_{tk} = 650$ kN/m ² Topsile vide strength	Mechanical Resistance (design values): Bending moment capacity (of the critical section)
Mechanical Resistance(design values):	Shear capacity (of the critical section) 114.7 kN
Bending moment capacity (of the critical section)	Material safety factors applied in strength calculation: For concrete
For seei	For seventrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation
Technical documentation: Technical File*	Technical documentation: Technical File *
* Available on request	
Note information on Dangerous Substances will only be given when and where required in the appropriate form.	Available on request
The performance of the product identified above is in conformity with the declared values, when installed in accordance with the manufacture's instructions.	
Signed on behalf of the manufacture: head full name: Matthew Clay	
Position: Managing Director (Design Solution) Date: 05 October 2015	
Version: 1	Version: 1

Forterra	
Declaration of Performance Certificate Number: DOP/F/FP/SC-Retaining Walls/RW 3.75x1	CE
The undersigned, representing the following: FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA	FORTERRA 5 Grange Park Court, Roman Way Northampton NN4 5EA 13
Confirms that:	FPC Certificate No.:1333-CPR-00138
Retaining Walls:- RW 3.75x1 Manufacturing Plant: Somercotes	BS EN 15258:2008 Retaining Wall Elements Precast element for gravity retaining wall
13	Product Name: RW 3 75x1
FPC Certificate No.:1333-CPR-00138 Conforms to harmonised European Standard: BS EN 15258:2008	Category 1: Retaining Wall Elements Concrete: Compressive strengthf _{ck} = C40/50 N/mm ²
Category 1: 3750 x 1000 Retaining Wall Elements Provision to which the prodcut conforms: Standard: Annex ZA of BS EN 15258:2008 Regulation (EU) No. 305 / 2011	Reinforcing Steel:Ultimate tensile strength $f_{tk} = 650 \text{ N/mm}^2$ Tensile yield strength $f_{yk} = 500 \text{ N/mm}^2$
Concrete: Compressive strength Compressive strength $f_{ck} = C40/50$ N/mm² Reinforcing Steel: Ultimate tensile strength $f_{ik} = 650$ kN/m² Tensile yield strength $f_{yk} = 500$ kN/m² Mechanical Resistance(design values): Bending moment capacity	Mechanical Resistance (design values): Bending moment capacity (of the critical section) 117.0 kNm Shear capacity (of the critical section) 158.2 kN
(of the critical section) 117.0 kNm Shear capacity (of the critical section) 158.2 kN Material Safety Factor Used in Calculation 158.2 kN For concrete	Material safety factors applied in strength calculation:For concrete
For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation Technical documentation: Technical File*	For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistan and other NDPs see the Technical documentation
	Technical documentation: Technical File *
Available on request Note information on Dangerous Substances will only be given when and where required in the appropriate form.	* Available on request
The performance of the product identified above is in conformity with the declared values, when installed in accordance with the manufacture's instructions. Signed on behalf of the manufacture:	
Position: Managing Director (Design Solution) Date: 05 October 2015	Version: 1
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