



THINKING PRECAST?  
THINK FP MCCANN

# DOCK LEVELLER PIT SYSTEMS





FP McCann is the UK's market leader in the manufacture, supply and delivery of precast concrete solutions. Our comprehensive precast concrete business extends to include:

**AGRICULTURE | ARCHITECTURAL PRECAST | BOX CULVERTS | BUILDING PRODUCTS  
DOCK LEVELLER PITS | DRAINAGE | FENCING | FILTER BED SYSTEMS | FLOORING  
POWER & INFRASTRUCTURE | RAIL | SPECIALIST PRECAST | STRUCTURAL PRECAST TANKS &  
CHAMBERS | TUNNELS & SHAFTS | WALLING**

Modern manufacturing plants at Alnwick (Northumberland), Armagh (Northern Ireland), Byley (Cheshire), Cadeby (Warwickshire), Ellistown (Leicestershire), Grantham (Lincolnshire), Lisnaskea (Northern Ireland), Littleport (Cambridgeshire), Lydney (Gloucestershire), Magherafelt (Northern Ireland), Uddingston (Lanarkshire) and Weston Underwood (Derbyshire) incorporate the latest computerised batching, distribution, casting, curing and handling systems and are operated by skilled and experienced workforces to ensure consistency of quality. Their geographical spread gives us an unrivalled ability to serve the construction industry throughout the UK and Ireland.

By applying the DFMA principles, FP McCann's design engineers are able to evaluate individual precast concrete products part by part, in addition to documenting the assembly process step by step. This allows them to generate the cost, part count and assembly time to provide a benchmark to measure its success and identify the parts and process improvement opportunities. In turn, this has allowed FP McCann to design and manufacture more cost-effective and efficient high-quality precast concrete products with less wastage and greater on-site recycling. As a result, increased productivity, combined with a reduction in production time and costs, allows FP McCann to be more competitive within the marketplace.

*Please note: all information is correct at time of going to print.*



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# CONTINUOUS TAILGATE DOCK LEVELLER PITS

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The FP McCann Ltd dock leveller pit system is constructed from pre-cast reinforced concrete sections. These combine to form a pit into which a hung dock leveller can be installed. Our system will incorporate dock levellers supplied by all leading manufacturers.

Each pit is designed for use with a top hung leveller, provided with a tailgate slot and is configured in a continuous run

The F P McCann Ltd dock leveller pit system is not designed to be the edge support of the ground floor slab. For piled sites with a suspended floor slab, the precast components can be increased in design and thickness upon request for an additional cost:

The FP McCann Ltd dock leveller pit system comprises of:

- Front elevation walls (HT & FT)
- Rear retaining walls (BW)
- End Side walls (SW)
- Intermediate biscuit slab (BS)

Front, rear and end side walls are designed to be supported off and are connected to a reinforced structural concrete foundation slab. The foundation slab is to be designed and installed by others to suit the ground conditions and wall loadings.

The rear retaining wall of our system is built as a continuous wall parallel to the face of the building and is constructed in panel lengths suited to our manufacture and casting programme

Early installation of rear walls and side walls can be accommodated to allow early back filling for programme advantages. However the full dock pit system must be installed prior to laying of the main floor slab. Early installation of rear walls may incur additional visit charges

The FP McCann dock pit system requires a head height clearance for installation of 2200mm above Finished Floor Level and a minimum of 1m clear working space behind the walls is required to install the Excalibur bolts, dry pack and grout beneath the walls to a maximum height of 40mm and a minimum height of 10mm.

The Frontwall 'arm' to which the buffer is fixed, is designed for an accidental force of 75kN acting to the buffer. Note that the upstand to the arm is not designed for impact loading and therefore should not be subjected to the forces transferred through the buffer.

Dock Leveller bumpers must be fixed in the designed locations specified by the Dock Leveller Manufacturer at F P McCann RFI stage.

The biscuit slab will be designed to act compositely with a minimum 110mm thick insitu topping, by the main contractor, to support loads of up to 50kN/m<sup>2</sup>. Other insitu topping thicknesses / loadings can be accommodated subject to design checks and additional charges

The front walls, sides and rear of the dock levellers provide permanent shuttering to the edges of the biscuit and when the main contractor provides the insitu topping (as part of the main floor slab installation) the pits become a fully integrated unit.

Door posts to stop minimum of 30mm above biscuit for casting into in-situ floor slab by others.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

Insitu works to column areas and Mastic joints to be by others.

# CONTINUOUS NON-TAILGATE DOCK LEVELLER PITS

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The FP McCann Ltd dock leveller pit system is constructed from pre-cast reinforced concrete sections. These combine to form a pit into which a hung dock leveller can be installed. Our system will incorporate dock levellers supplied by all leading manufacturers.

Each pit is designed for use with a top hung leveller, provided complete with a front wall recess to the dock leveler zone. We have not allowed for a tailgate slot. Each non tailgate pit is configured in a continuous run

The FP McCann Ltd dock leveller pit system is not designed to be the edge support of the ground floor slab. For piled sites with a suspended floor slab, the precast components can be increased in design and thickness upon request for an additional cost:

The FP McCann Ltd dock leveller pit system comprises of:

- Front elevation walls (HT & FT)
- Rear retaining walls (BW)
- End Side walls (SW)
- Intermediate biscuit slab (BS)

Front, rear and end side walls are designed to be supported off and are connected to a reinforced structural concrete foundation slab. The foundation slab is to be designed and installed by others to suit the ground conditions and wall loadings.

The rear retaining wall of our system is built as a continuous wall parallel to the face of the building and is constructed in panel lengths suited to our manufacture and casting programme

Early installation of rear walls and side walls can be accommodated to allow early back filling for programme advantages. However the full dock pit system must be installed prior to laying of the main floor slab. Early installation of rear walls may incur additional visit charges

The F P McCann dock pit system requires a head height clearance for installation of 2000mm above Finished Floor Level and a minimum of 1m clear working space behind the walls is required to install the Excalibur bolts, dry pack and grout beneath the walls to a maximum height of 40mm and a minimum height of 10mm.

The Frontwall to which the buffer is fixed, is designed for an accidental force of 75Kn acting to the buffer. Note that the up stand to the wall not designed for impact loading and therefore should not be subjected to the forces transferred through the buffer.

Dock Leveller bumpers must be fixed in the designed locations specified by the Dock Leveller Manufacturer at F P McCann RFI stage.

The biscuit slab will be designed to act compositely with a minimum 110mm thick insitu topping, by the main contractor, to support loads of up to 50kN/m<sup>2</sup>. Other insitu topping thicknesses / loadings can be accommodated subject to design checks and additional charges

The front walls, sides and rear of the dock levellers provide permanent shuttering to the edges of the biscuit and when the main contractor provides the insitu topping (as part of the main floor slab installation) the pits become a fully integrated unit.

Door posts to stop minimum of 30mm above biscuit for casting into in-situ floor slab by others.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes.

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations

Insitu works to column areas and Mastic joints to be by others.

# FULL DEPTH INFIL KITS

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The FP McCann Ltd Infil kit system constructed from pre-cast reinforced concrete sections. These combine to future proof buildings enabling future easy installation of dock levellers supplied by all leading manufacturers.

Infill kits are design to work in conjunction with continuous and individual tailgate dock pits

The FP McCann Ltd Infil Kit system comprises of:

- Invert front Elevation T wall
- Intermediate Rear support walls (BW)
- Full Depth Infil biscuit

The infill biscuit finishes at finish floor level. The biscuit allows current use of the floor slab area up to a loading of 50kN/m<sup>2</sup> . The design allows for easy removal of the kit via forklift trucks reducing the need to remove current cladding.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

# SCREEDED INFIL KITS

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The FP McCann Ltd Infil kit system constructed from pre-cast reinforced concrete sections. These combine to future proof buildings enabling future easy installation of dock levellers supplied by all leading manufacturers

Infill kits are design to work in conjunction with continuous and individual tailgate dock pits

The FP McCann Ltd Infil Kit system comprises of:

- Invert front Elevation T wall
- Intermediate Rear support walls (BW)
- Full Depth Infil biscuit

The infill biscuit finishes at depth of the adjacent biscuits supporting the dock levellers. The infill kit is then required to be screeded by others. A saw cut joint to allow for future removal is required in the screed zone. The biscuit allows current use of the floor slab area up to a loading of 50kN/m<sup>2</sup> . The design allows for easy removal of the kit via forklift trucks reducing the need to remove current cladding.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes



# CONTINUOUS COMBI DOCK LEVELLER PITS

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The FP McCann Ltd Combi dock leveller pit system is constructed from pre-cast reinforced concrete sections. These combine to form a pit into which a hung dock leveller can be installed. Our system will incorporate dock levellers supplied by all leading manufacturers.

Each pit is designed for use with a top hung leveller, provided with a tailgate slot and is configured in a continuous run

The F P McCann Ltd dock leveller pit system is not designed to be the edge support of the ground floor slab. For piled sites with a suspended floor slab, the precast components can be increased in design and thickness upon request for an additional cost:

The FP McCann Ltd dock leveller pit system comprises of:

- Front elevation walls (HT & FT)
- Rear retaining walls (BW)
- End Side walls (SW)
- Intermediate biscuit slab (BS)
- Removable Ground beam (GB)

Front, rear and end side walls are designed to be supported off and are connected to a reinforced structural concrete foundation slab. The foundation slab is to be designed and installed by others to suit the ground conditions and wall loadings.

The rear retaining wall of our system is built as a continuous wall parallel to the face of the building and is constructed in panel lengths suited to our manufacture and casting programme

Early installation of rear walls and side walls can be accommodated to allow early back filling for programme advantages. However the full dock pit system must be installed prior to laying of the main floor slab. Early installation of rear walls may incur additional visit charges

The F P McCann dock pit system requires a head height clearance for installation of 2000mm above Finished Floor Level and a minimum of 1m clear working space behind the walls is required to install the Excalibur bolts, dry pack and grout beneath the walls to a maximum height of 40mm and a minimum height of 10mm.

The Frontwall 'arm' to which the buffer is fixed, is designed for an accidental force of 75kN acting to the buffer. Note that the up stand to the arm is not designed for impact loading and therefore should not be subjected to the forces transferred through the buffer.

Dock Leveller bumpers must be fixed in the designed locations specified by the Dock Leveller Manufacturer at F P McCann RFI stage.

The biscuit slab will be designed to act compositely with a minimum 110mm thick insitu topping, by the main contractor, to support loads of up to 50kN/m<sup>2</sup>. Other insitu topping thicknesses / loadings can be accommodated subject to design checks and additional charges

The front walls, sides and rear of the dock levellers provide permanent shuttering to the edges of the biscuit and when the main contractor provides the insitu topping (as part of the main floor slab installation) the pits become a fully integrated unit.

The Removable ground beam is designed as a free standing cloaking panel with integrated forklift points to allow easy removal and placement

Door posts to stop minimum of 30mm above biscuit for casting into in-situ floor slab by others.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

Insitu works to column areas and Mastic joints to be by others.

# INDIVIDUAL NON-TAILGATE DOCK LEVELLER PITS

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The FP McCann Ltd dock leveller pit system is constructed from pre-cast reinforced concrete sections. These combine to form a pit into which a hung dock leveller can be installed. Our system will incorporate dock levellers supplied by all leading manufacturers.

Each pit is designed for use with a top hung leveller, provided with a tailgate slot and is configured individually

The F P McCann Ltd dock leveller pit system is not designed to be the edge support of the ground floor slab. For piled sites with a suspended floor slab, the precast components can be increased in design and thickness upon request for an additional cost

The FP McCann Ltd dock leveller pit system comprises of:

- Front elevation walls
- Rear retaining walls
- Side walls
- Biscuit slabs

Front, rear and side walls are designed to be supported off and are connected to a reinforced structural concrete foundation slab. The foundation slab is to be designed and installed by others to suit the ground conditions and wall loadings.

Early installation of rear walls and side walls can be accommodated to allow early back filling for programme advantages. However the full dock pit system must be installed prior to laying of the main floor slab. Early installation of rear walls may incur additional visit charges

Individual pits will require additional back filling between each dock leveller

The F P McCann dock pit system requires a head height clearance for installation of 2200mm above Finished Floor Level and a minimum of 1m clear working space behind the walls is required to install the Excalibur bolts, dry pack and grout beneath the walls to a maximum height of 40mm and a minimum height of 10mm.

The Frontwall 'arm' to which the buffer is fixed, is designed for an accidental force of 75Kn acting to the buffer. Note that the up stand to the arm is not designed for impact loading and therefore should not be subjected to the forces transferred through the buffer.

Dock Leveller bumpers must be fixed to in the designed locations specified by the Dock Leveller Manufacturer at F P McCann RFI stage

The biscuit slab will be designed to act compositely with a minimum 110mm thick insitu topping, by the main contractor, to support loads of up to 50kN/m<sup>2</sup>. Other in situ topping thicknesses / loadings can be accommodated subject to design checks and additional charges.

The front walls, sides and rear of the dock levellers provide permanent shuttering to the edges of the biscuit and when the main contractor provides the insitu topping (as part of the main floor slab installation) the pits become a fully integrated unit.

Door posts to stop minimum of 30mm above biscuit for casting into in-situ floor slab by others.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

Insitu works to column areas and Mastic Joints to be by others



# INDIVIDUAL NON-TAILGATE DOCK LEVELLER PITS

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The FP McCann Ltd dock leveller pit system is constructed from pre-cast reinforced concrete sections. These combine to form an individual pit into which a hung dock leveller can be installed. Our system will incorporate dock levellers supplied by all leading manufacturers.

Each pit is designed for use with a top hung leveller, provided with a tailgate slot and is configured individually as per F P McCann Dock Sales Drawing FPM-DSD-00006 REV P01 Status Information

The FP McCann Ltd dock leveller pit system is not designed to be the edge support of the ground floor slab. For piled sites with a suspended floor slab, the precast components can be increased in design and thickness upon request for an additional cost

The FP McCann Ltd dock leveller pit system comprises of:

- Front elevation walls
- Rear retaining walls
- Side walls

Front, rear and sidewalls walls are designed to be supported off and are connected to a reinforced structural concrete foundation slab. The foundation slab is to be designed and installed by others to suit the ground conditions and wall loadings.

Early installation of rear walls and side walls can be accommodated to allow early back filling for programme advantages. However the full dock pit system must be installed prior to laying of the main floor slab. Early installation of rear walls may incur additional visit charges

Individual pits will require additional back filling between each dock leveler

The F P McCann dock pit system requires a head height clearance for installation of 2000mm above Finished Floor Level and a minimum of 1m clear working space behind the walls is required to install the Excalibur bolts, dry pack and grout beneath the walls to a maximum height of 40mm and a minimum height of 10mm.

The Frontwall to which the buffer is fixed, is designed for an accidental force of 75Kn acting to the buffer. Note that the up stand to the wall not designed for impact loading and therefore should not be subjected to the forces transferred through the buffer.

Dock Leveller bumpers must be fixed to in the designed locations specified by the Dock Leveller Manufacturer at F P McCann RFI stage

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

Insitu works to column areas and Mastic Joints to be by others

# PROWALL

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The FP McCann Ltd Single Door Prowall walling system is designed in insulated reinforced precast concrete. The integral insulation will provide an elemental U-value of 0.27W/m<sup>2</sup>K. Better U-Values can be achieved by an increased insulation size but this will incur additional costs

Doors will only require support from steelwork above panels as tracks can be connected directly to internal face of Prowall and dock shelters externally if required.

Door openings will be incorporated, to suit dock door and personnel door openings to a maximum size of 3000mm high x 3000mm wide. For larger openings a Stonehenge prowall arrangement will need to be adopted, this may incur additional costs

The Prowall panel requires to be clipped to the outside of the steel columns using galvanized fixing plates. The prowall sits on top of the biscuit slabs or thickened front walls of the dock pit system, therefore the steel columns cannot be any further back or forward than the thickness of our Prowall.

For Prowall the head height clearance for installation is 6000mm above precast. To enable installation if the first sheeting rail cleat is less than 200mm above the top of the prowall the cleat will be required to be bolted on by others after the prowall installation. See

To complement the system above dock levellers, prowall panels can be utilized above perimeter retaining walls as cladding panels.

Prowall Panels will have a standard steel mould finish based on a BS8110 type B Finish to the external face. The internal face will have a float finish based on BS8110 type A finish. In order to achieve a relatively consistent colour on the floated face, the units will be machine pan floated to bring the fine aggregate and cement paste to the surface, which is then finished off by a hand steel trowel to create a smooth even finish. This process will be consistent across all FPM manufacturing depots. Note that due to the manufacturing processes and conditions, both mould and float finish can have an initial colour differential in the appearance, however in time, once the panels have weathered they will have a more consistent colour match.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Mastic Joints to be by others.

For further prowall requirements refer to Sales Drawing:  
FPM-DSD-0010

# SINGLE DOOR PANELS

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The Single door panel spans between Main stanchions and Intermediate stanchions over a single dock pit. Which ensures a rapid on site erection programme and eliminates the requirement for the more traditional areas of cladding and steel doorposts / rails.

Single panel sizes are generally provided up to a maximum height of 3800mm above Finished Floor Level and length 4000mm. Additional heights above FFL are achieved by the introduction of a lintel to the sit on top of the prowall. Lintels may incur additional costs

# DOUBLE DOOR PROWALL

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The panel spans between Main stanchions over a 2 dock pits per grid. By using the double prowall system there is no requirement for intermediate stanchions offering cost savings for the Steel Columns and Foundations

Using the Double Door Prowall system ensures a rapid on site erection programme and eliminates the requirement for the more traditional areas of cladding and steel doorposts / rails.

Double panel sizes are generally provided up to a maximum height of 3800mm above Finished Floor Level and length 8000mm. Additional heights above FFL are achieved by the introduction of a lintel to the sit on top of the prowall. Lintels may incur additional costs

# STONEHENGE PROWALL

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The FP McCann Ltd Stonehenge Prowall walling system is designed in insulated reinforced precast concrete. The integral insulation will provide an elemental U-value of 0.27W/m<sup>2</sup>K. Better U-Values can be achieved by an increased insulation size but this will incur additional costs

The system consists of Single Vertical legs and spanning Lintels

The Lintels span between Main stanchions and Intermediate stanchions over a single dock pit. The legs and lintels require to be clipped to the outside of the steel columns using galvanized fixing plates. The Legs sits on top of the biscuit slabs or thickened front walls of the dock pit system, therefore the steel columns cannot be any further back or forward than the thickness of our Prowall.

Using the Stonehenge system eliminates the requirement for the more traditional areas of cladding and steel doorposts / rails.

Where Intermediate stanchions are not available, temporary propping off the biscuit slab to the leg will be required at additional costs.

Doors will only require support from steelwork above panels as tracks can be connected directly to internal face of Prowall and dock shelters externally if required.

Door openings will be incorporated, to suit dock door openings which are above 3000mm high

For Stonehenge Prowall the head height clearance for installation is 6000mm above top of precast. To enable installation if the first sheeting rail cleat is less than 200mm above the top of the prowall the cleat will be required to be bolted on by others after the prowall installation

To complement the system above dock levellers, prowall panels can be utilized above perimeter retaining walls as cladding panels.

Stone Henge Panels will have a standard steel mould finish based on a BS8110 type B Finish to the external face. The internal face will have a float finish based on BS8110 type A finish. In order to achieve a relatively consistent colour on the floated face, the units will be machine pan floated to bring the fine aggregate and cement paste to the surface, which is then finished off by a hand steel trowel to create a smooth even finish. This process will be consistent across all FPM manufacturing depots. Note that due to the manufacturing processes and conditions, both mould and float finish can have an initial colour differential in the appearance, however in time, once the panels have weathered they will have a more consistent colour match.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Mastic Joints to be by others.

For further prowall requirements refer to Sales Drawing: FPM-DSD-0010

# SERVICE YARD RETAINING WALLS DWELLED TO STRIP FOOTING

The external service yard walls will sit on a concrete reinforced strip footing/base designed and installed by others. We have included for installation of the Excalibur fixings and grouting, however accurate casting of the supporting strip footing/base by main contractor is required as to ensure correct levels are achieved.

Any retaining walls over 1800mm high may require propping. Props provided by FP McCann Ltd. propping bases provided by others at no additional cost to FP McCann Ltd.

It is assumed that the above retained area to the rear of the retaining wall will be free draining and suitable land drain provided to avoid the possibility of buildup of hydrostatic pressure. We have not included for weep holes.

A Minimum of 1m clear working space behind the wall is required to install the connection dowels, grout and to dry pack beneath the walls to a maximum height of 40mm and a minimum of 10mm.

The slope to the top of the wall will be to our own design, along with maximization of panel lengths best suited to achieve the overall length of the wall. The total maximum height of the wall is to be 2000mm. Larger walls can be catered for with increased panel thickness and boot sizes at an additional cost

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

The wall is to be protected from vehicular impact damage by use of Armco barrier or similar, by others.

Design – The retaining wall has been based upon a nominal surcharge of 20kN/m<sup>2</sup>

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Mastic Joints to be by others.

For further prowall requirements refer to Sales Drawing:  
FPM-DSD-0010

# SERVICE YARD RETAINING WALLS COMPLETE WITH INSITU BOOT

The external service yard walls will sit on a concrete base designed and installed by others. We have included for installation of the insitu boot and reinforcement, however accurate excavation by main contractor is required as concrete will be poured to bank or formwork supplied and fixed by main contractor to size determined by FP McCann Ltd.

Preparatory work is to be carried out by others in the provision of stone and adequate concrete base to formation level. The base must be sufficient to support the weight of the wall stem in the temporary state until the insitu boot has been cast.

Any retaining walls over 1800mm high may require propping. Props provided by FP McCann Ltd. propping base provided by others at no additional cost to FP McCann Ltd.

It is assumed that the above retained area to the rear of the retaining wall will be free draining and suitable land drain provided to avoid the possibility of buildup of hydrostatic pressure. We have not included for weep holes. Weep holes can be provided at an additional cost.

Vehicular access behind the wall is required to pour the insitu toe, we have not included for plant or machinery to carry out this operation. If any plant is required due to poor access charges may apply.

The slope to the top of the wall will be to our own design, along with maximization of panel lengths best suited to achieve the overall length of the wall. The total maximum height of the wall is to be 2000mm. Larger walls can be catered for with increased panel thickness and boot sizes at an additional cost

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

The wall is to be protected from vehicular impact damage by use of Armco barrier or similar, by others.

Design – The retaining wall has been based upon a nominal surcharge of 20kN/m<sup>2</sup>, and a ground bearing capacity of 150kN/m<sup>2</sup>

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Mastic to Joints by other



# WAREHOUSE PERIMETER RETAINING WALLS

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Retaining walls to the perimeter of the building will generally cast in one panel length per bay, currently to a maximum length of 12000mm. The height and finish of the wall will compliment that of the adjacent loading dock walls and allow for varying external levels

The FP McCann Ltd Perimeter Retaining Wall system is not designed to be the edge support of the ground floor slab. For piled sites with a suspended floor slab, the precast components can be increased in design and thickness upon request for an additional cost.

The retaining walls sit upon, and are connected to a strip foundation of similar thickness and level to the reinforced base slab, which supports the front dock leveller walls, thus providing a uniform outward appearance to the system. The strip foundation is to be designed and installed by others to suit the ground conditions and wall loadings.

Design – The retaining wall has been based upon a nominal surcharge of 50kN/m<sup>2</sup>

The F P McCann Retaining wall system requires a head height clearance for installation of 8000mm above Finished Floor Level and a minimum of 1m clear working space behind the walls is required to install the Excalibur bolts, dry pack and grout beneath the walls to a maximum height of 40mm and a minimum height of 10mm.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

In situ works to column areas and Mastic Joints to be by others

# OFFICE & HUB RETAINING WALL

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Retaining walls to the perimeter of the office will generally cast in one panel length per bay, currently to a maximum length of 12000mm. The height and finish of the wall will compliment that of the adjacent loading dock walls and allow for varying external levels.

The FP McCann Ltd Perimeter Retaining Wall system is not designed to be the edge support of the ground floor slab. For piled sites with a suspended floor slab, the precast components can be increased in design and thickness upon request for an additional cost.

The height of the walls can be increased from the adjacent dock walls to allow the toes to be below the yard slab, if the yard slab falls away from the dock levellers.

The retaining walls sit upon, and are connected to a strip foundation of similar thickness and level to the reinforced base slab, which supports the front dock leveller walls, thus providing a uniform outward appearance to the system. The strip foundation is to be designed and incorporated by others to suit the ground conditions and wall loadings.

Design – The retaining wall has been based upon a nominal surcharge of 10kN/m<sup>2</sup>

The FP McCann Retaining wall system requires a head height clearance for installation of 8000mm above Finished Floor Level and a minimum of 1m clear working space behind the walls is required to install the Excalibur bolts, dry pack and grout beneath the walls to a maximum height of 40mm and a minimum height of 10mm.

Drawings for all pre-fabricated components will be provided and will include design arrangements and drawings for approval in addition to those required under current CDM Regulations.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

In situ works to column areas and Mastic Joints to be by others

# GROUND BEAMS

## 300MM TO 600MM WIDE X 450MM TO 600 MM HIGH

Pre-cast concrete ground beams will be supplied and delivered / supplied, delivered and installed in lengths to span between stanchion bases. Ground beams will be fixed in position via an Excalibur bolt and fixing plate to the foundation pad.

The maximum length of span between stanchions is to be 7400mm. Ground beams will require a minimum of 300mm full bearing at each foundation base. Greater spans can be achieved by the introduction of a small intermediate concrete base by others at mid span for beams to bear upon.

Ground beams of standard size will be cast in steel moulds, where non-standard beams are required; moulds may require formation partially in timber.

The Ground beams are designed to support their self-weight only as standard, to form a permanent shutter to the edge of an in-situ concrete floor slab, but can be designed to accommodate specific loads subject to design at. Increased spans and loadings may incur an additional cost

The maximum length of ground beams is 7400mm.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The boot face will have a float finish based on BS8110 type A finish due to mould configurations.

The FP McCann Ground beam system requires a head height clearance for installation of 8000mm above Finished Floor Level and a minimum of 1m clear working space behind the beams is required to install the Excalibur bolts, fixing plates, grout and to dry pack beneath the walls to a maximum height of 40mm and a minimum height of 10mm. Head height requirements can be reduced down to a minimum of 5000mm by Telehandler installation at an additional cost

In situ works to column areas and Mastic Joints to be by others.

## C.2 SPECIFICATION

This estimate is based on the use of our own tried and tested specifications and details. We therefore reserve the right to amend any specification or details where in our opinion the use of standard FP McCann Ltd specifications and details is beneficial.

## C.3 MANUFACTURE

The concrete sections are cast using Quality Assured procedures in a controlled production environment, certified in accordance with the requirements of BS EN 9001:2008 Certificate Number FM 97367.

Moulds are constructed from steel or a fine finish quality plywood to ensure consistent accurate dimensional control. Tolerances to be agreed prior to the commencement of manufacture.

Surface efflorescence can occur in all quality concrete products with high cement content. It is a temporary natural phenomenon that does not affect durability or performance and responsibility cannot be accepted for its occurrence.

Advice can be provided on the removal of efflorescence should it be required

## C.4 DESIGN

All designs are carried out in accordance with Eurocode standards and their corresponding national annexes. Where applicable other relevant standards may be adopted. Assumed parameters should be verified by the scheme designer.

Design Team Meetings C4 in the quote):

We have made an allowance to attend design team meetings based on the below quantity with the first attendance no earlier than 1 week prior to receipt of all information based on the date required on the RFI's raised by FP McCann. If our attendance is requested at further DTM's there will be an added charge of £400.00 per meeting.

- Project value up to £100k = 2 DTM's with the first no earlier than 1 week prior to all information being received as per RFI dates
- Project value up to £300k = a maximum of 3 Design team meetings
- Project value up to £600k = a maximum of 5 Design team meetings
- Project Value over £600k = a maximum of 8 Design team meetings

# GROUND BEAMS

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## LESS THAN 300MM WIDE X 450MM TO 600 MM HIGH

Pre-cast concrete ground beams will be supplied and delivered / supplied, delivered and installed in lengths to span between stanchion bases. Ground beams will be fixed in position via a notch to ends of the beams. The beams are slotted over a T bracket welded to the steel stanchions. The T bracket is supplied and installed by others.

The maximum length of span between foundations is to be 7400mm. Ground beams will require a minimum of 300mm full bearing at each foundation base. Greater spans can be achieved by the introduction of a small intermediate concrete base by others at mid span for beams to bear upon.

Ground beams of standard size will be cast in steel moulds, where non-standard beams are required; moulds may require formation partially in timber.

The Ground beams are designed to support their self-weight only as standard, to form a permanent shutter to the edge of an in-situ concrete floor slab, but can be designed to accommodate specific loads subject to design at. Increased spans and loadings may incur an additional cost

The maximum length of ground beams is 7400mm.

All designs are carried out in accordance with Eurocode standards and relevant national annexes

Panels will have a standard steel mould finish based on a BS8110 type B Finish to the flat face. The opposite face will have a float finish based on BS8110 type A finish due to mould configurations.

The F P McCann Ground beam system requires a head height clearance for installation of 8000mm above Finished Floor Level and a minimum of 1m clear working space behind the beams is required to install the beams safely over the connection steel, grout and to dry pack beneath the walls to a maximum height of 40mm and a minimum height of 10mm. Head height requirements can be reduced down to a minimum of 6000mm by Telehandler installation at an additional cost

In situ works to column areas and Mastic Joints to be by others

# SCHEDULE OF ATTENDANCES

The following attendances and facilities shall be provided and maintained at all times by the main contractor (including additional working hours if necessary) for the duration of and in relation to the works, free of charge to F P McCann and in a manner so as not to disrupt or restrict the regular progress of the F P McCann works.

1. **Notices.** Giving all notices and obtaining all necessary approvals, licences and sanction.
2. **Rates and Fees.** Payment of any rates or fees which may become payable due to occupation of the sub-contractor.
3. **Protection.** Protection of the works where taken over by other traders or contractors or where the sub-contractor has left site including the partial handover
4. **Security.** Provision of security to safeguard the plant, equipment, materials on the site and the works.
5. **Fencing, Hoardings, etc.** Hoardings, fences, noise and splash barriers, statutory warnings, flagmen or the like as necessary to protect the works, plant, materials, personnel, third party property, and the general public. This shall include protection from exhaust, oil, grease, etc.
6. **Clearance.** The provision of adequate clearance (minimum 2000mm) around working positions for the sub-contract works including protection to adjacent works and third party property.
7. **Access and Working Surfaces.** Hard-core access to and adjacent to our working area around the external perimeter of the building suitable for heavy articulated delivery vehicles and pneumatic tyred 40T mobile cranes with outriggers including standard mats, for an approximate width of 10mtrs, together with similar adjacent space for storage of materials. The above areas to be free of obstruction and the risk of damage and contamination, from mud and vehicular or foot traffic. Note larger Crane mats can be supplied at an additional cost

Where panel heights exceed 3600mm, delivery will be made on low loading trailers with racks, therefore hard cored access to and around our working area will need to be particularly level and firm to avoid risk of 'grounding'.

- a) No allowance has been made for working in excavations, trenches, or confined spaces.
- b) We require the provision of adequate safe working space to enable the erection crew to land, manoeuvre, and secure precast units.

8. **Hard standing and Storage Areas.** Provision and subsequent removal of firm, dry reasonably level working areas, designed prepared and maintained for the safe operation and erection of plant and equipment. Conveniently situated areas on site for storage of plant, equipment and materials. Surface Water and Groundwater. Any pumping or drainage required to keep the site free of surface water.
9. **Telephone Facilities.** Provision of emergency site telephone facilities.
10. **Health and Safety.** Welfare and safety facilities to comply with statutory regulations or rules, orders or regulations of any authority having powers related to the specialist works.
11. **Temporary Safety Lighting.** Suitable background and safety lighting to working areas to allow safe working and safe access and egress and to facilitate execution of the works
12. **Water Supply.** Within the working, storage and preparatory operation areas, potable water supply at mains pressure take-off points and sufficient for the operations, including (where applicable) concrete mixing and cleaning of plant.
13. **Traffic.** Control or diversion of road, rail or water borne traffic.
14. **Setting Out.** Clear and substantive setting out and maintenance of individual base positions as necessary throughout the contract and the provision of permanent datum points, base lines, structural grid lines and as built survey information as required.
15. **Work to Existing Buildings.**
  - a) **Access for Plant and Materials.** Protection to existing roads, footpaths and landscaped area etc, is the responsibility of the Employer or Main Contractor.
  - b) **Works inside existing premises.** Protection to floor, wall and ceilings is the responsibility of the Employer or Main Contractor.
16. **Rubbish.** FP McCann to clear away all rubbish to skips provided by the Main Contractor
17. **Unrestricted Access.** No allowance has been made for dismantling, cladding rails or other components adjacent to working area to enable installation of components from the outside of the building, such as doorposts and sheeting rails. A typical clear height of 8000mm is required. For Dock openings above 3000mm high the head height clearance for installation is 11000mm.
18. **Waterproofing.** Any tanking, waterproofing, mastic to joints or sealing works are to be carried out by others.
19. Any associated fire stops are to be by others
20. Should adverse weather be forecast we reserve the right to defer delivery without liability for delay or disruption costs.
21. Intumescent paint to steel / bracketry to be by others – where applicable





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