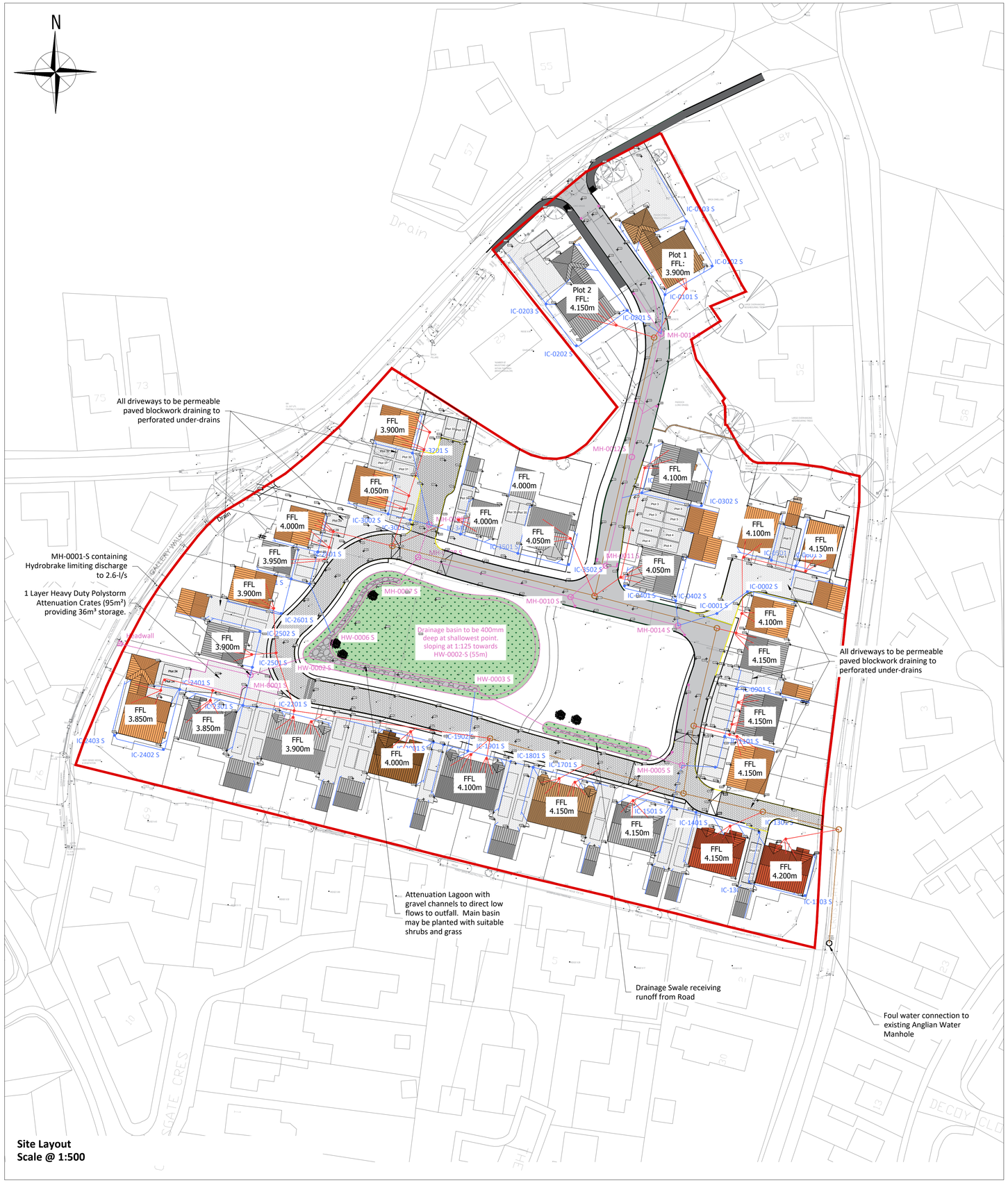
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Project Details

The site is located off Milestone Lane, Pinchbeck, Spalding. The postcode for the site is PE11 3XR and the approximate centre of the site at National Grid Reference TF 24240 26600.
The site size is more than a hectare (1.88 ha). The site is currently greenfield disused soft landscaping.
The proposed development includes proposals for the construction of 35 dwellings with roads, driveways and parking spaces as follows:

- Housing (Roofs) : 3327m²
- Driveways and Parking : 2608m²
- Adoptable Road and Footpath: 1970m²
- Total Impermeable area: 7905m² (Approx 42% of the Site)

Superficial deposits are silty fine Sands. Infiltration tests have shown an infiltration rate of 3.67 x 10e-6 m/s. and ground water was encountered 0.95m below existing ground level.

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 Hierarchy:

	Drainage Hierarchy	Y/N	Comment
1	Infiltration to maximum extent	N	Due to high water table, soakaways are not suitable
2	Discharge to Surface Waters	Y	An existing Surface Water ditch will be utilised to the western side of the site
3	Discharge to Surface Water Sewer	N	None available
4	Discharge to Combined Sewer	N	Only option remaining

Key aspects proposed:

- It is proposed to provide an adoptable drainage system throughout the development, receiving runoff from roofs, driveways and the access road. These flows will be attenuated before discharging into the existing surface water ditch running along the western side of the site.
- Runoff from private driveways and parking spaces will be filtered through a filter media within permeable surfacing.
- The Adoptable Road shall be drained either through the collection of water using gullies and discharging through a gravity operated system or using a grass filter strip to a Swale, both to be adopted by Highways. A perforated underdrain shall be adopted by Anglian Water.
- Discharge from the Site shall be restricted to Greenfield Runoff Rate of 2.6-l/s (As stated on HR Wallingford) using a Hydrobrake in MH-0001-S
- Attenuated water shall be stored in a combination of the Swales/Lagoon and the underground attenuation crates & subbase for all storm events upto 1 in 100-year + 40% Climate Change event.
- All flooding will be routed away from the properties and collected in a vegetated area in the centre of the site.

Storm Water Attenuation

Attenuation Volume Provided shall be 667.6m³, (Subbase = 130.3m³; Swales = 537.3m³)

- Attenuation Volume used in 1 in 30 yrs storm event: 32%
- Attenuation Volume used in 1 in 100 yrs storm event: 46%
- Attenuation Volume used in 1 in 100 yrs storm event + 40% Climate Change : 73%

Foul Water

- An adoptable foul water system shall be provided discharging to an existing public sewer in the south eastern point of the site.

Exceedence Flows

Storm Water System is designed to receive and contain within the site boundary all rainfall up to & including 1:100 AEP. Larger flows are expected to follow the topography of the site and discharge on to the vegetated area within the centre of the site. Exceedence Flows is exceptional events or due to blockage shall be routed away from all properties.

Management & Maintenance:

The maintenance activities listed below are considered to be the basic tasks necessary to keep the site drainage systems working at optimum efficiency, which is necessary to ensure that they have capacity to deal with extreme / unusual events. Other activities, such as litter removal / repairs etc. will also be required.

Area	Maintenance Activity	Frequency	Responsibility
Foul Drainage	CCTV/Jetting of Sewers	Every 10-Years	Anglian Water
Foul Drainage Hard-Surfacing & Drainage	Repairs to Sewers	As Required	Anglian Water
	Blockwork paved areas to be swept and de-weeded	As required during Spring and Summer Months	Plot Owner
Hard-Surfacing & Drainage	Cleaning of Gullies	Recommended every 2-Years	Management Company
Building Roof Drainage **Building Foul Drainage**	CCTV/Jetting of Sewers	Recommended Every 10-Years	Management Company
Hard-Surfacing & Drainage	Inspection of Manholes/Chambers	Recommended Every 5-Years	Management Company
Building Roof Drainage **Building Foul Drainage**	Spillages	Provision of Spill Kits to Contain	Management Company
	Gutters to be cleared of debris	Recommended Every 2-Years	Management Company
	Cleaning of below ground pipework	Recommended Every 10-Years	Management Company
Development Site Access Roads	Periodic sweeping to remove, debris, leaves etc	Every 2-4 weeks during autumn	Highways Authority
Adoptable Road Drainage	Inspection and Maintenance, Gully cleaning etc.	As Required	Anglian Water
Soakaway Trenches	CCTV	Every 5-Years	Highways Authority
	Flushing	Every 10-Years	

NOTES

1. Do not scale this drawing.
2. All dimensions are in millimetres unless stated otherwise.
3. This drawing to be read in conjunction with all other relevant drawings and specifications.
4. All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

Key

- HB-HALF BATTERED KERB
- BN-BULLNOSE KERB
- TH-TRANSITION KERB
- EF-EDGING OF FOOTPATH
- Permeable Paving
- Tarmac
- Paving Slabs
- Exceedence Flow

CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015

THE CONTRACTORS ATTENTION IS DRAWN TO THE ABNORMAL RISKS IDENTIFIED BELOW, ANNOTATED ON THE DRAWING AND EXPLAINED IN THE ASSOCIATED DESIGN RISK REGISTERS

LEGEND

- YOU MUST NOT DO
- HAZARD OR DANGER
- YOU MUST DO
- CAUTION

ABNORMAL RISKS IDENTIFIED:

P5	Amended Plan	PSP	13-09-22
P4	Drainage basin information added	AJP	22-04-22

Client: Postland Management Ltd

Project: The Burells
Milestone Lane
Pinchbeck

Title: Drainage Strategy

Job No	21027		
Drawing No	21027-1000		P5
Status	Preliminary	Rev	
Scale	As Stated	Date	08-11-21
Project Engineer	TBP	Drawn By	AJP
		Checked By	TBP
		Approved By	

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