| Tekla Tedds PlanningApplications.com | Project High Gables, Straight Road, Boxted, Colchester, CO4 5QN | | | | Job no. 2021-67-01 | |
|---|--|-----------------------|------------------|----------------------------|-----------------------|--------------------------|
| Summer House, Upper Court Rd CR3 7BF - 020 8660 5026 | Calcs for | Mr Ralp | h Keeble | | Start page no./F | Revision 1 |
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MASONRY WALL PANEL DESIGN

In accordance with EN1996-1-1:2005 + A1:2012 incorporating Corrigenda February 2006 and July 2009 and the UK national annex

Tedds calculation version 1.2.18

Summary table

| | Allowable | Actual | Utilisation | |
|--|--------------|--------------|-------------|------|
| Slenderness ratio | 27; | 20.4; | 0.757; | PASS |
| Height to thickness ratio | 59.281; | 20.430; | 0.345; | PASS |
| Flexural stress to outer leaf of sub panel 1 | 0.634 kNm/m; | 0.189 kNm/m; | 0.298; | PASS |
| Flexural stress to inner leaf of sub panel 1 | 0.622 kNm/m; | 0.185 kNm/m; | 0.298; | PASS |
| Flexural stress to outer leaf of sub panel 2 | 0.634 kNm/m; | 0.183 kNm/m; | 0.289; | PASS |
| Flexural stress to inner leaf of sub panel 2 | 0.622 kNm/m; | 0.181 kNm/m; | 0.291; | PASS |
| Flexural stress to outer leaf of sub panel 3 | 0.679 kNm/m; | 0.522 kNm/m; | 0.769; | PASS |
| Flexural stress to inner leaf of sub panel 3 | 0.652 kNm/m; | 0.502 kNm/m; | 0.769; | PASS |

Masonry panel details

Side wall - Bi-folds opening - Unreinforced masonry wall with openings

| Panel length | L = 4500 mm |
|--------------|--------------------|
| Panel height | h = 2600 mm |

Panel support conditions

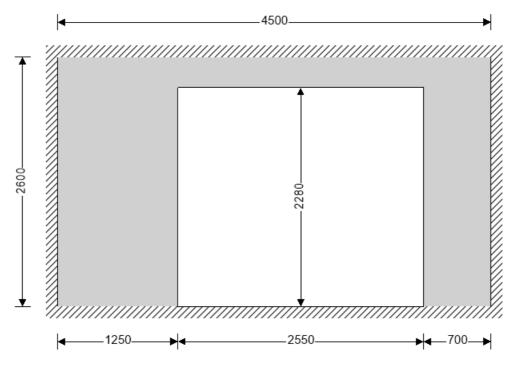
| Outer leaf | All edges supported continuously |
|------------|----------------------------------|
| Inner leaf | All edges supported continuously |

Effective height of masonry walls - Section 5.5.1.2

Reduction factor

Effective height of wall - eq 5.2

ρ2 = **1.000** h_{ef} = ρ2 × h = **2600** mm

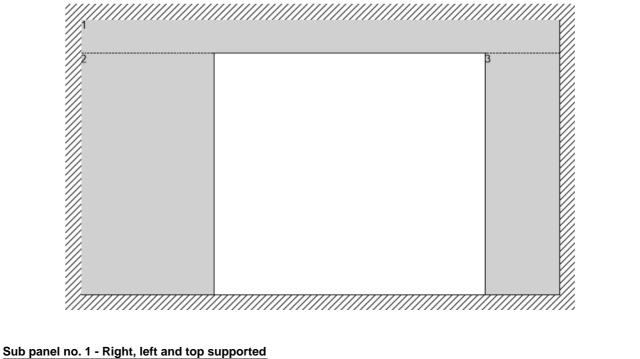


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| | 30 | 29/04/2021 | | 29/04/2021 | 38 | 29/04/2 | |
| Panel opening details | | | | | | | |
| Spacing length | | L1 = 1250 | mm | | | | |
| Opening width | | W1 = 2550 | mm | | | | |
| Height to underside of lintel | | h1 = 2280 | mm | | | | |
| Height of opening | | O1 = 2280 | mm | | | | |
| Cavity wall construction detail | ils | | | | | | |
| Outer leaf thickness | | tı = 102 m | | | | | |
| Cavity thickness | | tc = 50 mm | | | | | |
| Inner leaf thickness | | t2 = 100 m | m | | | | |
| Effective thickness of mason | ry walls - Sec | tion 5.5.1.3 | | | | | |
| Relative E factor | | ktef = 1.000 |) | | | | |
| Effective thickness - eq 5.11 | | $t_{ef} = (k_{tef} \times$ | $t_{1^3} + t_{2^3})^{1/3} = 12$ | 27.3 mm | | | |
| 1 | | | | | 1 | | |
| | | X | / | | | | |
| | | X | | ~ | | | |
| | | | | - | | | |
| | | Aggregate | e concrete bri | | | | |
| Masonry outer leaf details | ігу | Aggregate | | ≂ ck - Group 1 | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit | гу | fc1 = 3.6 N/ hu1 = 215 r | /mm² mm | -≺ ck - Group 1 | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit | ıry | fc1 = 3.6 N/ hu1 = 215 r Wu1 = 102 | /mm² mm | ck - Group 1 | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor | | $f_{c1} = 3.6 \text{ N}_{t}$ $h_{u1} = 215 \text{ m}$ $w_{u1} = 102 \text{ k}$ $k_1 = 1.0$ | /mm² mm mm | ck - Group 1 | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor | | $f_{c1} = 3.6 \text{ N}_{t}$ $h_{u1} = 215 \text{ m}$ $w_{u1} = 102 \text{ k}$ $k_1 = 1.0$ | /mm² mm mm .2 | | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 | ndition in acco | $f_{c1} = 3.6 \text{ N/}$ $h_{u1} = 215 \text{ m}$ $w_{u1} = 102 \text{ m}$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.37$ | /mm ² mm mm .2 6 | | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren | ndition in acco | $f_{c1} = 3.6 \text{ N}_{t}$ $h_{u1} = 215 \text{ m}$ $W_{u1} = 102$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.37$ $y \qquad f_{b1} = f_{c1} \times k$ | /mm ² mm 2 6 (1 × dsf1 = 4.95 4 | | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry | ndition in acco | $f_{c1} = 3.6 \text{ N}_{c1}$ $h_{u1} = 215 \text{ m}_{u1}$ $w_{u1} = 102$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.37$ $y \qquad f_{b1} = f_{c1} \times k$ $\gamma_1 = 20 \text{ kN}_{c1}$ | /mm ² mm .2 6 (1 × dsf1 = 4.95 4 /m ³ | 4 N/mm² | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry Mortar type | ndition in acco gth of masonr | $f_{c1} = 3.6 \text{ N}_{c1}$ $h_{u1} = 215 \text{ m}_{u1}$ $w_{u1} = 102$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.37$ $y \qquad f_{b1} = f_{c1} \times k$ $\gamma_1 = 20 \text{ kN}_{c1}$ | /mm ² mm .2 6 ≲1 × d₅f1 = 4.95 4 /m ³ eral purpose n | 4 N/mm² | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry Mortar type Compressive strength of masor | ndition in acco gth of masonr nry mortar | $f_{c1} = 3.6 \text{ N/}$ $h_{u1} = 215 \text{ m}$ $w_{u1} = 102$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.370$ $y \qquad f_{b1} = f_{c1} \times k$ $\gamma_1 = 20 \text{ kN/}$ $M6 - Gene$ | /mm ² mm .2 6 ≲1 × d₅f1 = 4.95 4 /m ³ eral purpose n | 4 N/mm² | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry Mortar type Compressive strength of masor Compressive strength factor - T | ndition in acco gth of masonr nry mortar able NA.4 | $f_{c1} = 3.6 \text{ N/}$ $h_{u1} = 215 \text{ m}$ $w_{u1} = 102 \text{ m}$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.37 \text{ m}$ $y \qquad f_{b1} = f_{c1} \times k$ $\gamma_1 = 20 \text{ kN/}$ $M6 - Gene$ $f_{m1} = 6 \text{ N/m}$ $K = 0.75$ | /mm ² mm .2 6 ≲1 × d₅f1 = 4.95 4 /m ³ eral purpose n | 4 N/mm² | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry | ndition in acco gth of masonr nry mortar able NA.4 | fc1 = 3.6 N/ hu1 = 215 r Wu1 = 102 k1 = 1.0 rdance with cl.7.3 dsf1 = 1.370 y fb1 = fc1 × k γ_1 = 20 kN/ M6 - Gene fm1 = 6 N/n K = 0.75 nry - eq 3.1 | /mm ² mm .2 6 ≲1 × dsf1 = 4.95 4 /m ³ eral purpose n nm ² | 4 N/mm² nortar | 3.715 N/mm ² | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry Mortar type Compressive strength of masor Compressive strength factor - T Characteristic compressive stre | ndition in acco gth of masonr nry mortar rable NA.4 ngth of masor | $f_{c1} = 3.6 \text{ N/}$ $h_{u1} = 215 \text{ m}$ $W_{u1} = 102$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.37$ $y \qquad f_{b1} = f_{c1} \times k$ $\gamma_1 = 20 \text{ kN/}$ $M6 - Gene$ $f_{m1} = 6 \text{ N/m}$ $K = 0.75$ $rry - eq 3.1$ $f_{k1} = K \times f_b$ | /mm ² mm .2 6 (1 × dsf1 = 4.954 /m ³ eral purpose n nm ² 1 ^{0.7} × min(fm1, 4 | 4 N/mm² nortar ↓.954 N/mm²) ^{0.3} = 5 | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry Mortar type Compressive strength of masor Compressive strength factor - T | ndition in acco gth of masonr nry mortar rable NA.4 ngth of masor | $f_{c1} = 3.6 \text{ N/}$ $h_{u1} = 215 \text{ m}$ $w_{u1} = 102 \text{ m}$ $k_1 = 1.0$ $rdance \text{ with cl.7.3}$ $d_{sf1} = 1.37 \text{ m}$ $y f_{b1} = f_{c1} \times k$ $\gamma_1 = 20 \text{ kN/}$ $M6 - Genere$ $f_{m1} = 6 \text{ N/m}$ $K = 0.75$ $ry - eq 3.1$ $f_{k1} = K \times f_b$ ving a plane of fail | /mm ² mm mm .2 6 $(1 \times d_{sf1} = 4.954)$ /m ³ eral purpose n nm ² $1^{0.7} \times min(f_{m1}, 4)$ ilure parallel to | 4 N/mm² nortar ↓.954 N/mm²) ^{0.3} = 5 | | | |
| Masonry outer leaf details Masonry type Compressive strength of masor Height of unit Width of unit Conditioning factor - Conditioning to the air dry cor Shape factor - Table A.1 Norm. mean compressive stren Density of masonry Mortar type Compressive strength of masor Compressive strength factor - T Characteristic compressive stre | ndition in acco gth of masonr ary mortar able NA.4 ngth of masor | fc1 = 3.6 N/ hu1 = 215 r Wu1 = 102 k1 = 1.0 rdance with cl.7.3 dsf1 = 1.370 y fb1 = fc1 × k γ_1 = 20 kN/ M6 - Gene fm1 = 6 N/n K = 0.75 my - eq 3.1 fk1 = K × fb wing a plane of fai fxk11 = 0.3 | /mm ² mm mm .2 6 (1 × dst1 = 4.95 4 /m ³ eral purpose n nm ² 1 ^{0.7} × min(fm1, 4 ilure parallel to N/mm ² | 4 N/mm² nortar 4.954 N/mm²) ^{0.3} = 5 9 the bed joints - Ta | able NA.6 | 1.6 | |

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| Maganny inner loof dataila | | | · | | | · |
| Masonry inner leaf details Masonry type | | Aggregate | concrete bri | ck - Group 1 | | |
| Compressive strength of maso | nrv | fc2 = 3.6 N/ | | | | |
| Height of unit | , | hu2 = 215 n | | | | |
| Width of unit | | Wu2 = 100 r | | | | |
| Conditioning factor | | k ₂ = 1.0 | | | | |
| - Conditioning to the air dry co | ndition in accord | dance with cl.7.3. | 2 | | | |
| Shape factor - Table A.1 | | dsf2 = 1.38 | | | | |
| Norm. mean compressive stren | ngth of masonry | $f_{b2} = f_{c2} \times k_{c2}$ | 2 × dsf2 = 4.968 | N/mm ² | | |
| Density of masonry | <u>,</u> | γ2 = 20 kN/ | m ³ | | | |
| Mortar type | | | ral purpose n | ortar | | |
| Compressive strength of maso | nrv mortar | fm2 = 6 N/m | | lontal | | |
| Compressive strength factor - | - | K = 0.75 | | | | |
| Characteristic compressive stre | | | | | | |
| | ongar of macori | | $0.7 \times \min(f_{max})$ | .968 N/mm²) ^{0.3} = 3 | 3 726 N/mm ² | |
| Characteristic flexural strength | of masonry bay | | • | , | | |
| | of masoning hav | fxk12 = 0.3 | - | | able NA.0 | |
| Characteristic flexural strength | of masonry bay | | | ular to the bed iou | ote - Table NA | 6 |
| | of masonly nav | fxk22 = 0.9 | | | | |
| | | 1xk22 = 0.91 | N/111111- | | | |
| Lateral loading details | | | | | | |
| Characteristic wind load on par | nel | Wk = 0.600 |) kN/m² | | | |
| Vertical loading details | | | | | | |
| Permanent load on top of oute | r leaf | Gk1 = 24 ki | N/m | | | |
| Permanent load on top of inner | r leaf | Gk2 = 29 kl | N/m | | | |
| Variable load on top of outer le | af | $Q_{k1} = 2 kN_{0}$ | ′m | | | |
| Variable load on top of inner le | af | $Q_{k2} = 2 kN_{\ell}$ | ′m | | | |
| Partial factors for material st | rength | | | | | |
| Category of manufacturing con | - | Category | | | | |
| Class of execution control | | Class 1 | | | | |
| Partial factor for masonry in co | mpressive flexu | re γ _{Mc} = 2.30 | | | | |
| Partial factor for masonry in ter | - | γ _{Mt} = 2.30 | | | | |
| Partial factor for masonry in sh | | γ _{Mv} = 2.50 | | | | |
| - | | | | | | |
| Slenderness ratio of masonr | y walls - Sectio | | | | | |
| Allowable slenderness ratio | | SRall = 27 | 00 (| | | |
| Slenderness ratio | | SR = h _{ef} / t | | | | |
| | | P | 455 - Siender | ness ratio is less | s than maxim | ium allowar |
| Unreinforced masonry walls | subjected to la | teral loading - S | ection 6.3 | | | |
| Partial safety factors for des | ign loads | | | | | |
| 2 | ent load | γfG = 1 | | | | |
| Partial safety factor for perman | | $\gamma f Q = 0$ | | | | |
| - | e imposed load | | | | | |
| Partial safety factor for perman | - | γfw = 1.5 | | | | |
| Partial safety factor for perman Partial safety factor for variable Partial safety factor for variable | e wind load | | or the service | ability limit state | Annov E | |
| Partial safety factor for perman Partial safety factor for variable Partial safety factor for variable Limiting height and length to | e wind load | os for walls und | | eability limit state | e - Annex F | |
| Partial safety factor for perman Partial safety factor for variable Partial safety factor for variable | e wind load o thickness ration | | | eability limit state | e - Annex F | |

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| | | F | PASS - Limitin | ig height to thick | ness ratio is | not exceed |
| Design moments of resistance | e in panels | | | | | |
| Considering outer leaf | | | | | | |
| Self weight at top of wall | | S _{wt1} = 0 kN | /m | | | |
| Design compressive strength o | t masonry | fd1 = fk1 / γΝ | c = 1.615 N/m | m² | | |
| Design vertical compressive str | ess | $\sigma_{d1} = \min(\gamma$ | $fG \times (G_{k1} + S_{wt1})$ |) / t_1 , 0.15 × f_{d1}) = | 0.235 N/mm ² | |
| Design flexural strength of mas | onry parallel to | bed joints | | | | |
| | | $f_{xd11} = f_{xk11}$ | / γ _{Mt} = 0.13 N/r | nm² | | |
| Apparent design flexural streng | th of masonry | parallel to bed joir | nts | | | |
| | | $f_{xd11,app} = f_{xd}$ | a11 + od1 = 0.36 | 56 N/mm ² | | |
| Design flexural strength of mas | onry perpendic | cular to bed joints | | | | |
| | | $f_{xd21} = f_{xk21}$ | / γ _{Mt} = 0.391 N | /mm² | | |
| Elastic section modulus of wall | | $Z_1 = t_{1^2} / 6$ | = 1734000 mr | n³/m | | |
| Moment of resistance parallel to | o bed joints - e | q.6.15 | | | | |
| | | $M_{Rd11} = f_{xd1}$ | 1,app × Z1 = 0.6 | 34 kNm/m | | |
| Moment of resistance perpendi | cular to bed joi | nts - eq.6.15 | | | | |
| | | $M_{Rd21} = f_{xd2}$ | 1 × Z1 = 0.679 | kNm/m | | |
| Considering inner leaf | | | | | | |
| Self weight at top of wall | | S _{wt2} = 0 kN | /m | | | |
| Design compressive strength o | f masonry | fd2 = fk2 / γN | c = 1.620 N/m | m² | | |
| Design vertical compressive str | ess | $\sigma_{d2} = \min(\gamma)$ | fG × (Gk2 + Swt2 | 2) / t2, 0.15 × fd2) = | 0.243 N/mm ² | |
| Design flexural strength of mas | | | · | | | |
| | | $f_{xd12} = f_{xk12}$ | / γ _{Mt} = 0.13 N/r | nm² | | |
| Apparent design flexural streng | th of masonry | | - | | | |
| | _ | | 112 + Od2 = 0.37 | 73 N/mm ² | | |
| Design flexural strength of mas | onry perpendic | cular to bed joints | | | | |
| | | $f_{xd22} = f_{xk22}$ | / γ _{Mt} = 0.391 N | /mm² | | |
| Elastic section modulus of wall | | $Z_2 = t_2^2 / 6$ | = 1666667 mr | n³/m | | |
| Moment of resistance parallel to | o bed joints - e | q.6.15 | | | | |
| | | $M_{Rd12} = f_{xd1}$ | 2,app × Z2 = 0.6 | 22 kNm/m | | |
| Moment of resistance perpendi | cular to bed joi | nts - eq.6.15 | | | | |
| | | $M_{Rd22} = f_{xd2}$ | 2 × Z2 = 0.652 | kNm/m | | |
| Design moment in panels | | | | | | |
| Calculate design wind load a | cting on each | leaf | | | | |
| Outer leaf design wind load - pa | • | | 11 × Wk / (MRd1 | 1 + MRd12) = 0.303 | kN/m² | |
| | | | | 1 + MRd12) = 0.297 | | |
| Inner leaf design wind load - pa | | | | , 1 + MRd22) = 0.306 | | |
| | rponuloului | | · · | , | | |
| Outer leaf design wind load - pe | - | $W_{k22} = M_{Rd}$ | 22 × Wk / (MRd2 | 21 + MRd22) = 0.294 | kN/m² | |
| Outer leaf design wind load - pe Inner leaf design wind load - pe | - | $W_{k22} = M_{Rd}$ | 22 × Wk / (MRd2 | 21 + MRd22) = 0.294 | • kN/m² | |
| Outer leaf design wind load - pe | - | | 22 × Wk / (MRd2 0 / fxd21 = 0.93 | e1 + MRd22) = 0.294 | • kN/m² | |

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| Ratio panel height to length | hs1B / Ls1B = 0.07 |
|--|--|
| Considering outer leaf | |
| Parallel design moment of resistance | MRd11 = 0.634 kNm/m |
| Using elastic analysis to determine bending mo | ment coefficients for a vertically spanning sub panel |
| Bending moment coefficient | $\alpha_{s11B} = 0.5 \times (1 + 2 \times \beta_{s1B}) = 4.062$ |
| Design moment in sub-panel | $M_{\text{Ed11B}} = \gamma_{\text{FW}} \times \alpha_{\text{S11B}} \times W_{\text{K11}} \times h_{\text{S1B}}^2 = \textbf{0.189} \text{ kNm/m}$ |
| | PASS - Resistance moment exceeds design moment |

WARNING! - The checking of sub-panels for vertical loading is currently beyond the scope of the calculation. This check can be performed by creating a new calculation for this sub-panel, modelled with the appropriate vertical and horizontal loading.

| and horizontal loading. | |
|---|---|
| Considering inner leaf | |
| Parallel design moment of resistance | MRd12 = 0.622 kNm/m |
| Using elastic analysis to determine bendir | ng moment coefficients for a vertically spanning sub panel |
| Bending moment coefficient | $\alpha_{s21B} = 0.5 \times (1 + 2 \times \beta_{s1B}) = 4.062$ |
| Design moment in sub-panel | $M_{\text{Ed21B}} = \gamma_{\text{fW}} \times \alpha_{\text{s21B}} \times W_{\text{k12}} \times h_{\text{s1B}^2} = \textbf{0.185 kNm/m}$ |
| | PASS - Resistance moment exceeds design moment |
| WARNING! - The checking of sub-panels f | for vertical loading is currently beyond the scope of the calculation. This |
| | v calculation for this sub-panel, modelled with the appropriate vertical |
| and horizontal loading. | |
| Sub panel no. 2 - Top, bottom and left sup | ported |
| Ratio panel height to length | hs2B / Ls2B = 1.82 |
| Considering outer leaf | |
| Parallel design moment of resistance | M _{Rd11} = 0.634 kNm/m |
| Using yield line analysis to calculate bend | ling moment coefficient |
| Bending moment coefficient | αs12B = 0.276 |
| Design moment in sub-panel | $M_{\text{Ed12B}} = \mu_1 \times \gamma_{\text{FW}} \times \alpha_{\text{s12B}} \times W_{\text{k11}} \times L_{\text{s2B}^2} = \textbf{0.183} \text{ kNm/m}$ |

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| | SB | 29/04/2021 | DB | 29/04/2021 | SB | 29/04/20 | |
| WARNING! - The checking of check can be performed by c and horizontal loading. | • | | g is currently | • | e of the calc | ulation. Thi | |
| Considering inner leaf Parallel design moment of resis | stance | $M_{Rd12} = 0.6$ | 322 kNm/m | | | | |
| Using yield line analysis to c | alculate bend | ing moment coef | ficient | | | | |
| Bending moment coefficient | | as22B = 0.2 | 73 | | | | |
| Design moment in sub-panel | | M Ed22B = μ 2 | | $\langle W_{k12} \times L_{s2B^2} = 0.1$ | | | |
| | | | | esistance momer | | - | |
| WARNING! - The checking of | • | | | • • | | | |
| check can be performed by c and horizontal loading. | reating a new | <i>i</i> calculation for t | his sub-panel | I, modelled with t | he appropria | te vertical | |
| Sub panel no. 3 - Top, botton | n and right su | pported | | | | | |
| Ratio panel height to length | | hsзв / Lsзв = | = 3.26 | | | | |
| Considering outer leaf | | | | | | | |
| Perpendicular design moment | of resistance | MRd21 = 0.6 | 579 kNm/m | | | | |
| Using elastic analysis to dete | ermine bendir | ng moment coeffi | cients for a h | orizontally spann | ning sub pan | el | |
| Bending moment coefficient | | αs13B = 0.5 | \times (1 + 2 \times β s3E | B) = 2.321 | | | |
| Design moment in sub-panel | | $MEd13B = \gamma f$ | m W	imes lphas13B $	imes m W$ k2 | $_{21} \times L_{s3B^2} = 0.522 \text{ k}$ | Nm/m | | |
| | | | | esistance momer | | 0 | |
| WARNING! - The checking of check can be performed by c and horizontal loading. | • | | • • | • | | | |
| Considering inner leaf | | | | | | | |
| Perpendicular design moment | of resistance | MRd22 = 0.6 | 6 52 kNm/m | | | | |
| Using elastic analysis to dete | ermine bendir | ng moment coeffi | cients for a h | orizontally spanr | ning sub pan | el | |
| Bending moment coefficient | | αs23B = 0.5 | \times (1 + 2 \times β s3E | a) = 2.321 | | | |
| 0 | | $MEd_{23B} = \gamma f$ | N 	imes lphas23B $	imes$ Wk2 | 22 × Ls3B ² = 0.502 k | Nm/m | | |
| Design moment in sub-panel | | 1 | | | | | |
| Design moment in sub-panel | | | | esistance momer | | 0 | |
| Design moment in sub-panel WARNING! - The checking of check can be performed by c | • | or vertical loadin | g is currently | beyond the scop | e of the calc | ulation. Th | |
| Design moment in sub-panel WARNING! - The checking of | • | or vertical loadin | g is currently | beyond the scop | e of the calc | ulation. Thi | |