

ENGINEERING LEGEND:

Adoptable Drainage and highways

- Existing adopted Combined — ex. mh
- Existing adopted Combined to be abandoned — ex.mh
- Proposed adoptable Storm — S1
- Proposed adoptable Foul — F1
- Proposed adoptable Combined — C1
- Permeable Paved Private Drives

DRAINAGE STRATEGY NOTES

Discharge via Infiltration

The ground investigation included falling head tests, the results were not favourable and the recommendation in the report is that the site is not suitable for the use of soakaways.
For this reason Infiltration has been discounted as a method of surface water disposal.

Discharge to Water Course

As previously discussed with NWL and STC this option has been discounted due to scheme viability.

Discharge to Public Sewers

The NWL combined sewer has been identified as the most suitable point of discharge for the scheme.
NWL approved a rate of 18.9l/sec to the sewer
STC have stated that the surface water must be restricted to the former greenfield runoff rates.

Greenfield runoff rates

Qbar = 1.70l/sec
1year = 1.5l/sec
30year = 3.0l/sec
100year = 3.60l/sec

Proposed maximum discharge rates

100year = 3.70l/sec
The above rate gives a satisfactory orifice size within the flow control device.

30year volumes required

33m³
Due to a relatively shallow connection at the combined sewer a box culvert has been designed to accommodate the above volumes. These structures will be sited within the road network and offered to NWL for adoption.

100year volumes required

49m³
The size and layout of this HCA funded housing scheme does not allow for any above ground SuDS that would give any significant volumes.
Aquacell crates are to be utilised with rodding access upstream and downstream and a roddable channel through the crates along this line.

Source Control

Private drive areas that are relatively flat are to be constructed as permeable paving with connection to the main surface water system.
These measures will act as a slowing down mechanism of flows into the main system and also provide greater pollution protection.

Maintenance arrangements

Sewers within the road network - NWL will maintain these sewers once the maintenance period is over - The developer will be responsible for the upkeep until the sewers are handed over.

Crate system - This system will be the responsibility of the developer and they must follow the maintenance schedule which should be read in conjunction with this drawing

Permeable paving - The permeable bays will be the responsibility of the developer and they must follow the maintenance schedule which should be read in conjunction with this drawing

Rev.	Description	By	Chk	App	Date
B	Drainage and proposed levels revised to suit the current architects layout	MA	MT	LB	not issued
A	Drainage design revised to suit the surveyed manhole depth and locations	MT	SH	LB	06/10/17
Ø	Initial Issue	MT	SH	LB	08/05/17

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Client
Gus Robinson Developements

Project
Proposed Residential Development at West Boldon Primary School

Drawing Title
Drainage Strategy Layout

Scale	1:200	Sheet Size	A1
Drawn By	MDT	Checked By	SH
Approved By	LB	Date	08/05/17

Drawing Status
For Approval

Project No.	Drawing No.	Revision
2017021	000-02	B

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