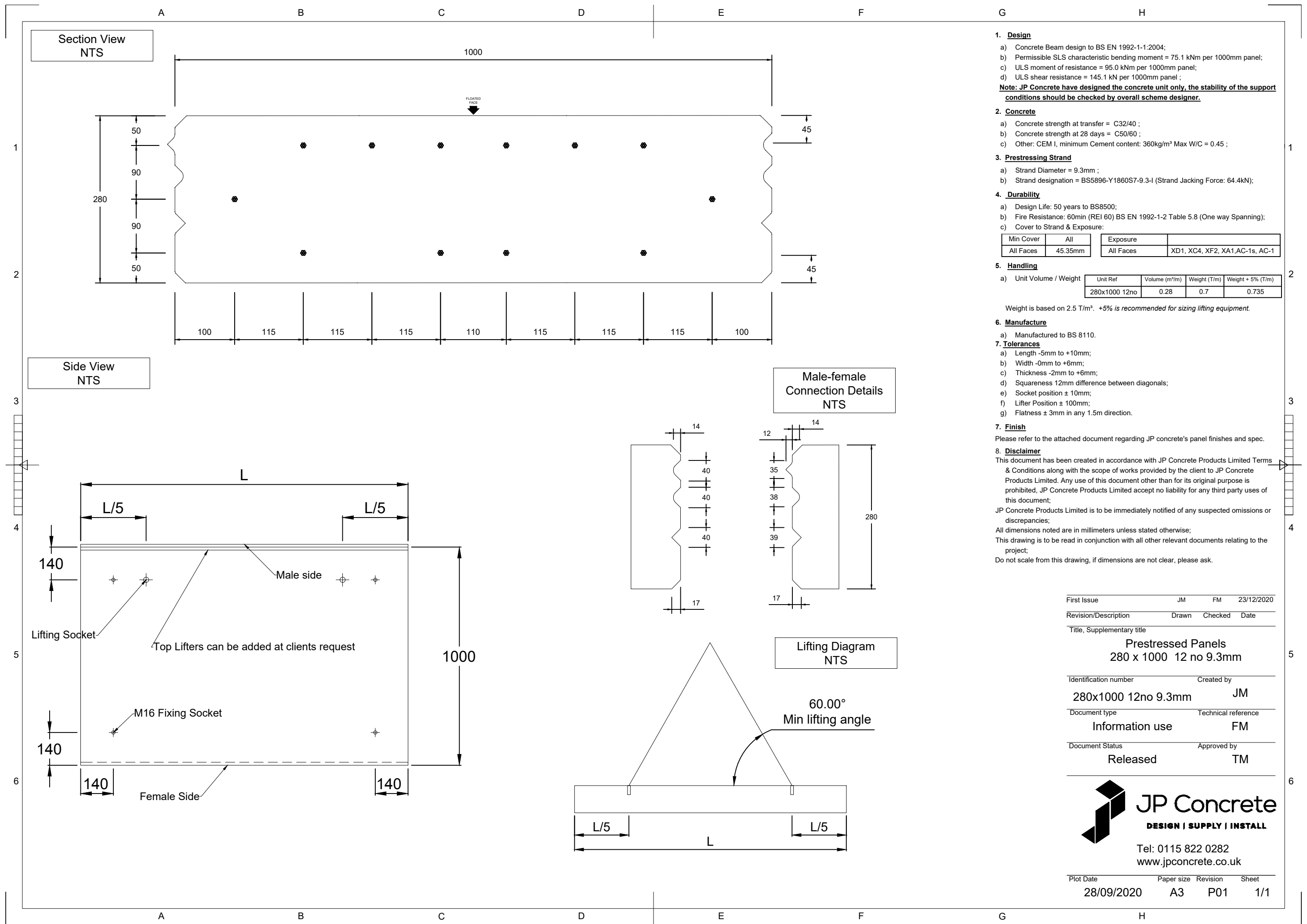
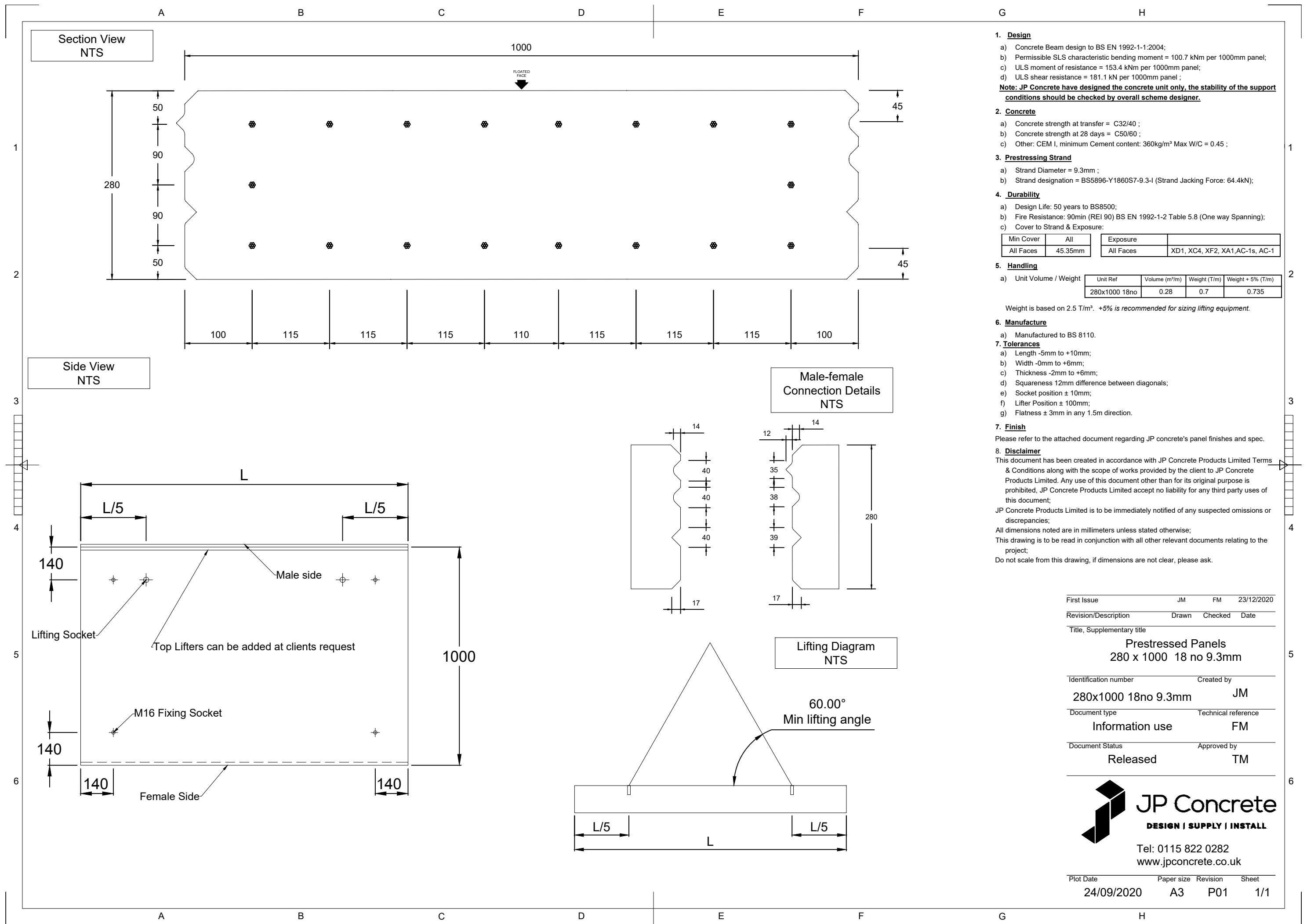




- 1. Design**
- a) Concrete Beam design to BS EN 1992-1-1:2004;
 - b) Permissible SLS characteristic bending moment = 75.1 kNm per 1000mm panel;
 - c) ULS moment of resistance = 95.0 kNm per 1000mm panel;
 - d) ULS shear resistance = 145.1 kN per 1000mm panel ;
- Note: JP Concrete have designed the concrete unit only, the stability of the support conditions should be checked by overall scheme designer.**
- 2. Concrete**
- a) Concrete strength at transfer = C32/40 ;
 - b) Concrete strength at 28 days = C50/60 ;
 - c) Other: CEM I, minimum Cement content: 360kg/m³ Max W/C = 0.45 ;
- 3. Prestressing Strand**
- a) Strand Diameter = 9.3mm ;
 - b) Strand designation = BS5896-Y1860S7-9.3-I (Strand Jacking Force: 64.4kN);
- 4. Durability**
- a) Design Life: 50 years to BS8500;
 - b) Fire Resistance: 60min (REI 60) BS EN 1992-1-2 Table 5.8 (One way Spanning);
 - c) Cover to Strand & Exposure:
- | | | | |
|-----------|---------|-----------|--------------------------------|
| Min Cover | All | Exposure | |
| All Faces | 45.35mm | All Faces | XD1, XC4, XF2, XA1,AC-1s, AC-1 |
- 5. Handling**
- a) Unit Volume / Weight
- | Unit Ref | Volume (m³/m) | Weight (T/m) | Weight + 5% (T/m) |
|---------------|---------------|--------------|-------------------|
| 280x1000 12no | 0.28 | 0.7 | 0.735 |
- Weight is based on 2.5 T/m³. +5% is recommended for sizing lifting equipment.
- 6. Manufacture**
- a) Manufactured to BS 8110.
- 7. Tolerances**
- a) Length -5mm to +10mm;
 - b) Width -0mm to +6mm;
 - c) Thickness -2mm to +6mm;
 - d) Squareness 12mm difference between diagonals;
 - e) Socket position ± 10mm;
 - f) Lifter Position ± 100mm;
 - g) Flatness ± 3mm in any 1.5m direction.
- 7. Finish**
- Please refer to the attached document regarding JP concrete's panel finishes and spec.
- 8. Disclaimer**
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- This drawing is to be read in conjunction with all other relevant documents relating to the project;
- Do not scale from this drawing, if dimensions are not clear, please ask.

First Issue	JM	FM	23/12/2020
Revision/Description	Drawn	Checked	Date
Title, Supplementary title			
Prestressed Panels			
280 x 1000 12 no 9.3mm			
Identification number	Created by		
280x1000 12no 9.3mm	JM		
Document type	Technical reference		
Information use	FM		
Document Status	Approved by		
Released	TM		
 JP Concrete DESIGN SUPPLY INSTALL Tel: 0115 822 0282 www.jpconcrete.co.uk			
Plot Date	Paper size	Revision	Sheet
28/09/2020	A3	P01	1/1



- 1. Design**
- a) Concrete Beam design to BS EN 1992-1-1:2004;
 - b) Permissible SLS characteristic bending moment = 100.7 kNm per 1000mm panel;
 - c) ULS moment of resistance = 153.4 kNm per 1000mm panel;
 - d) ULS shear resistance = 181.1 kN per 1000mm panel ;
- Note: JP Concrete have designed the concrete unit only, the stability of the support conditions should be checked by overall scheme designer.**
- 2. Concrete**
- a) Concrete strength at transfer = C32/40 ;
 - b) Concrete strength at 28 days = C50/60 ;
 - c) Other: CEM I, minimum Cement content: 360kg/m³ Max W/C = 0.45 ;
- 3. Prestressing Strand**
- a) Strand Diameter = 9.3mm ;
 - b) Strand designation = BS5896-Y1860S7-9.3-I (Strand Jacking Force: 64.4kN);
- 4. Durability**
- a) Design Life: 50 years to BS8500;
 - b) Fire Resistance: 90min (REI 90) BS EN 1992-1-2 Table 5.8 (One way Spanning);
 - c) Cover to Strand & Exposure:
- | Min Cover | All | Exposure | |
|-----------|---------|-----------|--------------------------------|
| All Faces | 45.35mm | All Faces | XD1, XC4, XF2, XA1,AC-1s, AC-1 |
- 5. Handling**
- a) Unit Volume / Weight
- | Unit Ref | Volume (m³/m) | Weight (T/m) | Weight + 5% (T/m) |
|---------------|---------------|--------------|-------------------|
| 280x1000 18no | 0.28 | 0.7 | 0.735 |
- Weight is based on 2.5 T/m³. +5% is recommended for sizing lifting equipment.
- 6. Manufacture**
- a) Manufactured to BS 8110.
- 7. Tolerances**
- a) Length -5mm to +10mm;
 - b) Width -0mm to +6mm;
 - c) Thickness -2mm to +6mm;
 - d) Squareness 12mm difference between diagonals;
 - e) Socket position ± 10mm;
 - f) Lifter Position ± 100mm;
 - g) Flatness ± 3mm in any 1.5m direction.
- 7. Finish**
- Please refer to the attached document regarding JP concrete's panel finishes and spec.
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Prestressed Panels
280 x 1000 18 no 9.3mm

Identification number Created by

280x1000 18no 9.3mm JM

Document type Technical reference

Information use FM

Document Status Approved by

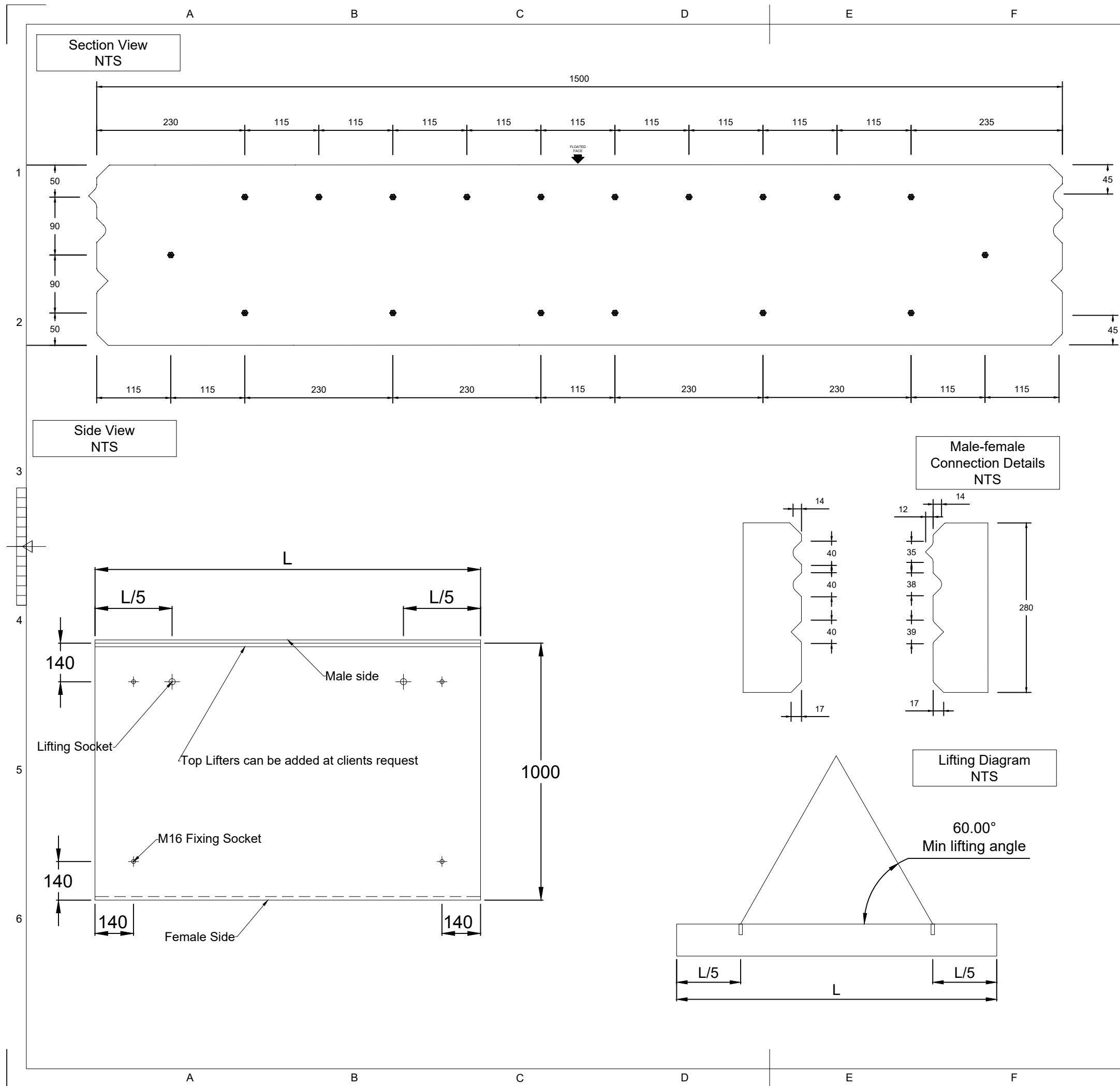
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Plot Date Paper size Revision Sheet

24/09/2020 A3 P01 1/1



- 1. Design**
- a) Concrete Beam design to BS EN 1992-1-1:2004;
 - b) Permissible SLS characteristic bending moment = 108.6 kNm per 1500mm panel;
 - c) ULS moment of resistance = 137.5 kNm per 1500mm panel;
 - d) ULS shear resistance = 213.9 kN per 1500mm panel ;
- Note: JP Concrete have designed the concrete unit only, the stability of the support conditions should be checked by overall scheme designer.**
- 2. Concrete**
- a) Concrete strength at transfer = C32/40 ;
 - b) Concrete strength at 28 days = C50/60 ;
 - c) Other: CEM I, minimum Cement content: 360kg/m³ Max W/C = 0.45 ;
- 3. Prestressing Strand**
- a) Strand Diameter = 9.3mm ;
 - b) Strand designation = BS5896-Y1860S7-9.3-I (Strand Jacking Force: 64.4kN);
- 4. Durability**
- a) Design Life: 50 years to BS8500;
 - b) Fire Resistance: 120min (REI 120) BS EN 1992-1-2 Table 5.8 (One way Spanning);
 - c) Cover to Strand & Exposure:
- | Min Cover | All | Exposure | |
|-----------|---------|--------------------------------|--|
| All Faces | 50.35mm | XD1, XC4, XF2, XA1,AC-1s, AC-1 | |
- 5. Handling**
- a) Unit Volume / Weight
- | Unit Ref | Volume (m³/m) | Weight (T/m) | Weight + 5% (T/m) |
|---------------|---------------|--------------|-------------------|
| 280x1500 18no | 0.42 | 1.05 | 1.10 |
- Weight is based on 2.5 T/m³. +5% is recommended for sizing lifting equipment.
- 6. Manufacture**
- a) Manufactured to BS 8110.
- 7. Tolerances**
- a) Length -5mm to +10mm;
 - b) Width -0mm to +6mm;
 - c) Thickness -2mm to +6mm;
 - d) Squareness 12mm difference between diagonals;
 - e) Socket position ± 10mm;
 - f) Lifter Position ± 100mm;
 - g) Flatness ± 3mm in any 1.5m direction.
- 7. Finish**
- Please refer to the attached document regarding JP concrete's panel finishes and spec.
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280 x 1500 18 no 9.3mm

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