

#### Notes

- All dimensions are in millimetres unless stated otherwise.
- This drawing to be read in conjunction with all other relevant drawings and specifications.
- All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

#### STANDARD DRAINAGE NOTES:

- Except where specifically shown otherwise all below ground pipes / connections shall be 100mm dia PVC (to BS 4660) or VC (to BS 5481) with flexible joints and laid to minimum falls of 1 in 40, except where connected to WC when falls may be 1 in 80.
- All gravity pipe runs to be tested to a standing head of 1500mm head of water above the invert at the head of the pipe run (but not exceeding 4000mm at the lower end)
- For details of bed and surround requirements refer to long-sections and standard details. In all other situations provide 150mm of 10mm single-sized rounded gravel bedding and surround.
- Except where specifically shown otherwise, pipes to be a minimum of 900mm below roads/driveways and 600mm below gardens/fields.
- Ventilating pipes to be provided at the head of each drain and to any branch longer than 6m where a single appliance is connected, or 12m where a group of appliances is connected.
- Step-irons shall not be fitted in any chambers unless specified otherwise.
- Manhole/Gully covers shall be regulated to suit finished levels and crossfalls
- All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations
- Drains passing beneath buildings to have minimum 100mm granular fill or flexible filling around pipe. Where the pipe crown is within 300mm of the underside of the slab, pipe shall be encased in concrete integral with the slab.
- Drains passing through walls below ground level to have minimum 50mm clearance all round and opening in walls to be masked all round with rigid sheet material to prevent ingress of fill or vermin. Openings in walls for pipes shall have concrete lintels to support wall construction above
- Unless stated otherwise, pipes to be 150mm Diameter.

#### STANDARD ROADS / FOOTPATH NOTES:

- Existing structures to be broken out to minimum 450mm below top of finished surface level. Existing footpath to be broken out and rubble and existing subbase to be removed off-site.
- Subgrade to be proof rolled with one pass of a smooth-wheeled roller having a mass per M-width of roll of not less than 2,100-kg or a Vibrating Roller having a mass per M-width of roll of not less than 700-kg or a Vibrating Plate Compactor having a mass per m2 of not less than 1400-kg. Any soft spots shall be removed and replaced with Type 1 compacted in layers not exceeding 150mm thickness.
- All formations are to be treated with an approved herbicide before placing sub-base material on a geotextile separation membrane (Terram 1000 or similar approved)
- All sub-base material is to be non-frost-susceptible. All concrete to be sulphate resisting

P01	Preliminary Issue	EP	01/25
Rev	Amendments	Rev'd by	Date
Client Spalding United FC			

Project  
**Spalding United Football Club,  
Winfrey Avenue, Spalding**

Title  
**Drainage Strategy**

Job No	25011		
Drawing No	25011-001		
Status	Preliminary	Rev	P01
Scale	@A1	Date	01/25
Project Engineer	TBP	Drawn By	EP
		Checked By	TBP
		Approved By	



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#### Project Details

The proposed site is Spalding United Football Club which is located in Spalding, Lincolnshire, with the postcode PE11 1DA. The site is situated in a predominantly urban area, surrounded by a mix of residential properties, local businesses, and recreational spaces. The approximate center of the site at National Grid Reference TF 24679 22992.

The proposed development includes construction of two dugouts, one proposed steel canopy with concrete foundation and one proposed steel 10 seated stand with concrete foundation. The total site area is less than a hectare (0.0134 ha). The proposed development area is within Flood Zone 3 and therefore flood risk assessment should be carried out.

#### Defined Plots

Proposed Dugouts	:	7.2 m <sup>2</sup>
Proposed Canopy	:	87.0 m <sup>2</sup>
Proposed 100 person Steel Seated Stand	:	61.0 m <sup>2</sup>
Total Hardstanding Area	:	155.2 m <sup>2</sup>

According to the British Geology Survey Map (Borehole Record), the ground condition is stiff grey brown clay with partings of silt and occasional coal gravel and the groundwater can be expected approximately 1.7m below ground level therefore it is not suitable for soakaway system.

#### Drainage Hierarchy

Drainage Hierarchy	Y/N	Comment
1. Infiltration to maximum extent	N	Ground Condition is not suitable for Soakaway System
2. Discharge to Surface Waters	N	None available
3. Discharge to Surface Water Sewer	N	Proposed Storm Water System will discharge into Existing Abglian Water Surface Sewer
4. Discharge to Combined Sewer	N	None available

#### Drainage and SuDS Strategy

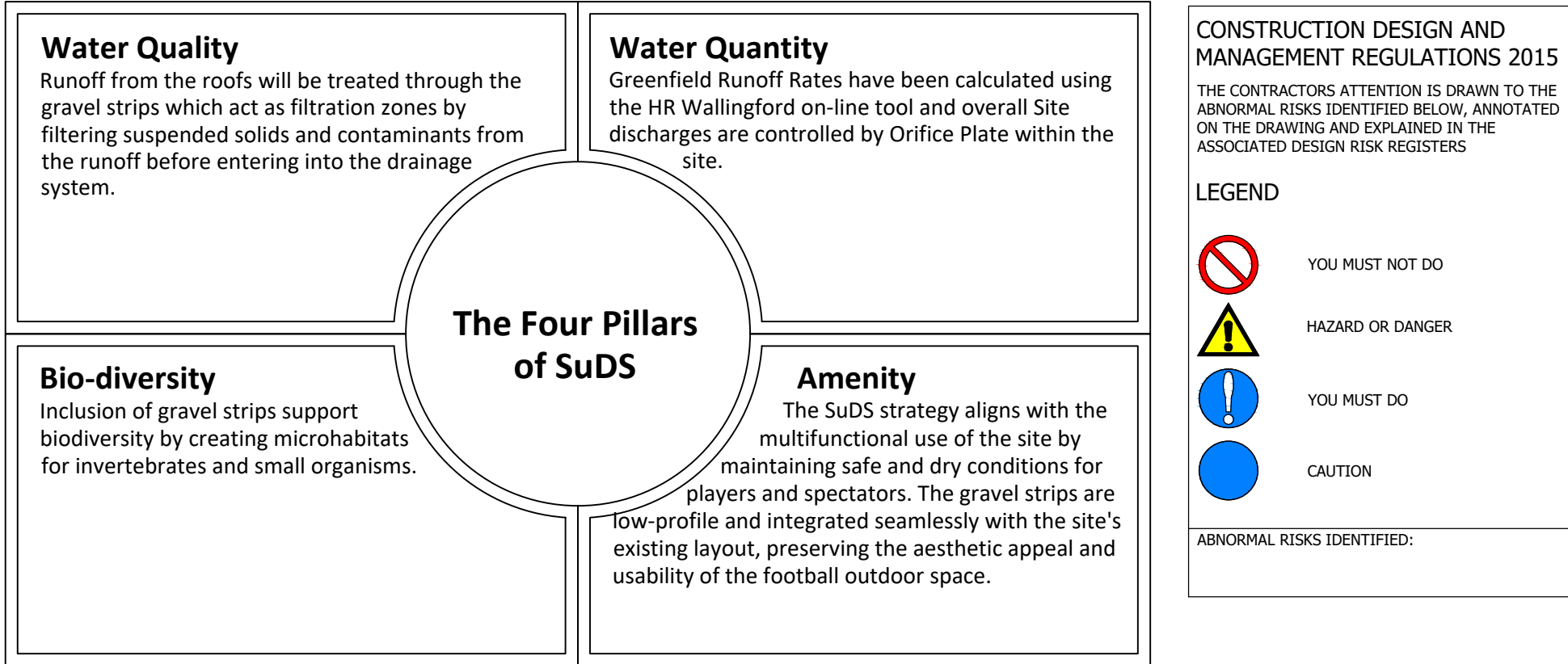
As stated in CIRIA SuDS Manual 2015 the objective of sustainable drainage systems is to maximize the benefits and minimize the negative impacts of surface water runoff from developed areas. By applying SuDS methodology, storm runoff from the Site is controlled to ensure that flow rates in downstream watercourses are not increased and the water is appropriately treated to remove any contaminants, thus ensuring the quality of the water in the natural environment downstream.

#### Drainage Strategy

##### Storm Water

- The drainage strategy has been designed to collect storm water runoff from the roofs for all storms up to 1:100-yr event + 40% climate change. The proposed storm water system will discharge into the existing Anglian Water Surface Sewer which is located on Winfrey Avenue Road.
- The runoff from the roofs will be directed into a proposed 300mm gravel strip via the downspouts, where it will undergo filtration. From there, it will be collected by rainwater pipes and discharged into the existing Anglian Water Surface Sewer System.
- Discharge from the Site will be restricted to green field runoff rate which is 0.14-l/s at MH-001 S as an orifice plate before discharging into the existing sewer.
- The storm drainage system has been designed to contain all storm water on the site. Flooding will occur in 1 in 30-year storm event and there is no attenuation features required as the use of the site is associated with outdoor sports and therefore it is considered to be water compatible.

#### SUDS Strategy



#### Simple Pollution Indices:

Area	Pollution Indices			Proposed Treatment	Mitigation Indices			Residual Indices		
	TSS	Metals	Hydro-Carbons		TSS	Metals	Hydro-Carbons	TSS	Metals	Hydro-Carbons
Roofs	0.2	0.2	0.005	Filter Strip(Gravel Strip)	0.9	0.7	0.8	0.0	0.0	0.0

