

SUDS STRATEGY

Planning Constraints
Planning guidance followed with SUDS proposed as suitable.
sub-proposals:
Phase 1
M16 Bid North = attenuation and possible porous paving
M16 Bid Mid = rain gardens and porous surfacing
M16 Bid South = attenuation
Phase 2
M16 Bid = attenuation and possible porous paving
Corner bid = attenuation
Drainage Authority Constraints
- Betterment conditions have been applied to restrict discharge to 50% of existing 1 year brownfield rates.
- As agreed with U.U. total site discharge to Bradford Road sewer = 39L/s
M16 North = 6L/s
M16 Mid = 25L/s
M16 South = 3L/s
Phase 2 works
M16 Bid = 5L/s
Total discharge to Bradford Road Combined sewer = 39L/s
Corner bid connected to beneath street at 5L/s as agreed with U.U. (greenfield)
Total site discharge = 44L/s
FRA Constraints
- HWI Detail design completed in accordance with Civic FRA and drainage strategy documents.
Other
- No infiltration yet assumed, ground conditions to be confirmed.

General Notes

Do not scale this drawing. If in doubt, consult with the Engineer

- This drawing is to be read in conjunction with all other relevant Engineers, Architects and Specialist design drawings and specifications.
- All dimensions and levels are in metres unless noted otherwise.
- This drawing is for information purposes and all information displayed is subject to detailed design.
- Cover levels noted are indicative or best design levels. constructed levels should take into account as-built surfacing levels and gradients.
- The Contractor shall be responsible for checking all tie-ins for line and level with existing foul and surface water systems before commencing any works.
- The Engineer shall be notified immediately, in writing, should any errors or discrepancies be found prior to the commencement or continuation of any works. All work is to be carried out in accordance with current British Standards, Building Regulations and NHBC Standards.
- All drainage work is to be strictly in accordance with the requirements of the Building Regulations 2010, Approved Document Part H, "Drainage and waste disposal".
- It is the responsibility of the Contractor to execute the works at all times in strict accordance with the requirements of the Health and Safety at Work Act 1974, and the C.D.M. Regulations 2015. The Contractor will be deemed to have allowed for full compliance, including full liaison with the Principle Contractor, within his rates.
- All existing land drains encountered on site during construction are to be re-connected.
- Should any departure from the proposed slab or external levels be considered, agreement shall be sought from the Engineer immediately and prior to the commencement or continuation of any works. Proposals should take full account of all restrictions to the slab level.
- Temporary protection to be provided to drainage work during construction as necessary.
- Power supply to separator/treatment units, alarm, panel, vent etc to be provided by contractor in accordance with manufacturers recommendations.
- Topographical survey shown is based upon Survey Solutions drawing 46746MCLS-01
- Architects layout shown is based upon Hodder and Partner Site Layout drawing no.200

Specification Notes

- The following types of pipe may be used unless noted or agreed otherwise;
- Pipes up to 300mm diameter to be Structured Wall to BS EN 13476, Polypropylene to BS EN 1852 or PVC-U to BS EN 1401.
- Pipes 300mm diameter or over to be Concrete to BS 5911.
- Both Clay and Concrete pipes shall be strength class 120 (100/150mm min crushing strength 28kN/m). Thermoplastic pipes shall have a minimum ring stiffness of SM4.
- Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25.
- All pipes, chambers and fittings shall be installed, bedded and backfilled in accordance with the manufacturers instructions subject to the following minimum requirements;

Pipe Location	Cover to crown	Clay/Concrete Pipe * Bedding	Plastic Pipe Bedding	Backfill
Roads (HGV)	>1.2m	Class S	Class S (Stor2)	Type 1 Granular
Drives / car parking	>0.9m	Class S (Concrete)	Class S (Stor2)	Type 1 Granular
Hard and soft Landscaping	>0.6m	Class S	Class S (Stor2)	Suitable as dug material

- The first flexible joint in pipes adjoining a manhole shall be a maximum length of 600mm from the inside face of the manhole, connecting to a rocker pipe. The length of the rocker pipe shall be as follows;

Pipe diameter	Length of Rocker pipe
150-600mm	600mm
675-750mm	1000mm
over 750mm	1250mm

- All manholes and inspection chambers situated in areas subject to vehicular loading to have class D400 covers and frames to BS EN 24 and those not subject to vehicular loading to have class minimum class B125 covers and frames.
- Drainage frames must be tied to manhole risers by use of manufacturers ties (eg. Polyprop ref FRAS200 heavy kit and FRAS201 black ties). The ground works contractor will be held fully responsible for any accidents due to incorrect fitting or failure to use the correct manufacturers fixing equipment.
- All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.

INFORMATION/PLANNING

Rev.	Date	Amendments	By	Chkd
P04	30.03.24	Revised to suit LLFA comments 25-03-24		BD
P03	21.03.24	drainage text amended		BD
P02	05.02.24	comments 19-01-24		BD
P01	20.12.23	Red Line Boundary Added		BD

Project
Brunswick Mill
Bradford Road
Manchester
Status

FOR
INFORMATION/PLANNING
Scale Drawn Checked Date
1:250 BD CW 20-07-23

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Drawing Title

Drainage Strategy
phase 1 only

Client

ARROWSMITH-
Brunswick Square.

Project/Drawing No.
23178-HW-23-00-DR-C-502

Rev.
P04

Typical Cross Section through porous Rain Garden/Porous block paving

Proposed Section
1:1NTS

Typical flow control chamber
Proposed Plan 1:1NTS