

H DR N H H N  
UN HM N RM H  
D N H DR UR  
R MN

R R D NR P D  
D P N R H N N H  
M P N

R N D UN R R  
D R NDR M H R  
R N RD R N R N  
R M R R

R DN N R ---  
MP MN NDR ---

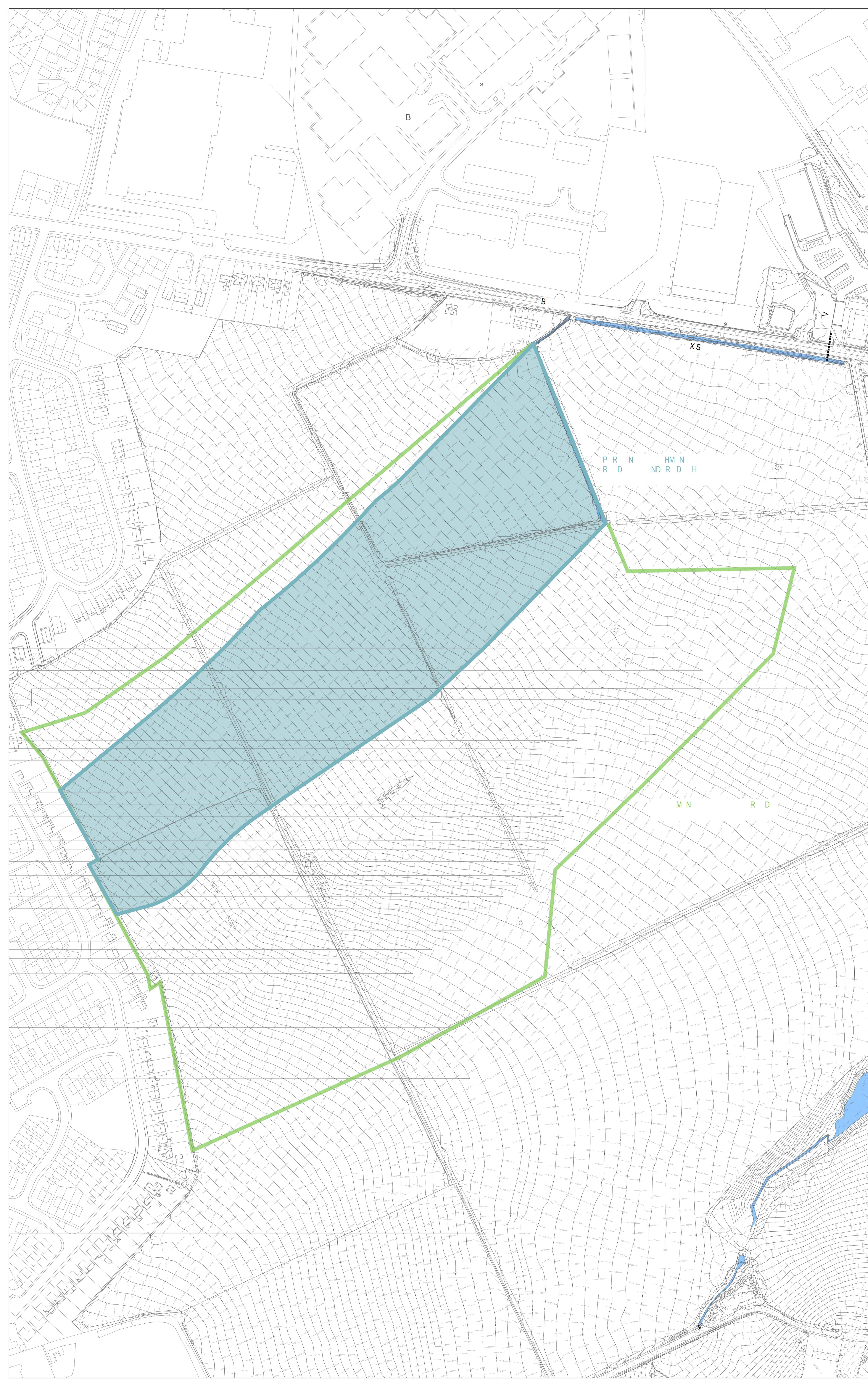


S S B S Y S

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0 0 0



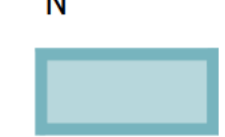
H DR N H H N  
 UN HM N RM H  
 D N H DR UR  
 R MN

R R D NR P D  
 D P N R H N N H  
 M P N

R N D UN R R  
 D R NDR M H R  
 R N RD R N R N  
 M R R

R R D  
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PR MN NDR  
 D H P D N



PR N HM N  
 R D NDR D H

MN R D

S S B S Y S

B S Y S

V S Y

0 0 0

Calculated by:	Nick Dunwoodie
Site name:	Claycliffe Business Park Catchment
Site location:	Barnsley West

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra 2015) This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

## Site Details

Latitude:	53 56045° N
Longitude:	1 52195° W
Reference:	1277760564
Date:	Oct 02 2023 15:33

Runoff estimation approach

## Site characteristics

Total site area (ha):

## Methodology

$Q_{BAR}$ estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

## Notes

(1) Is  $Q_{BAR} < 2.0$  l/s/ha?

When  $Q_{BAR}$  is  $< 2.0$  l/s/ha then limiting discharge rates are set at 2.0 l/s/ha

## Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates  $< 5.0$  l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

## Hydrological characteristics

	Default	Edited
SAAR (mm):	696	696
Hydrological region:	3	3
Growth curve factor 1 year:	0.86	0.86
Growth curve factor 30 years:	1.75	1.75
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is  $SPR/SPRHOST \leq 0.3$ ?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

## Greenfield runoff rates

Default Edited

$Q_{BAR}$ (l/s):	27 05	27 05
1 in 1 year (l/s):	23 26	23 26
1 in 30 years (l/s):	47 33	47 33
1 in 100 year (l/s):	56 26	56 26
1 in 200 years (l/s):	64 1	64 1

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at [www.uk-ud.com](http://www.uk-ud.com). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [www.uk-ud.com/terms-and-conditions.htm](http://www.uk-ud.com/terms-and-conditions.htm). The output from this tool are estimates of greenfield runoff rate. The use of the results is the responsibility of the user of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydro-olution or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Calculated by:	Nick Dunwoodie
Site name:	Claycliffe Road Catchment
Site location:	Barnsley West

## Site Details

Latitude:	53 56045° N
Longitude:	1 52195° W
Reference:	2860699555
Date:	Oct 02 2023 15:32

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra 2015) This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Runoff estimation approach

## Site characteristics

Total site area (ha):

## Methodology

Q <sub>BAR</sub> estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

## Notes

(1) Is  $Q_{BAR} < 2.0$  l/s/ha?

When  $Q_{BAR}$  is  $< 2.0$  l/s/ha then limiting discharge rates are set at 2.0 l/s/ha

## Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates  $< 5.0$  l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

## Hydrological characteristics

	Default	Edited
SAAR (mm):	696	696
Hydrological region:	3	3
Growth curve factor 1 year:	0.86	0.86
Growth curve factor 30 years:	1.75	1.75
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is  $SPR/SPRHOST \leq 0.3$ ?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

## Greenfield runoff rates

Default Edited

$Q_{BAR}$ (l/s):	104.21	104.21
1 in 1 year (l/s):	89.62	89.62
1 in 30 years (l/s):	182.36	182.36
1 in 100 year (l/s):	216.75	216.75
1 in 200 years (l/s):	246.97	246.97

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Calculated by: Nick Dunwoodie

Site name: Claycliffe Ditch Catchment

Site location: Barnsley West

## Site Details

Latitude: 53 56045° N

Longitude: 1 52195° W

Reference: 1604563342

Date: Oct 02 2023 16:03

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra 2015) This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Runoff estimation approach: IH124

## Site characteristics

Total site area (ha): 7.78

## Methodology

$Q_{BAR}$  estimation method: Calculate from SPR and SAAR

SPR estimation method: Calculate from SOIL type

## Notes

(1) Is  $Q_{BAR} < 2.0$  l/s/ha?

When  $Q_{BAR}$  is  $< 2.0$  l/s/ha then limiting discharge rates are set at 2.0 l/s/ha

## Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates  $< 5.0$  l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

## Hydrological characteristics

	Default	Edited
SAAR (mm):	696	696
Hydrological region:	3	3
Growth curve factor 1 year:	0.86	0.86
Growth curve factor 30 years:	1.75	1.75
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is  $SPR/SPRHOST \leq 0.3$ ?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates	Default	Edited

$Q_{BAR}$ (l/s):	37.31	37.31
1 in 1 year (l/s):	32.09	32.09
1 in 30 years (l/s):	65.29	65.29
1 in 100 year (l/s):	77.6	77.6
1 in 200 years (l/s):	88.42	88.42

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Calculated by:	Nick Dunwoodie
Site name:	Redbrook Catchment
Site location:	Barnsley West

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

## Site Details

Latitude:	53 56045° N
Longitude:	1 52195° W
Reference:	2732673640
Date:	Oct 03 2023 15:22

## Runoff estimation approach

IH124

## Site characteristics

Total site area (ha): 41.222

## Methodology

$Q_{BAR}$ estimation method:	Calculate from SPR and SAAR
SPR estimation method:	Calculate from SOIL type

## Notes

(1) Is  $Q_{BAR} < 2.0$  l/s/ha?

When  $Q_{BAR}$  is  $< 2.0$  l/s/ha then limiting discharge rates are set at 2.0 l/s/ha

## Soil characteristics

	Default	Edited
SOIL type:	4	4
HOST class:	N/A	N/A
SPR/SPRHOST:	0.47	0.47

(2) Are flow rates  $< 5.0$  l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

## Hydrological characteristics

	Default	Edited
SAAR (mm):	696	696
Hydrological region:	3	3
Growth curve factor 1 year:	0.86	0.86
Growth curve factor 30 years:	1.75	1.75
Growth curve factor 100 years:	2.08	2.08
Growth curve factor 200 years:	2.37	2.37

(3) Is  $SPR/SPRHOST \leq 0.3$ ?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

## Greenfield runoff rates

Default Edited

<b>Q<sub>BAR</sub> (l/s):</b>	197 68	197 68
<b>1 in 1 year (l/s):</b>	170 01	170 01
<b>1 in 30 years (l/s):</b>	345 95	345 95
<b>1 in 100 year (l/s):</b>	411 18	411 18
<b>1 in 200 years (l/s):</b>	468 51	468 51

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at [www.uk-ud.com](http://www.uk-ud.com). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at [www.uk-ud.com/terms-and-conditions.htm](http://www.uk-ud.com/terms-and-conditions.htm). The output from this tool are estimates of greenfield runoff rate. The use of the results is the responsibility of the user of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydro-olution or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

## Appendix 4 – Yorkshire Water



YorkshireWater

**Mr J Millar**  
**JPG Consulting Engineers**  
**5 John Charles Way**  
**Leeds**  
**LS12 6QA**



**Yorkshire Water Services**  
**Developer Services**  
**Pre-Development Team**  
**PO BOX 52**  
**Bradford**  
**BD3 7AY**

**Tel: 0345 120 8482**

**Fax:**

**Your Ref:**

**Our Ref: X001148**

**Email:**

**technical.sewerage@yorkshirewater.co.uk**

**For telephone enquiries ring:  
Chris Roberts on 0345 120 8482**

**3rd February 2021**

Dear Mr Millar,

**Land Between Baugh Green & Higham Common, Barnsley, S75 2RW – Pre-Planning Sewerage Enquiry U111900 (MIXED)**

Thank you for your recent enquiry. Our charge of £157.00 will be added to your account with us, reference JPG027. You will receive an invoice for your account in due course.

Please find enclosed a complimentary extract from the Statutory Sewer Map which indicates the recorded position of the public sewers. Please note that as of October 2011 and the private to public sewer transfer, there are many uncharted Yorkshire Water assets currently not shown on our records. The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site and are valid for a maximum period of twelve months:



## **Existing Infrastructure**

The local Waste Water Treatment Works (WWTW) is Lundwood. It is understood that this WWTW may only have limited spare capacity, if any, available. We have contacted the respective treatment team for more information regarding the impact of proposed development and will contact you when an assessment has been made.

## **Foul Water**

Development of the site should take place with separate systems for foul and surface water drainage. The separate systems should extend to the points of discharge to be agreed.

The closest practicable point of discharge for foul will be the 600 mm combined public sewer in Baugh Green Road, but at present there is no spare capacity available to accept the foul discharge from all the proposed development. Further investigation in the form of modelling, at the developers cost, will be required to understand the impact on the public sewer network along with a build programme of the development. Please contact us on the above number to discuss this further.

Foul water from kitchens and/or food preparation areas of any restaurants and/or canteens etc. must pass through a fat and grease trap of adequate design before any discharge to the public sewer network.

## **Surface Water**

The developer's attention is drawn to Requirement H3 of the Building Regulations 2000. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SuDS), for example the use of soakaways and/or permeable hardstanding etc, may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SuDS in this instance from the appropriate authorities.



It is understood that all surface water will discharge to watercourses located on the site. This appears to be the obvious place for surface water disposal (if SuDS are not viable). Please note Yorkshire Water cannot provide plans of culverted watercourses or highway drains. To obtain plans please contact the Lead Local Flood Authority for more details.

Please note further restrictions on surface water disposal from the site may be imposed by other parties. You are strongly advised to seek advice/comments from the Environment Agency/Land Drainage Authority/Internal Drainage Board, with regard to surface water disposal from the site.

Surface water run-off from communal parking (greater than 800 sq metres or more than 50 car parking spaces) and hardstanding must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the traditional 'stage' or full retention type of interceptor/separator. It is good drainage practice for any interceptor/separator to be located upstream of any on-site balancing, storage or other means of flow attenuation that may be required.

### **Other Observations**

Any new connection to an existing public sewer will require the prior approval of Yorkshire Water. You may apply on line or obtain an application form from our website ([www.yorkshirewater.com](http://www.yorkshirewater.com)) or by telephoning 0345 120 84 82.

Under the provisions of section 111 of the Water Industry Act 1991 it is unlawful to pass into any public sewer (or into any drain or private sewer communicating with the public sewer network) any items likely to cause damage to the public sewer network interfere with the free flow of its contents or affect the treatment and disposal of its contents. Amongst other things this includes fat, oil, nappies, bandages, syringes, medicines, sanitary towels and incontinence pants. Contravention of the provisions of section 111 is a criminal offence.



An off-site foul and surface water sewer may be required which may be provided by the developer and considered for adoption under Section 104 of the Water Industry Act 1991. Please telephone 0345 120 84 82 for advice on sewer adoptions. Alternatively, the developer may in certain circumstances be able to requisition off-site sewers under Section 98 of the Water Industry Act 1991 for which an application must be made in writing. For further information, please telephone 0345 120 84 82.

Prospectively adoptable sewers and pumping stations must be designed and constructed in accordance with the WRc publication "Sewers for Adoption - a design and construction guide for developers" 6th Edition as supplemented by Yorkshire Water's requirements, pursuant to an agreement under Section 104 of the Water Industry Act 1991. An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our Developer Services Team (telephone 0345 120 84 82) for further information.

The site is within an area that may be affected by river, coastal or estuarine flooding. We would advise you to contact the Environment Agency for details.

Yorkshire Water's Trade Effluent team must be consulted in respect of any proposed trade effluent discharge to the public sewer.

All the above comments are based upon the information and records available at the present time and is subject to formal planning approval agreement. The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level of any public sewers affecting your proposals before the commencement of any design work.

Yours sincerely

**Chris Roberts**  
**Development Services Technician**