



Case Study

Lyme Dale Project for New Look

New Look is expanding rapidly; since their first store in Taunton in 1969 New Look has grown to be a worldwide fashion retailer with stores in the UK and Republic of Ireland, Europe, the Middle East, Singapore, Russia and Poland. In 2009 alone, over 355 million customers visited New Look either online or in one of their stores.

In line with New Look's growth, continual improvements to logistic operations are required, which brings with it the requirement to continually expand their distribution warehouses.

One such expansion was required at their Newcastle-under-Lyme distribution warehouse. In order to make better use of existing floor space, New Look invested in a 3-tier mezzanine floor which equated to a total area of 12,596m². Davicon Mezzanine Floors provided the new mezzanine floor, which was installed in a twelve week programme, which including coordination with all the other mechanical service providers.

Davicon has a proven track record of delivering jobs of this size to schedule, and this, together with Davicon's quality brand and excellent customer service was the reason New Look chose a Davicon mezzanine floor.

Phase 1

Two tier mezzanine with a third tier of steelwork only; between grid lines **14-19**

Level 1

| | |
|--------------------|---|
| Platform Size | : 64.35m x 38.4m (2,471m ²) |
| Column Grid | : 4.8m x 4.1m |
| Height | : +3.25m to top of floor |
| Construction Depth | : 292 mm |
| Decking | : 38mm Particle Board (TG2, Grade C, P6 Treadsafe with white melamine balancer) |
| Loads | : Imposed load - 4.80 kN/m ² U.D.L. Dead load (mezzanine self-weight) - 0.35 kN/m ² U.D.L. Service load -(sprinklers and lighting only) 0.25 kN/m ² U.D.L. |

Level 2

| | |
|--------------------|--|
| Platform Size | : 93.3m x 38.4m (3,583m ²) |
| Column Grid | : 4.8m x 4.1m |
| Height | : +6.5m to top of floor |
| Construction Depth | : 292 mm |
| Decking | : 38mm Particle Board (TG2, Grade C, P6 Treadsafe with white melamine balancer) |
| Loads | : Imposed load - 4.80 kN/m ² U.D.L. Dead load (mezzanine self-weight) - 0.35 kN/m ² U.D.L. Service load - (sprinklers and lighting only) |

Level 3

| | |
|---------------|--|
| Platform Size | : 93.3m x 38.4m (3,583m ²) |
| Column Grid | : 4.8m x 4.1m |
| Height | : +9.75m to top of floor |

| | | | | | | | |
|--|---|----------------|------------------------------|-------------------------------------|------------------------------|--|------------------------------|
| Construction Depth | : 203 mm | | | | | | |
| Decking | : 38mm Particle Board (TG2, Grade C, P6 Treadsafe with white melamine balancer) | | | | | | |
| Loads | : <table> <tr> <td>Imposed load -</td><td>3.50 kN/m² U.D.L</td></tr> <tr> <td>Dead load (mezzanine self weight) -</td><td>0.35 kN/m² U.D.L</td></tr> <tr> <td>Service load -(sprinklers and lighting only)</td><td>0.25 kN/m² U.D.L</td></tr> </table> | Imposed load - | 3.50 kN/m ² U.D.L | Dead load (mezzanine self weight) - | 0.35 kN/m ² U.D.L | Service load -(sprinklers and lighting only) | 0.25 kN/m ² U.D.L |
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| Service load -(sprinklers and lighting only) | 0.25 kN/m ² U.D.L | | | | | | |
| Deflection | : All steel members have been designed with a maximum deflection of L/250 (under imposed loading only – unfactored) in accordance with the requirements of BS5950 Part 1: 2000. No other limits have been specified or allowed for. | | | | | | |
| Base Plates | : 300mm x 300mm x 20mm | | | | | | |
| Column Loads | : Estimated maximum axial load 293kN (unfactored) to floor slab | | | | | | |
| Hand-railing | : 767 metres total (standard tubular, twin railed) | | | | | | |

Phase 2

Two tier mezzanine with a third tier of steelwork only; between grid lines **19-22**

Level 1

| | | | | | | | | | |
|-------------------------------------|--|----------------|------------------------------|-------------------------------------|------------------------------|----------------|------------------------------|--------------------------------|--|
| Platform Size | : 64.35m x 24.0m (1,544.4m ²) | | | | | | | | |
| Column Grid | : 4.8m x 4.1m | | | | | | | | |
| Height | : +3.25m to top of floor | | | | | | | | |
| Construction Depth | : 292 mm | | | | | | | | |
| Decking | : 38mm Particle Board (TG2, Grade C, P6 Treadsafe with white melamine balancer) | | | | | | | | |
| Loads | : <table> <tr> <td>Imposed load -</td><td>4.80 kN/m² U.D.L</td></tr> <tr> <td>Dead load (mezzanine self weight) -</td><td>0.35 kN/m² U.D.L</td></tr> <tr> <td>Service load -</td><td>0.25 kN/m² U.D.L</td></tr> <tr> <td>(sprinklers and lighting only)</td><td></td></tr> </table> | Imposed load - | 4.80 kN/m ² U.D.L | Dead load (mezzanine self weight) - | 0.35 kN/m ² U.D.L | Service load - | 0.25 kN/m ² U.D.L | (sprinklers and lighting only) | |
| Imposed load - | 4.80 kN/m ² U.D.L | | | | | | | | |
| Dead load (mezzanine self weight) - | 0.35 kN/m ² U.D.L | | | | | | | | |
| Service load - | 0.25 kN/m ² U.D.L | | | | | | | | |
| (sprinklers and lighting only) | | | | | | | | | |

Level 2

| | | | | | | | | | |
|-------------------------------------|--|----------------|------------------------------|-------------------------------------|------------------------------|----------------|------------------------------|--------------------------------|--|
| Platform Size | : 93.3m x 24.0m (2,240m ²) | | | | | | | | |
| Column Grid | : 4.8m x 4.1m | | | | | | | | |
| Height | : +6.5m to top of floor | | | | | | | | |
| Construction Depth | : 292 mm | | | | | | | | |
| Decking | : 38mm Particle Board (TG2, Grade C, P6 Treadsafe with white melamine balancer) | | | | | | | | |
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| Imposed load - | 4.80 kN/m ² U.D.L | | | | | | | | |
| Dead load (mezzanine self weight) - | 0.35 kN/m ² U.D.L | | | | | | | | |
| Service load - | 0.25 kN/m ² U.D.L | | | | | | | | |
| (sprinklers and lighting only) | | | | | | | | | |

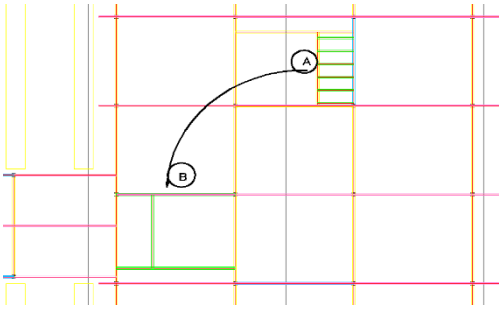
Level 3

| | | | | | | | | | |
|-------------------------------------|--|----------------|------------------------------|-------------------------------------|------------------------------|----------------|------------------------------|--------------------------------|--|
| Platform Size | : 93.3m x 24.0m (2,240m ²) | | | | | | | | |
| Column Grid | : 4.8m x 4.1m | | | | | | | | |
| Height | : +9.75m to top of floor | | | | | | | | |
| Construction Depth | : 203 mm | | | | | | | | |
| Decking | : 38mm Particle Board (TG2, Grade C, P6 Treadsafe with white melamine balancer) | | | | | | | | |
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| Base Plates | : 300mm x 300mm x 20mm | | | | | | | | |
| Column Loads | : Estimated maximum axial load 293kN (unfactored) to floor slab | | | | | | | | |

Phase 3

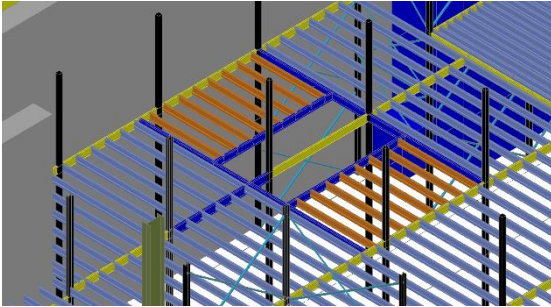
For modification work to the existing platform installation between gridlines 13 - 19.

A

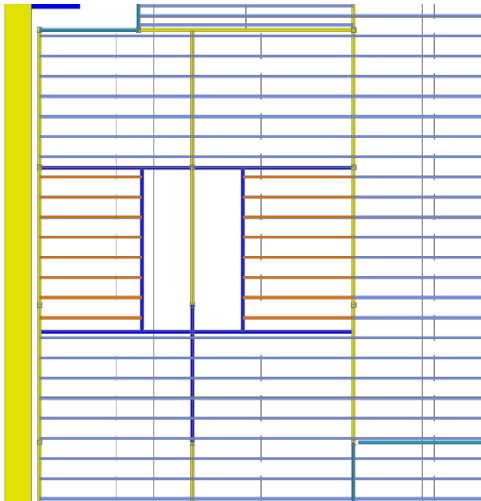


- a) To move the existing stair from position A and fill in the opening with the required secondary steel and decking (as described above).
b) To create an opening at position B and fit the stair from A, and handrail to the void.
Note: we have excluded the supply of new handrail and have included for the installation of free issue handrail.

B



- a) Level 2 - To create an opening in the existing by cutting and removing the decking, secondary steel and 1 primary beam, fitting new primary steelwork (blue) then cutting the existing secondary steelwork as required (orange) and re-fitting all secondary steelwork. Note - we have allowed for 6 bays plus any boards necessary in adjoining bays.
To supply and fit new decking and fit free issue handrail with kicker to the void.
We have included for a Garment Hanging Stair between levels 2 to 1. Handrail to the void edge is included.

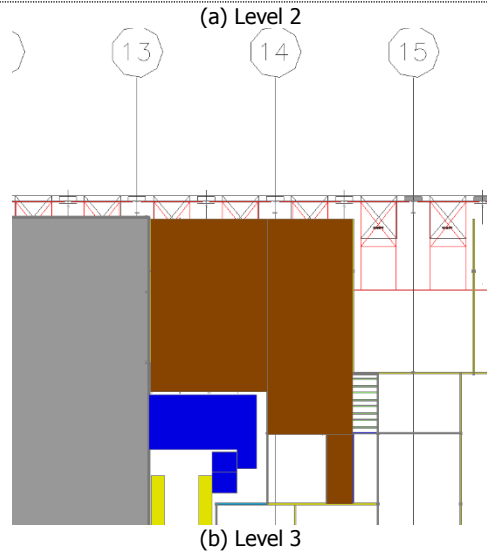


Note: We have left the central primary steelwork as it appears to be on the centre line between the 2 garment hanging tracks. If this requires moving a further design solution is required at additional cost.

We have excluded the supply of new handrail and have included for the installation of free issue handrail.



C

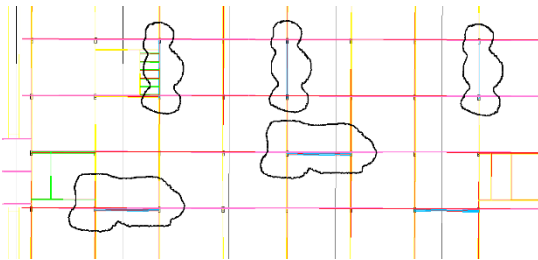


b) Level 3 - (brown) to supply and install required primary and secondary steelwork to the existing level 3 framing. To supply and install approximately 134m² decking and approximately 34m of free issue handrail & kicker to the edges. We have included for a Garment Hanging Stair between levels 3 to 2. Handrail to the void edge is included.

Note: We have assumed that there is some flexibility in the final layout, as such we have not allowed for any modification to the existing primary frame this will need to be checked for any clashes with final design and if any occur then additional cost will be incurred.

We have excluded the supply of new handrail and have included for the installation of free issue handrail.

D



To remove 5 'X' brace between levels 2 and 3 and re-position in adjacent bays so as to maintain the floor stability.

