john newton & partners
jnpgroup
Consulting Engineers

Report on Drainage Strategy

Development off Wombwell Lane, Barnsley

Chesham
Brighouse
Midlands
Sheffield
Teesside

For Ashmount Homes Ltd

Prepared by Christopher Yates

Approved by Neil Taylor
BSc(Hons) CEng MICE MIStructE

Date 2nd July 2015

Ref. B20556/DS

Issue Record

Job Number: B20556

Prepared By:



Chris Yates

Checked By:



Nathan Eastwood

Date: 03 July 2015

Revision	Change Overview	Reason for Change	Date

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1 DRAINAGE STRATEGY

1.1 Introduction

It is proposed to construct 16 number properties on land which currently has a single property with garage and associated areas of overgrown waste land. The site is off Wombwell Lane approximately 3.8 km south east of Barnsley town centre.

The rear of the site was once a railway cutting which has since been filled to make up levels.

Table 1 - Site Description Summary table

Item	Remarks
Site Area	5000m^2
OS X (Eastings)	438070
OS Y (Northings)	404781
Nearest Postcode	S70 3NR

The site is on the whole relatively flat with a difference in levels of approximately 1.0m covering the site in an undulating manner. The rear of the site falls away to form part of a banking to the Trans Pennine Trail which runs past the north east boundary.

Table 2 - Boundary Conditions

Boundary	Remarks
Northern	Palisade fence. Land falls away to the Trans Pennine Trail
Eastern	Conifer trees along part of the boundary. Neighbouring gardens.
Southern	Wombwell Lane
Western	Land used for industrial purposes

1.2 Existing Site Run-Off

Surface and Foul Water

A walkover study was carried out on the 25th June 2015 and an existing drainage system to the existing property was found. It would appear that the drainage system acts as a combined drain with rainwater downpipes from the gutters and a soil stack from the property both draining to the system. 2 number inspection chambers were found on the site, both with their covers missing. The drainage on site is at a very shallow depth with approximately 100 to 300 mm cover to the head of the run.

The drainage would appear to outfall to the public combined sewer within Wombwell Lane (APP E) at the head of the run; from above ground the pipe runs appear to line up. The recorded depth to invert of the public manhole with Wombwell Road has been given through Yorkshire Water records as 1.82m deep. This would suggest that the house drain falls at a gradient of approximately 1:28, if connection is confirmed.

A full drainage CCTV survey is recommended to confirm connection of the house rainwater pipes and foul stack to the system around the property. It is assumed that some downpipes join the drainage run via junctions to the

final leg of the pipe. The survey should also confirm connection to the public combined sewer within Wombwell Lane.

1.3 Proposed Site Run-Off

The hierarchy of disposal methods as described in the Building Regulations Document Part H states that a sustainable drainage system is the first option to be considered. If a sustainable drainage system is not suitable then discharge to watercourse should be investigated. If neither of these systems are viable then surface water sewer (with balancing) and finally combined sewer (with balancing) could be used.

Discharge to Sustainable Urban Drainage System (SUDS)

Draining to SUDs, such as soakaways, storage tanks and permeable paving, reduces the impact of urbanisation on watercourse flows. This ensures the protection and enhancement of water quality and encourages recharge of groundwater in a manner which mimics nature.

No percolation testing has been carried out on site at present. The rear of the site would appear to be fill material, which is not recommended to have infiltration passing through it due to possible contamination and the washing out of fines material. Further site investigation into this landfill is recommended to establish how deep it goes and if contamination is present before determining if percolation testing is required.

The remaining site area should have percolation testing carried out during a site investigation to determine suitability for soakaways. From the site walkover, it would appear that this area of land also has the possibility of being landfill.

Discharge to a Watercourse

The nearest recorded watercourse to the site is approximately 350metres to the southwest of the site. There is the possibility there are other unrecorded watercourses nearer the site but these would most likely be situated along the opposite side of Wombwell Lane in 3rd party land, and placing surface water pipes beneath the road and through 3rd party land would be an unrealistic and expensive option.

Due to these impracticalities, draining to watercourse has been discounted.

Discharge to Public Sewers

Sewer records show a combined sewer within Wombwell Lane to the front of the site. This is the head of the run and has a recorded depth from Yorkshire Water of 1.82m. It would appear that the existing surface water from the property drains to this sewer; a CCTV survey is required to confirm this connection. Should the connection be proved, a restricted runoff rate from the site of 70% of the existing could be used with the balance of water for the 1 in 100 year + Climate change event being stored on site in attenuation (see APP F).

There is an old Railway track drainage system to the rear of the site which served the now dismantled railway, which is now the Trans Pennine Trail. Although this system is lower than the site, we have been informed by Barnsley Metropolitan Borough Council that a connection into this drainage system would not be possible. This option of draining to the disused railway drainage has therefore been discounted.

There is a surface water connection shown on the Yorkshire Water asset maps serving a row of terraced housing approximately 130metres to the to the west of the site. The eventual outfall to this drain run is not concluded on the asset maps. The final manhole shown on this run was lifted and a visual assessment indicated that the drain runs into the abandoned brickworks to the north, and therefore this option has been discounted.

There is a further surface water sewer shown to the north east of the site within Albany Close. Connecting surface water drainage from the proposed site to this outfall would have to be agreed with Yorkshire Water as to whether there is capacity within their system to accept further flow. Should this be possible, further complications would exist with negotiating an easement through 3rd party land or investigating the possibility of a requisition by Yorkshire Water. This option may be difficult but should not be discounted at this stage.

1.4 Proposed Drainage Assessment

The means of draining the development site has been assessed and evaluated to determine how best to deal with the disposal of foul and surface water run-off generated from the proposed development.

Surface water drainage

The site should drain to suitable SUDS systems should permeability testing come back positive. The type of SUDs system most suitable to the site would be a soakaway to discharge roof drainage, with each plot having its own soakaway. Permeable paving could be used to drain surface water from driveways and the highway, again depending on permeability testing.

Should permeability testing not be feasible due to the presence of fill material or come back with unsatisfactory results, surface water should drain to public sewer. There appears to be an existing connection from the site into the combined sewer within Wombwell Lane. Should this be confirmed via a CCTV survey, surface water could discharge to this sewer at a suggested rate of 5l/s to be agreed with Yorkshire Water and BMC.

An alternative would be to discharge surface water to the public sewer within Albany Close with a discharge rate to be agreed with Yorkshire Water and easements agreed with necessary land owners, or requisition.

Foul water drainage

The existing property on site appears to discharge foul waste to the public combined sewer within Wombwell Lane. This existing connection should be re-used, should levels on site be appropriate. The alternative would be to outfall via a requisition / easement to the public foul sewer in Albany Close.

2 CONCLUSIONS AND RECOMMENDATION

- A site investigation should be carried out to determine any possible contamination issues to the land filled part of the site.
- A CCTV survey of the existing drainage on site should be carried out with the connection onto the public sewer also being proved.
- Permeability testing should be carried out to BRE Digest 365 as part of the site investigation in areas of the site which do not have landfill or beneath the landfill levels.
- Should soakaways within the land fill be considered, a robust detail of the soakaways needs to be produced to avoid settlement of the ground above.
- Should infiltration rates be suitable, soakaways should be the chosen method of surface water discharge for roof drainage.
- Should infiltration rates be suitable, permeable paving should be the chosen method of surface water discharge for driveways and roads.
- Should infiltration rates be unsuitable, surface water should discharge to the public sewer within Wombwell Lane at 5l/s with the balance of water (Approx. 124m^3) being attenuated on site.
- Foul water should discharge to the public sewer within Wombwell Lane.

APPENDIX A

LOCATION PLAN

B20556 – Development off Wombwell Lane, Barnsley



Proposed site off Wombwell Lane, (Red outline above)

Nearest Post code – S70 3NR,

OS co-ords X= 438085

Y=404787

SITE LOCATION

APPENDIX B

PHOTOGRAPHS OF EXISTING SITE





Photos 1 & 2 – View of Front of Site





Photos – 3 & 4 – Existing Drainage Inspection Chambers





Photos – 5 & 6 View of Eastern Boundary at the Southern end of the Site




Photos 7 & 8 – View of Eastern Boundary at the northern end of the site




Photos 7 & 8 - View of Western Boundary at the Southern end of the Site




Photos 9 & 10 - View of Western Boundary at the Northern end of the Site





Photos 11 & 12 - View of Northern Boundary from within the site





Photos 13 & 14 - View of Northern Boundary taken from Trans Pennine Trail





Photos 15 & 16 - View of Trans Pennine Trail, North of Northern Boundary, and Old Track Drainage

APPENDIX C

EXISTING TOPOGRAPHICAL SURVEY



KEY

- Kerblines
- Road edges, Paths, Foundations, Bases etc.
- Buildings
- Walls
- Hedgerows
- Limits of Bushes Canopies Scrub
- Fence - PM/FE Post & Mesh Fence; CB/FE Close boarded Fence; PW/FE Post & Wire Fence; PR/FE Post & Rail Fence; PA/FE Palisade (metal) Fence; IR/FE Iron Railings Fence
- Batters
- Overhead Powerlines
- Gate
- 52.47 Spot level
- Tree

BB	Bellkiha beacon	SVMK	Stop Valve Marker
BOLL	Bollard	SVP	Soil vent pipe
BIG	Black Inlet Gully	SP	Stop post
BIN	Litter bin	ST	Stop tap
BSTP	Bus stop	STAY	Cable stay
BTEL	British Telecom IC	SV	Stop valve
CATV	Cable Television cover	TM	Triangular manhole
CB	Catchpit	TCB	Telephone call box
ECAB	Electrical Cable Marker	TLTS	Traffic light
ELEC	Electricial IC	UP	Utility pole
EP	Elec. pole	VP	Vent pipe
FLTS	Floodlight	WM	Water meter
GAS	Gas valve	WO	Wash out
GP	Gate post	UTL	Unable to Lift
G	Gully		
GAS	Gas valve		
FHYD	Fire Hydrant		
FMAR	Fire Hydrant Marker		
FP	Flagstaff/Cowl		
KO	Kerb outlet		
LB	Letter box		
LC	Lamp column	BL 33.58	Bed level
LHOLE	Lamp Hole		
Mlw	Utility marker	CL 32.56	Cover level
MY	Mercury Telecom IC		
MH	Manhole cover	FL 36.52	Floor level
PM	Parking meter	IL 36.59	Invert level
PP	Petrol pump	SL 37.54	Soffit level
REYE	Pointing eye		
RP	Rodding point	TL 36.45	Threshold level
RS	Road sign	WL 36.24	Water level
RWDP	Rain water pipe		

NOTES

ALL LEVELS RELATE TO OSBM VALUE 42.873M LOCATED ON AN ELEC SUB-STATION 0PP. 220 WOMBWELL LANE.
ROTATED APPROXIMATELY NORTH.
CO-ORDINATES TO AN ARBITRARY GRID.

SCALE = 1:200

SURVEY SITE SERVICES

CHARTERED SURVEYORS
CHARTERED CIVIL ENGINEERS

Survey and Site Services
Francis Jordan House
Wellington Street
Barnsley
South Yorkshire. S70 1SW
Tel and Fax (01226) 289177

Client

THE CLIENT

Drawing Title

TOPOGRAPHICAL SURVEY

Site Address

WILLIAM GOSNEY LIMITED
WOMBWELL LANE
BARNSLEY

Surveyed VHM	Processed JW	Drawn JW	Checked VHM

Drg.No. B404/S/1	Date 16/04/09

APPENDIX D

PROPOSED DEVELOPMENT LAYOUT

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This drawing must not be scaled
Dimensions are in millimetres unless otherwise specified.

Depot

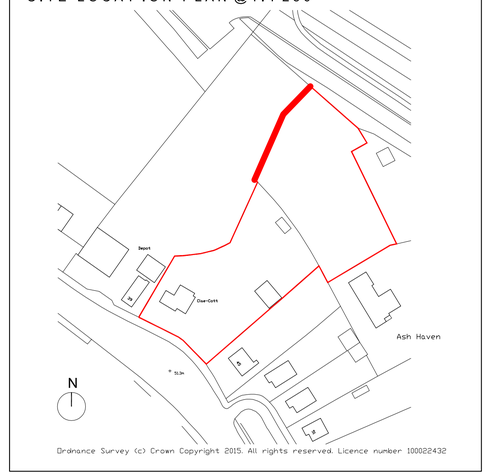
Ash Haven

WOMBWELL LANE

45

N

SITE LOCATION PLAN @1:1 250



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Drawing Status
PLANNING APPLICATION

Space
architecture and design limited
The Studio
Lake House
Blackmoorfoot Road
Huddersfield
HD7 5TR
t: 01484 841423
f: 01484 847757
e: md@spacearchitecture.net
w: www.spacearchitecture.net

Client
Ashmount Homes Ltd

Project
Residential Development on
Land at 41 Wombwell Lane
Barnsley
S70 3NR

Drawing Title
Site Layout Plan
and Site Location Plan

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Scale @ A1	Scale @ A3	Date	Drawn	Checked	Drawing Number	Revision
1:250	1:500	01.05.15	MJD	mjd	15.010(9-)001	

APPENDIX E

YORKSHIRE WATER SEWER RECORDS

YORKSHIRE WATER
PROTECTION OF MAINS AND SERVICES

1. The position of Yorkshire Water Services Ltd (YWS) apparatus shown on the existing mains record drawing(s) indicates the ***general*** position and nature of our apparatus and the accuracy of this information cannot be guaranteed. Any damage to YWS apparatus as a result of your works may have serious consequences and you will be held responsible for all costs incurred. Prior to commencing major works, the exact location of apparatus must be determined on site, if necessary by excavating trial holes. The actual position of such apparatus and that of service pipes which have not been indicated must be established on site by contacting the Customer Helpline on 0845 124 24 24 for both water and sewerage.

2. The public sewer and water network is lawfully retained in its existing position and the sewerage and water undertaker is entitled to have it remain so without any disturbance. The provisions of section 159 of the Water Industry Act 1991 provides that the undertaker may "inspect, maintain, adjust, repair or alter" the network. Those rights are given to enable the undertaker to perform its statutory duties. Any development of the land or any other action that unacceptably hindered the exercise of those rights would be unlawful. The provisions contained in Section 185 of the Water Industry Act 1991 state that where it is reasonable to do so, a person may require the water supply undertaker to alter or remove a pipe where it is necessary to enable that person to carry out a proposed change of use of the land. The provisions contained in Section 185 also require the person making the request to pay the full cost of carrying out the necessary works.

3. Ground levels over existing YWS apparatus are to be maintained. Sewers in highways will ***generally*** be laid to give 1200mm of cover from finished ground level working to kerb races, other permanent identification of the limits of the road or to an agreed line and level. Substantial increases or decreases to this 1200mm depth of cover will result in the sewer being re-laid at your expense. Water mains and services will ***generally*** be laid with a minimum of 750mm depth of cover however some mains and services usually those installed over 50 years ago may have less ground cover.

4. If surface levels are to be decreased / increased significantly the effects on existing water supply apparatus will be carefully considered and if any alterations are necessary, the costs of the alterations will be recharged to you in full. Outlets on fire hydrants must be no more than 300mm below the new levels and all surface boxes must be adjusted as part of the scheme.

5. To enable future repair works to be carried out without hindrance; any pipe, cable, duct, etc. installed parallel to a water main or service pipe should not be installed directly over or within 300mm of a water main or service pipe or 1000mm of a waste water asset. Where a pipe, cable, duct, etc. crosses a main or service it should preferably cross perpendicular or at an angle of no less than 45° and with a minimum clearance of 150mm. These requirements apply to activities within an existing highway and are relevant to the installation of pipes, cables, ducts, etc. up to and including 250mm in diameter *(see illustration below).* Necessary protection measures for installations greater than 250mm in diameter and/or in private land will need to be agreed on an individual basis. Installations within a new development site must comply with the National Joint Utilities Group publication Volume 2: NJUG Guidelines On The Positioning Of Underground Utilities Apparatus For New Development Sites.

6. All excavation works near to YW apparatus should be by hand digging only.

7. Backfilling with a suitable material to a minimum 300mm above YW apparatus is required.

8. Adequate support must be provided where any works pass under YW apparatus.

9. Jointing chambers, lighting columns and other structures must be installed in such a way that future repair or maintenance works to YW apparatus will not be hindered.

10. Apparatus such as; railings, sign posts, etc. must not be placed in such a way that they prevent access to or full operation of controlling valves, hydrants or similar apparatus. YWS surface boxes must not be covered or buried. Any adjustment, alteration or replacement of manhole covers must be agreed on site prior to the commencement of the works with a YWS Inspector who may be contacted via our Call Centre on 0845 124 24 24.

11. Explosives shall not be used within 100 metres of any Yorkshire Water Services apparatus or installations.

12. Vibrating plant should not be used directly over any apparatus. Movement or operation by vehicles or heavy plant is not to be permitted in the immediate vicinity of YWS plant or apparatus unless there has been prior consultation and, if necessary, adequate protection provided without cost to YWS.

13. ***Under no circumstances*** should thrust boring or similar trenchless techniques commence until the actual position of the Company's mains/services along the proposed route have been confirmed by trial holes.

14. Any alterations to the highway should be notified following the procedures outlined in the New Road and Street Works Act 1991 Code of Practice; Measures Necessary Where Apparatus Is Affected By Major Works (Diversionary Works).

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Western House, Halifax Road, Bradford BD6 2SZ. Registered in England and Wales No. 2366682

safe-move
A part of YorkshireWater

15. You will be held responsible for any damage or loss to YWS apparatus during and after completion of work, caused by yourselves, your servant or agent. Any damage caused or observed to YWS plant or apparatus should be immediately reported to YWS. Should YW incur any costs as a result of non-compliance with the above, all costs will be rechargeable in full.

16. You should ensure that nothing is done on the site to prejudice the safety or operation of YWS employees, plant or apparatus.

17. In accordance with the New Roads and Street Works Act 1991, Chapter 22, Part 3, Section 80. The location of any identified YW asset "*which is not marked, or is wrongly marked, on the records made available* " should be communicated back to Yorkshire Water. The location of the apparatus should be identified on copies of the supplied plans which should be returned to Yorkshire Water (Asset Records Team) with photographic supporting evidence where possible.

18. The Government has decided that responsibility for private sewers serving two or more properties and lateral drains (the section of pipe beyond the boundary of a single property, connecting it to the public sewer) will be transferred to the water companies on Oct 1 2011. Private pumping stations will also transfer during the period 1 October 2011 – 1 Oct 2016. Records of these assets may not yet be shown on the existing mains record drawing(s). If you encounter any of these assets you must inform Yorkshire Water Services Ltd (YWS).

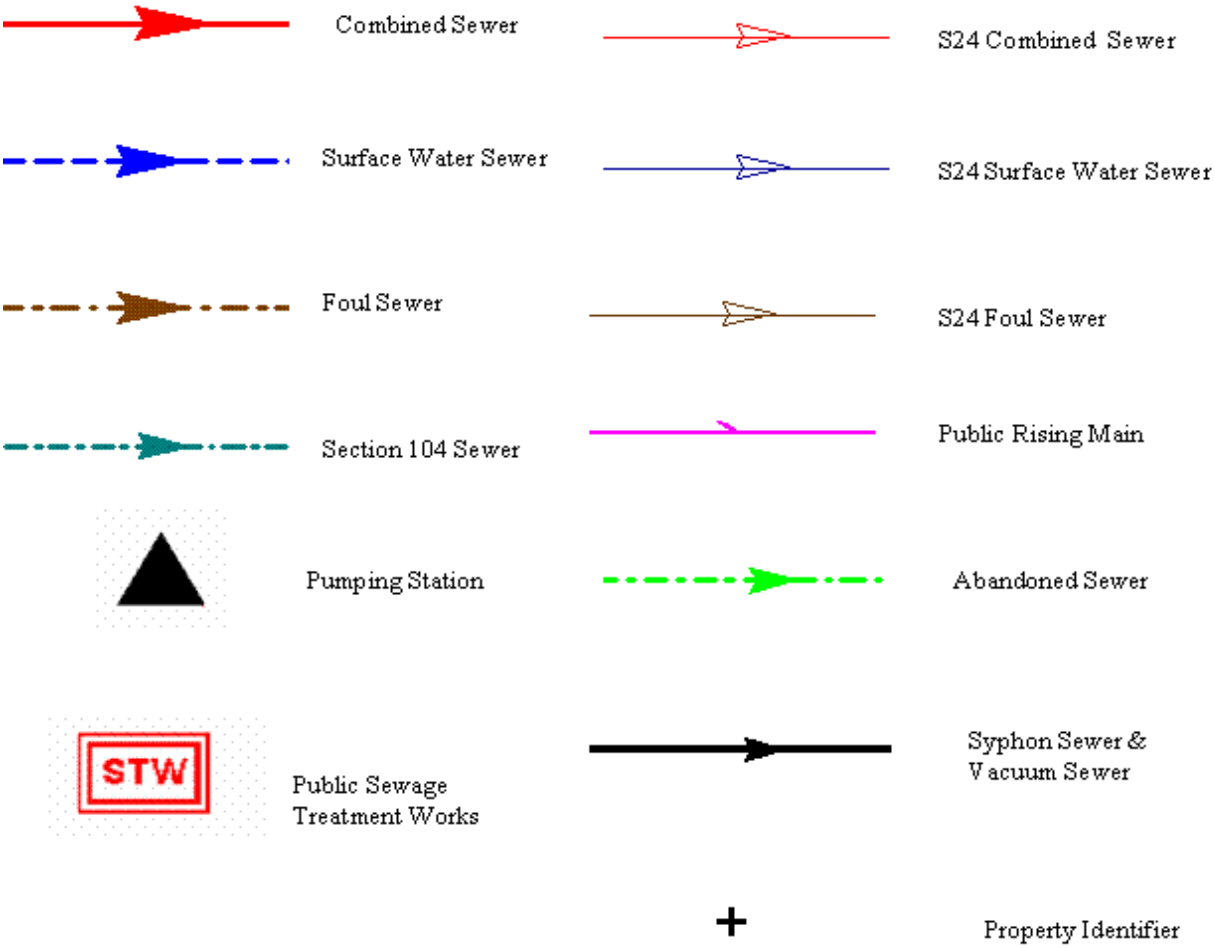
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20. This information is for guidance only and the position and depth of any YW apparatus is approximate only. Likewise, the nature and condition of any YW apparatus cannot be guaranteed. YW has no responsibility for recording the locations of privately owned apparatus. As of 1 October 2011, there may be some lateral drains and/or public sewers which are not documented on YW records but may still be present. For the avoidance of doubt, this information is not a substitute for appropriate professional and/or legal advice. YW accepts no responsibility for any inaccuracy or omissions in this information. The actual position of YW apparatus must be determined on site by excavating trail holes by hand. YW requires a minimum of two working days' written notice of the intention to excavate any trial holes before any excavation can be undertaken. If there are any queries in this respect please contact Yorkshire Water on 0845 124 24 24.

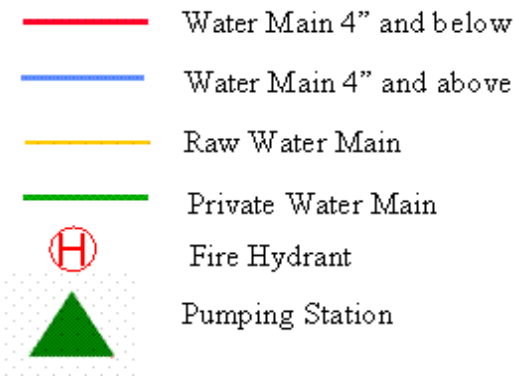
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Sewer Legend



Water Legend



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437833 : 404671	Map Name : SE3704NE	Title

Yorkshire Water,
PO Box 500,
Halifax Road,
Bradford BD6 2LZ
Contact Name :
Ms H Webster
Contact Tel :

Notes

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Partial Key
- Water mains up to 4" in diameter
- Water mains over 4" in diameter
- Raw water mains
- Private water mains

The position and depths of apparatus shown on this plan are approximate only. The exact positions and depths should be obtained by excavation trial holes.

Scale :	1:1250
Drg No :	
Maris No :	
Date Req :	19/06/2015, 12:50:14
Date Gen :	19/06/2015, 12:50:39
Source :	Water Network Enquiry

UPN: Undefined
Originator: H Webster, Safe Move,

Registered Office: Kelda Water Services Limited
Western House, Halifax Road, Bradford BD6 2SZ. Registered in England and Wales No. 2366682

safe-move
A part of YorkshireWater

WOMBWELL LANE

El Sub Sta

Track

Pumping Station

A 633

Depot

Clae-Cott

Ash Haven

Dismantled Railway

Path (um)

ALBA

1
2
3
5
6
7
8
15
23
33
35 to 37
39
40
45
51
24
28
1a
15
11
15a
19
59
61
99
89
FB

51.3m

53.3m

CS

1.89 >> 1.64

2.84 >> 1.551

1.68 >> 2.52

2.82 >> 2.49

2.53 >> 2.49

2.49 >> 2.05

437805 : 404671	Map Name : SE3704NE	Title	Partial Key
	Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : Ms H Webster Contact Tel :	Notes	Foul Sewer = F Combined Sewer = C Surface Water Sewer = SW Trade Sewer = TD Partially Separate = PS
		(Odv) COPYRIGHT STATEMENTS: Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown copyright and database 2014. All rights reserved Ordnance Survey Licence number 100022432	Date Req : 19/06/2015, 12:50:57 Source : Sewer Network Enquiry

This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown.

Date Gen : 19/06/2015, 12:51:04

UPN: Undefined

Originator: H Webster, Safe Move,

APPENDIX F

PROPOSED DRAINAGE DRAWING

PROPOSED DRAINAGE SKETCH

OPTION 1

PERMEABLE PAVED ROAD

PERMEABLE PAVED DRIVEWAYS.

LAYOUT SHOULD ALLOW FOR 5·0m CLEARANCE FROM STRUCTURES

APPROX CL=52·00 IL=50·515

Depot

Ash Haven

WOMBWELL LANE

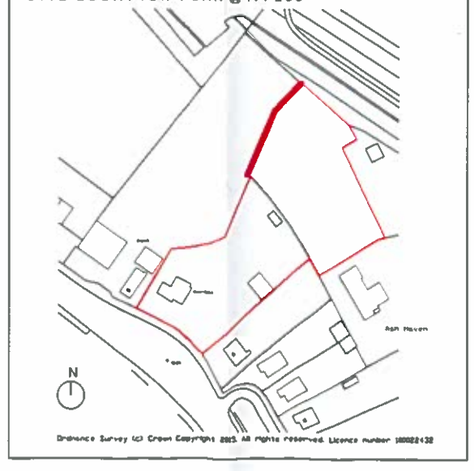
N

KEY

- SOAKAWAY IN FILLED GROUND SUBJECT TO CONTAMINATION TESTING AND PRODUCTION OF ROBUST DETAIL.
- SOAKAWAY SUBJECT TO INFILTRATION TESTING AND CONFIRMATION OF CURRENT LAND TYPE. IF IN FILLED GROUND SEE DESCRIPTION ABOVE.
- SOAKAWAYS TO BE A 5·0m MINIMUM FROM STRUCTURES.
- ALL PERMEABLE PAVING AND SOAKAWAYS SUBJECT TO SATISFACTORY INFILTRATION TESTING.

— · — · PROPOSED FOUL SEWER. SUBJECT TO SUITABLE LEVELS

SITE LOCATION PLAN @ 1:1 250



MARKED UP BY JNP GROUP.

PLANNING APPLICATION

Space

Ashmount Homes Ltd

Residential Development on Land at 41 Wombwell Lane Barnsley S70 3NR

Site Layout Plan and Site Location Plan

Scale @ A1	Scale @ A3	Date	Drawn	Checked	Drawing Number	Revision
1:250	1:500	01.03.13	MJD	mjd	13.010(P-)001	

PROPOSED DRAINAGE SKETCH

OPTION 2

KEY:

SURFACE WATER SEWER WITH ATTENUATION FOR 1IN 100 YR + CC EVENT.

PROPOSED FOUL SEWER @ MINIMUM 1:80

ATTENUATION UNDER ROAD TO ACCOMODATE 124m³ APPROX.

APPROX CL 52.000 IL 50.575

Depot

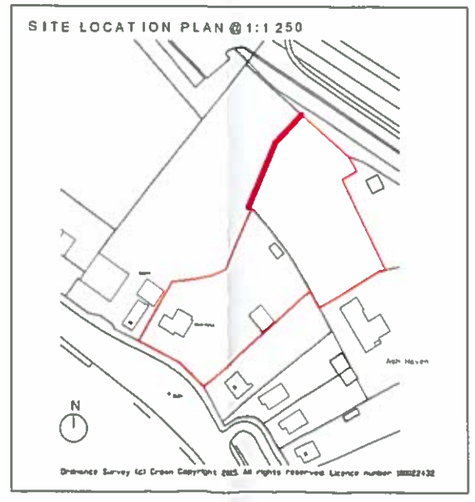
Ash Haven

EX MH CL 51.27 IL 49.45 TBC.

WOMBWELL LANE

N

SITE LOCATION PLAN @ 1:1250



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PLANNING APPLICATION

Space

Ashmount Homes Ltd

Residential Development on Land at 41 Wombwell Lane Barnsley S70 3NR

Site Layout Plan and Site Location Plan

Scale @ A1	Scale @ A3	Date	Sheet	Checked	Drawing Number	Revision
1:250	1:500	01.08.15	mp3	mp3	15.5140(P)-3001	

APPENDIX G

SURFACE WATER CALCULATION SHEETS

The existing site has a building with down pipes which connect into the existing drainage system. (to be confirmed by CCTV).

It is proposed to reuse this connection with a reduced discharge rate of 70% of the existing.

Existing outfall rate.

Using modified Rational Method

$Q = 2.78CiA$ where

Q = design peak runoff l/s

C = non-dimensional runoff coefficient

i = rainfall intensity (50mm/hr)

A = total catchment area being drained (ha)

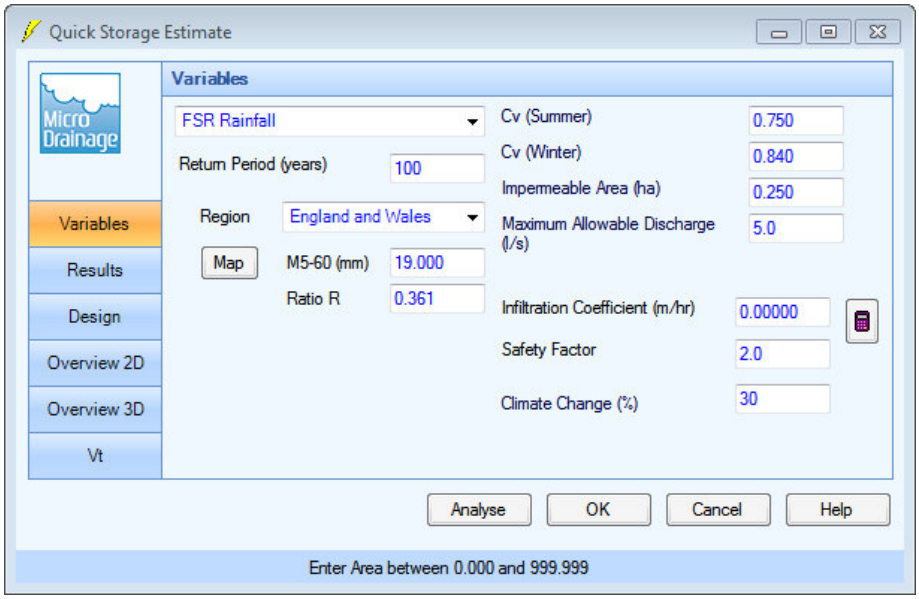
$Q = 2.78 \times 1 \times 50 \times 0.01$

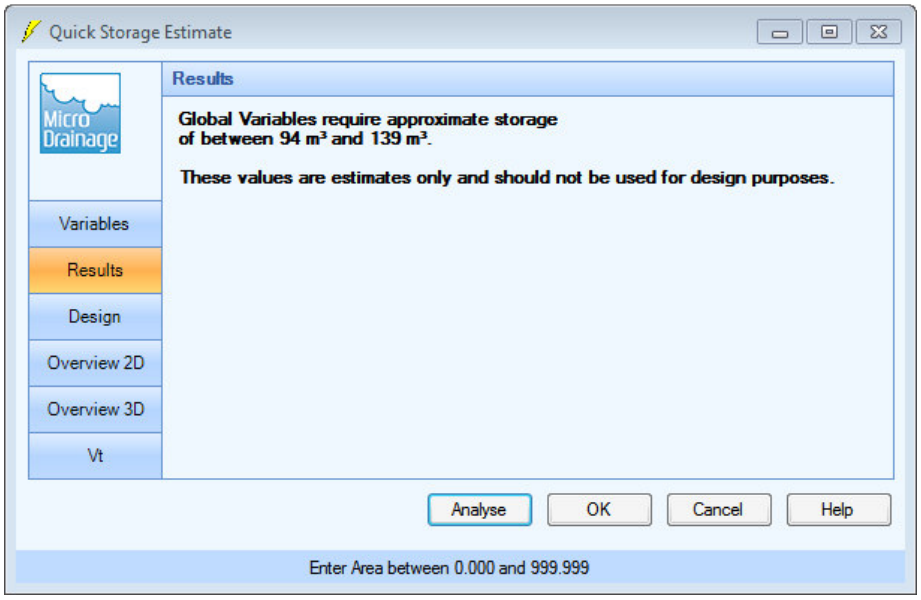
$Q = 1.39$ l/s.

Due to flow restrictors being susceptable to blockage @ low rates, round up allowable discharge rate to 5l/s.

Appendix F

Quick Storage Estimate





Take 2/3rds of the difference between the upper and lower limit and add this to the lower limit to get an approximate volume of storage.

Volume for storage = 124m³

ICP SUDS Mean Annual Flood

Input

Return Period (years)	2	Soil	0.300
Area (ha)	0.490	Urban	0.000
SAAR (mm)	793	Region Number	Region 3

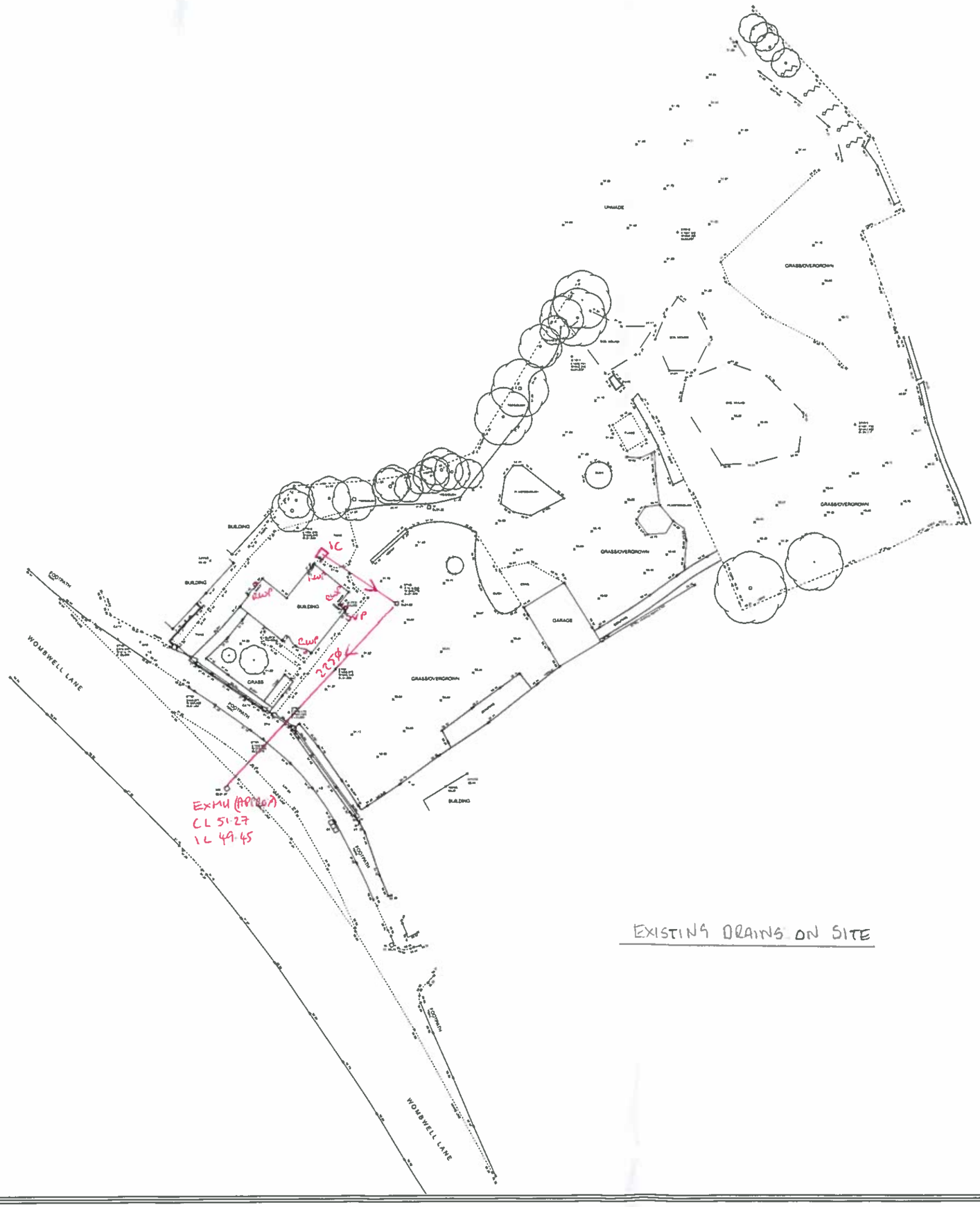
Results l/s

QBAR Rural	1.0
QBAR Urban	1.0
Q2 years	1.0
Q1 year	0.9
Q30 years	1.8
Q100 years	2.1

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APPENDIX H

EXISTING DRAINAGE PLAN



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INDICATIVE ONLY

KEY

NOTES

ALL LEVELS RELATE TO OSBM VALUE 42.873M LOCATED ON AN ELEC SUB-STATION OPP 220 WOMBWELL LANE. ROTATED APPROXIMATELY NORTH. CO-ORDINATES TO AN ARBITRARY GRID.

SCALE = 1:200

SURVEY SITE SERVICES

CHARTERED SURVEYORS
CHARTERED CIVIL ENGINEERS

Survey and Site Services
Francis Jordan House
Wellington Street
Barnsley
South Yorkshire. S70 1SW
Tel and Fax (01226) 289177

Client
THE CLIENT

Drawing Title
TOPOGRAPHICAL SURVEY

Site Address
WILLIAM GOSNEY LIMITED
WOMBWELL LANE
BARNSLEY

Surveyed WHd	Processed JW	Drawn JW	Checked WHd
Drg.No. 8404/S/1		Date 18.04.09	

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