

**Declaration of Performance**

Certificate Number: DOP/HANUK/FP-Retaining Walls/RW 1x1

The undersigned, representing the following:

Hanson Building Products Ltd  
Hanson House, 14 Castle Hill,  
Maidenhead,  
SL6 4JJ

Confirms that:

**Retaining Walls:- RW 1x1**

Manufacturing Plant: **Somercotes**

**13**

FPC Certificate No.:1333-CPD-00138

Conforms to harmonised European Standard: BS EN 15258:2008

Category 1: 1000 x 1000 Retaining Wall Elements

Provision to which the product conforms: Standard: Annex ZA of BS EN 15258:2008  
Regulation (EU) No. 305 / 2011

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ kN/m}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ kN/m}^2$

**Mechanical Resistance**(design values):

Bending moment capacity  
(of the critical section)..... 5.1 kNm

Shear capacity (of the critical section)..... 34.7 kN

**Material Safety Factor Used in Calculation**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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.

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:  Full name: Matthew Clay

Position: Managing Director (Design Solution) Date: 04 March 2014



1333

Hanson Building Products Ltd  
Hanson House, 14 Castle Hill,  
Maidenhead,  
SL6 4JJ

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FPC Certificate No.:1333-CPD-00138

**BS EN 15258:2008**  
**Retaining Wall Elements**  
**Precast element for gravity retaining wall**

**Product Name: RW 1x1**

Category 1: Retaining Wall Elements

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ N/mm}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ N/mm}^2$

**Mechanical Resistance** (design values):

Bending moment capacity  
(of the critical section)..... 5.1 kNm

Shear capacity (of the critical section)..... 34.7 kN

**Material safety factors applied in strength calculation:**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation

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### Declaration of Performance

Certificate Number: DOP/HANUK/FP-Retaining Walls/RW 1.5x1

The undersigned, representing the following:

Hanson Building Products Ltd  
Hanson House, 14 Castle Hill,  
Maidenhead,  
SL6 4JJ

Confirms that:

**Retaining Walls:- RW 1.5x1**

Manufacturing Plant: **Somercotes**

**13**

FPC Certificate No.:1333-CPD-00138

Conforms to harmonised European Standard: BS EN 15258:2008

Category 1: 1500 x 1000 Retaining Wall Elements

Provision to which the product conforms: Standard: Annex ZA of BS EN 15258:2008  
Regulation (EU) No. 305 / 2011

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ kN/m}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ kN/m}^2$

**Mechanical Resistance**(design values):

Bending moment capacity  
(of the critical section)..... 9.5 kNm

Shear capacity (of the critical section)..... 43.6 kN

**Material Safety Factor Used in Calculation**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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\*

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FPC Certificate No.:1333-CPD-00138

**BS EN 15258:2008**  
**Retaining Wall Elements**  
**Precast element for gravity retaining wall**

**Product Name: RW 1.5x1**

Category 1: Retaining Wall Elements

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ N/mm}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ N/mm}^2$

**Mechanical Resistance** (design values):

Bending moment capacity  
(of the critical section)..... 9.5 kNm

Shear capacity (of the critical section)..... 43.6 kN

**Material safety factors applied in strength calculation:**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation

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**Declaration of Performance**

Certificate Number: DOP/HANUK/FP-Retaining Walls/RW 1.75x1

The undersigned, representing the following:

Hanson Building Products Ltd  
Hanson House, 14 Castle Hill,  
Maidenhead,  
SL6 4JJ

Confirms that:

**Retaining Walls:- RW 1.75x1**

Manufacturing Plant: **Somercotes**

**13**

FPC Certificate No.:1333-CPD-00138

Conforms to harmonised European Standard: BS EN 15258:2008

Category 1: 1750 x 1000 Retaining Wall Elements

Provision to which the product conforms: Standard: Annex ZA of BS EN 15258:2008  
Regulation (EU) No. 305 / 2011

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ kN/m}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ kN/m}^2$

**Mechanical Resistance**(design values):

Bending moment capacity  
(of the critical section)..... 21.0 kNm

Shear capacity (of the critical section)..... 91.2 kN

**Material Safety Factor Used in Calculation**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation

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FPC Certificate No.:1333-CPD-00138

**BS EN 15258:2008**  
**Retaining Wall Elements**  
**Precast element for gravity retaining wall**

**Product Name: RW 1.75x1**

Category 1: Retaining Wall Elements

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ N/mm}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ N/mm}^2$

**Mechanical Resistance** (design values):

Bending moment capacity  
(of the critical section)..... 21.0 kNm

Shear capacity (of the critical section)..... 91.2 kN

**Material safety factors applied in strength calculation:**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation

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### Declaration of Performance

Certificate Number: DOP/HANUK/FP-Retaining Walls/RW 2x1

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Hanson Building Products Ltd  
Hanson House, 14 Castle Hill,  
Maidenhead,  
SL6 4JJ

Confirms that:

**Retaining Walls:- RW 2x1**

Manufacturing Plant: **Somercotes**

**13**

FPC Certificate No.:1333-CPD-00138

Conforms to harmonised European Standard: BS EN 15258:2008

Category 1: 2000 x 1000 Retaining Wall Elements

Provision to which the product conforms: Standard: Annex ZA of BS EN 15258:2008  
Regulation (EU) No. 305 / 2011

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ kN/m}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ kN/m}^2$

**Mechanical Resistance**(design values):

Bending moment capacity

(of the critical section)..... 21.0 kNm

Shear capacity (of the critical section)..... 91.2 kN

**Material Safety Factor Used in Calculation**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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

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FPC Certificate No.:1333-CPD-00138

**BS EN 15258:2008**  
**Retaining Wall Elements**  
**Precast element for gravity retaining wall**

**Product Name: RW 2x1**

Category 1: Retaining Wall Elements

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ N/mm}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ N/mm}^2$

**Mechanical Resistance** (design values):

Bending moment capacity  
(of the critical section)..... 21.0 kNm

Shear capacity (of the critical section)..... 91.2 kN

**Material safety factors applied in strength calculation:**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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 \*

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**Declaration of Performance**

Certificate Number: DOP/HANUK/FP-Retaining Walls/RW 2.5x1

The undersigned, representing the following:

Hanson Building Products Ltd  
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Maidenhead,  
SL6 4JJ

Confirms that:

**Retaining Walls:- RW 2.5x1**

Manufacturing Plant: **Somercotes**

**13**

FPC Certificate No.:1333-CPD-00138

Conforms to harmonised European Standard: BS EN 15258:2008

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

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ kN/m}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ kN/m}^2$

**Mechanical Resistance**(design values):

Bending moment capacity  
(of the critical section)..... 38.0 kNm

Shear capacity (of the critical section)..... 94.0 kN

**Material Safety Factor Used in Calculation**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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\*

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FPC Certificate No.:1333-CPD-00138

**BS EN 15258:2008**  
**Retaining Wall Elements**  
**Precast element for gravity retaining wall**

**Product Name: RW 2.5x1**

Category 1: Retaining Wall Elements

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ N/mm}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ N/mm}^2$

**Mechanical Resistance** (design values):

Bending moment capacity  
(of the critical section)..... 38.0 kNm

Shear capacity (of the critical section)..... 94.0 kN

**Material safety factors applied in strength calculation:**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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 \*

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**Declaration of Performance**

Certificate Number: DOP/HANUK/FP-Retaining Walls/RW 3x1

The undersigned, representing the following:

Hanson Building Products Ltd  
Hanson House, 14 Castle Hill,  
Maidenhead,  
SL6 4JJ

Confirms that:

**Retaining Walls:- RW 3x1**

Manufacturing Plant: **Somercotes**

**13**

FPC Certificate No.:1333-CPD-00138

Conforms to harmonised European Standard: BS EN 15258:2008

Category 1: 3000 x 1000 Retaining Wall Elements

Provision to which the product conforms: Standard: Annex ZA of BS EN 15258:2008  
Regulation (EU) No. 305 / 2011

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ kN/m}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ kN/m}^2$

**Mechanical Resistance**(design values):

Bending moment capacity  
(of the critical section)..... 61.0 kNm

Shear capacity (of the critical section)..... 114.7 kN

**Material Safety Factor Used in Calculation**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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\*

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FPC Certificate No.:1333-CPD-00138

**BS EN 15258:2008**  
**Retaining Wall Elements**  
**Precast element for gravity retaining wall**

**Product Name: RW 3x1**

Category 1: Retaining Wall Elements

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ N/mm}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ N/mm}^2$

**Mechanical Resistance** (design values):

Bending moment capacity  
(of the critical section)..... 61.0 kNm

Shear capacity (of the critical section)..... 114.7 kN

**Material safety factors applied in strength calculation:**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

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 \*

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**Declaration of Performance**

Certificate Number: DOP/HANUK/FP-Retaining Walls/RW 3.75x1

The undersigned, representing the following:

Hanson Building Products Ltd  
Hanson House, 14 Castle Hill,  
Maidenhead,  
SL6 4JJ

Confirms that:

**Retaining Walls:- RW 3.75x1**

Manufacturing Plant: **Somercotes**

**13**

FPC Certificate No.:1333-CPD-00138

Conforms to harmonised European Standard: BS EN 15258:2008

Category 1: 3750 x 1000 Retaining Wall Elements

Provision to which the product conforms: Standard: Annex ZA of BS EN 15258:2008  
Regulation (EU) No. 305 / 2011

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ kN/m}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ kN/m}^2$

**Mechanical Resistance**(design values):

Bending moment capacity  
(of the critical section)..... 117.0 kNm

Shear capacity (of the critical section)..... 158.2 kN

**Material Safety Factor Used in Calculation**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation

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FPC Certificate No.:1333-CPD-00138

**BS EN 15258:2008**  
**Retaining Wall Elements**  
**Precast element for gravity retaining wall**

**Product Name: RW 3.75x1**

Category 1: Retaining Wall Elements

**Concrete:**

Compressive strength.....  $f_{ck} = 50.0 \text{ N/mm}^2$

**Reinforcing Steel:**

Ultimate tensile strength.....  $f_{tk} = 650 \text{ N/mm}^2$

Tensile yield strength.....  $f_{yk} = 500 \text{ N/mm}^2$

**Mechanical Resistance** (design values):

Bending moment capacity  
(of the critical section)..... 117.0 kNm

Shear capacity (of the critical section)..... 158.2 kN

**Material safety factors applied in strength calculation:**

For concrete.....  $\gamma_c = 1.50$

For steel.....  $\gamma_s = 1.15$

For geometrical data detailing, durability, acoustic insulation index, possible complementary information on fire resistance and other NDPs see the Technical documentation

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