OAKWELL COMMUNITY ASSETS - SITE AT GROVE ST, BARNSLEY
DRAINAGE STATEMENT

Introduction

LK Consult has been asked to produce a report on drainage issues affecting this site for Oakwell Community Assets. The site is situated on the east side of Barnsley and is associated with Barnsley FC grounds at Oakwell (NGR 435260, 406125). It lies to the south-west of the River Dearne, which flows north-west. The area of the site is approximately 0.5 ha. The site falls evenly from north to south with a slight cross-fall to the east. The eastern boundary falls sharply down to a new development at lower level. The surface is all tarmac and is provided with formal drainage.

Information Supplied and Gathered

Information supplied by the Client
The site is within the 'site edged red' on the attached 1:1250 scale plan from Barnsley MBC, which is marked up to show the approximate location of Sough Dyke watercourse. Also supplied was correspondence with Yorkshire Water and Barnsley MBC Drainage Engineer detailed below. The attached development plan shows the proposals for construction of twelve dwellings with access from Grove Street.

Site visits
A site visit was undertaken on 6 November 2009 specifically to note the hydrology, local falls, threshold levels of existing and recently-constructed buildings and the relationship between the site, adjacent properties, and the accesses. Attempts were made to locate the large water main and 'Sough Dyke' surface water culvert by visible features, but none was found.

Environment Agency
Flood risk data was not requested from the Environment Agency (EA) as the site does not appear to be at any risk of flooding. An extract from the EA web-based flood mapping is attached for reference and shows the approximate extent of the flood zone.

The site is shown on the Environment Agency's (EA) website flood zone mapping as being within Flood Zone 1 – Low risk – annual probability of flooding less than 1 in 1,000. A flood Risk Assessment (FRA) will not therefore be required from a flooding perspective and Sequential Test evidence for development should not be required.

The Groundwater Source Protection Zone (GSPZ) and Aquifer information was accessed on the EA website. The site is located outside any source protection zone and over a 'Secondary A' bedrock aquifer (previously designated Minor Aquifer) and therefore infiltration methods should not be constrained provided ground permeability is suitable and there is no significant ground contamination.

The following comprises a summary of the usual EA guidance that would apply to this site:

- The EA will need to be consulted with the detail of drainage issues and would need to be contacted for permission to discharge any surface water to watercourse or to soakaway.
- It is very likely that they will require the maximum rate of runoff to be restricted to no more than the existing runoff rate (and may require a target reduction of around 30%), by infiltration and/or attenuation.

Local Council
Barnsley Metropolitan Borough Council (MBC) was consulted in the course of this appraisal. They confirm that there is no known history of flooding on the site. Correspondence was exchanged with Steve Kilner (Drainage and Highways Engineer) in an attempt to more closely define the location of Sough Dyke. They have provided guidance for developers for the design and consent of surface water discharges (attached). In summary, runoff must be constrained to the greenfield rate unless it can be shown that there is an existing discharge, in which case a 30% reduction on the existing rate is required. They require a 'stand off' from Sough Dyke of 6m for any development. A summary of correspondence is attached.

Drainage Undertaker
Yorkshire Water was contacted previously and as part of this assessment. They state that a public sewer crosses the southern part of the site, and a 450mm diameter water main passes up the eastern side of the site. They will not permit building within 5m of either the water main or the surface water culvert (Sough Dyke). They also require that the development is drained on a 'separate' system and that surface water is excluded as far as possible from the foul sewer system. A site surface water sewer has not been identified that may take the runoff from the existing impermeable area. Although it is probable that the ultimate destination is Sough Dyke, this has not been proven. Relevant correspondence is appended.

Barnsley Football Club
Club management and their designers were contacted for records of existing drainage but none could be located. It is thought that drainage information may be available in archives.

Discussion and Summary of Issues

Flooding Issues
The site is not at flood risk from rivers or local watercourses. The proposed development will not be constrained by flood risk.

Building habitable floor level and site level
Since the site is not at risk of fluvial flooding there is no requirement for freeboard above likely flood levels. However, it is prudent in design to allow for the possibility of overland flow or ponding due to problems of sewer overload or blockage, possibly off-site, and avoid low-spots in ground profile and set building floor levels nominally above local ground levels.

Surface Water Drainage
Surface Water drainage should be designed taking into account the requirements of Sustainable Drainage Systems (SuDS) guidance. Yorkshire Water will not allow any surface water from the site into their sewerage system. Permission from the EA will be required to discharge to watercourse or soakaway, and they will require flows to be reduced and/or attenuated at least to the current runoff or 'greenfield' runoff rate from the site, as appropriate. Installation of soakaways may be possible, but is constrained by the need to site them at least 5m away from buildings, and feasibility is determined by GSPZ and groundwater vulnerability requirements, ground conditions (including any contamination), permeability and local water table. It is therefore wise to assume for now that some attenuation may be required for runoff from roofs, roads and hardstandings before discharge. Treatment by interceptor should not be necessary for runoff from roofs. Site features may be designed to reduce total runoff.

Soakaway feasibility can be assessed by infiltration testing once ground contamination has been investigated. We have assessed the likely attenuation volumes required for the site, based on 70% impermeable area similar to the intended development, and with 5 l/s outflow limitation (as Barnsley MBC guidance). There are two cases to consider, depending on whether it can be proven that the existing drainage discharges to a surface water sewer or watercourse.

In the worst case, if it cannot be shown, and the site is required to be attenuated to the 'greenfield' rate, then 150 cu m would be required for the 30-year event, which should be stored below ground or in swales/ponds, and an additional 50 cu m would be required for the 100-year event, which could be accommodated temporarily in roads, gardens and parking areas if required. If a suitable existing connection can be proven, then these volumes will be reduced, possibly to zero, if total runoff is sufficiently reduced due to the development.

Foul drainage
Yorkshire Water have stated that foul water may discharge to the foul/combined sewer recorded in Pontefract Road approx 15m from the site or to the combined sewer network in Grove street. At the time of consultation in 2006 they note that there is insufficient treatment capacity but that improvements are programmed for 2008.

It has not yet been determined whether the whole site will drain by gravity to the public sewer network. If it is found that the site or part of site will not drain by gravity, then a sewage pumping station will be required to facilitate connection. Yorkshire Water further states that the rate of foul water discharge from

the development to the public sewer network should be restricted to a maximum of 8l/s. The development of 12 houses is expected to require a water supply, and therefore produce a sewage discharge, of approximately 6.5 cu m per day based on occupancy of three persons per property and consumption of 180 litres per person per day. Peak discharge rate is expected to be less than 1.0l/s.

Water Supply
Yorkshire water has stated that an adequate potable water supply is available in Pontefract Road.

Physical Constraints
The main constraints to developable area on this site are the presence of the culverted watercourse (Sough Dyke) and the 450mm diameter water main. Sough Dyke has been located as closely as possible on the site without intrusive investigations. The 450mm dia water main could not be located by ground features but may be located by a specialist services company using non-intrusive methods if a signal can be impressed on the pipe at, say, a valve or hydrant box. Attached is a site plan (not to scale) marked to show the effective sterilised area that then results, and which has been used for masterplanning. The areas affected have been retained as match parking.

Summary

- The site is in Flood Zone 1 and a site specific FRA will not be required
- Sequential and Exception Test evidence should not therefore be required
- Use of soakaways for rainwater disposal should be investigated.
- There should be a reduction of around 30% in surface water runoff.
- Attenuation of surface water runoff may be required before discharge.
- Permission for surface water disposal will be required from the EA.
- A potable water supply and foul drainage connection should be available.
- The water main and Sough Dyke are avoided by the development.

This report has been supplied by LK Consult to inform the Client during his site development process and to support an application for planning consent. For further explanation of anything herein please contact Phil Hunter at this address, or on p.hunter@thelkgroup.com.

For and on behalf of LK Consult



JM Philip Hunter
Associate

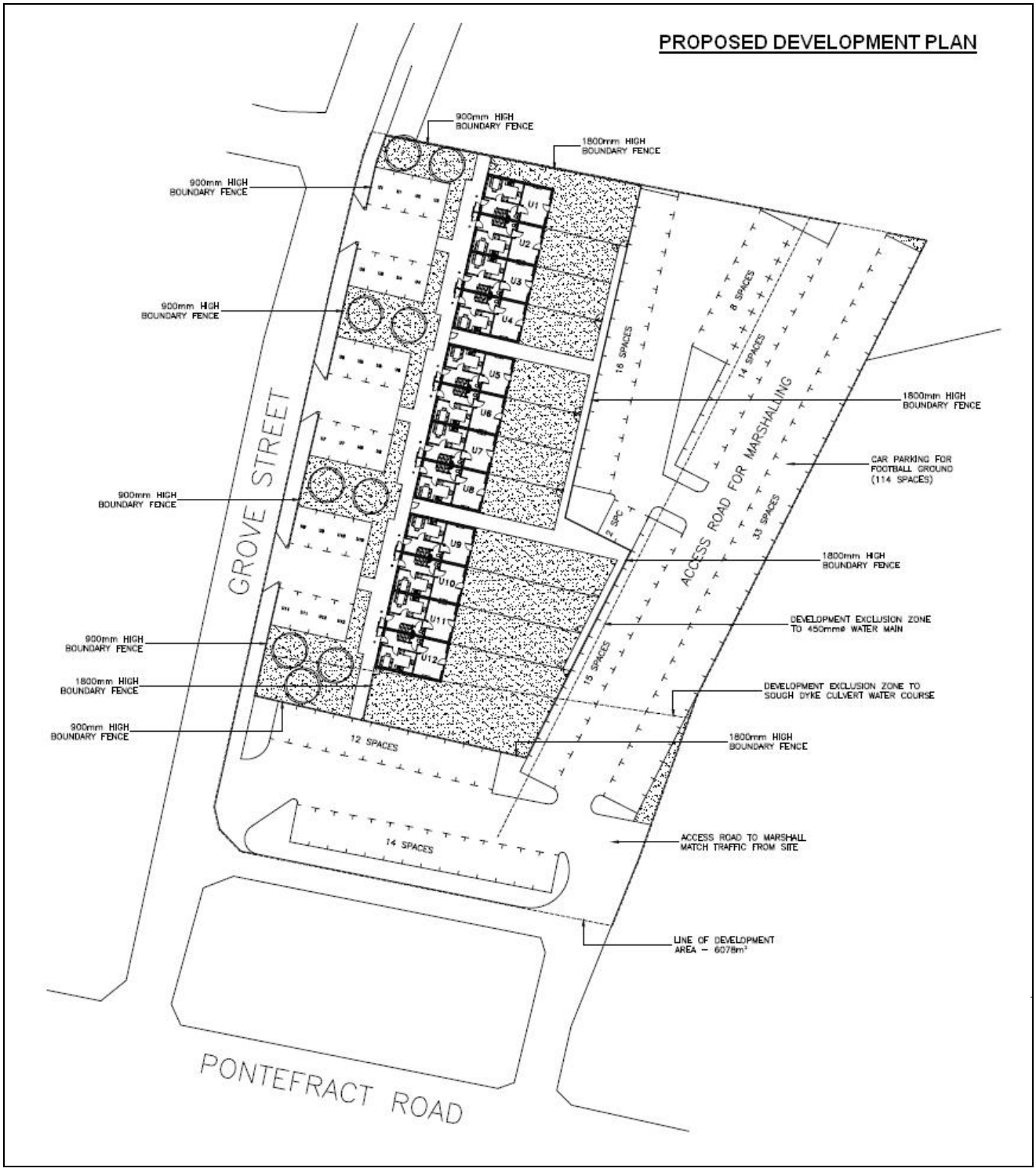
Attachments:
Location Plan and Flood zones
Land in same ownership
Site plan with approx alignment of Sough Dyke
Sough Dyke – derivation of likely position
Sough Dyke and Water Main – likely positions and stand-off areas
Email Correspondence with Barnsley MBC
YW Correspondence

Location Plan and Relation to Flood Zones



GROVE STREET, BARNSLEY

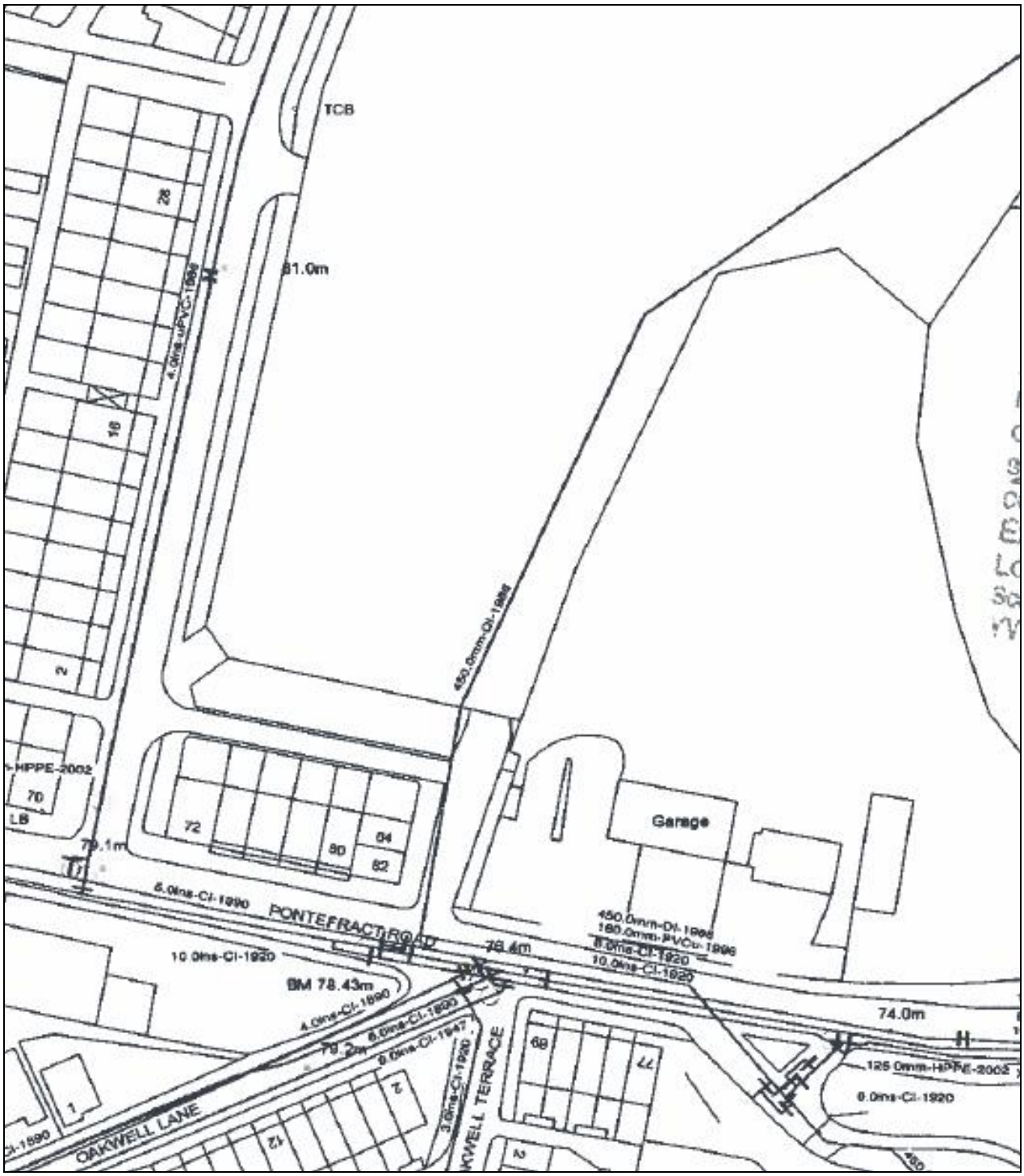
DRAINAGE STATEMENT



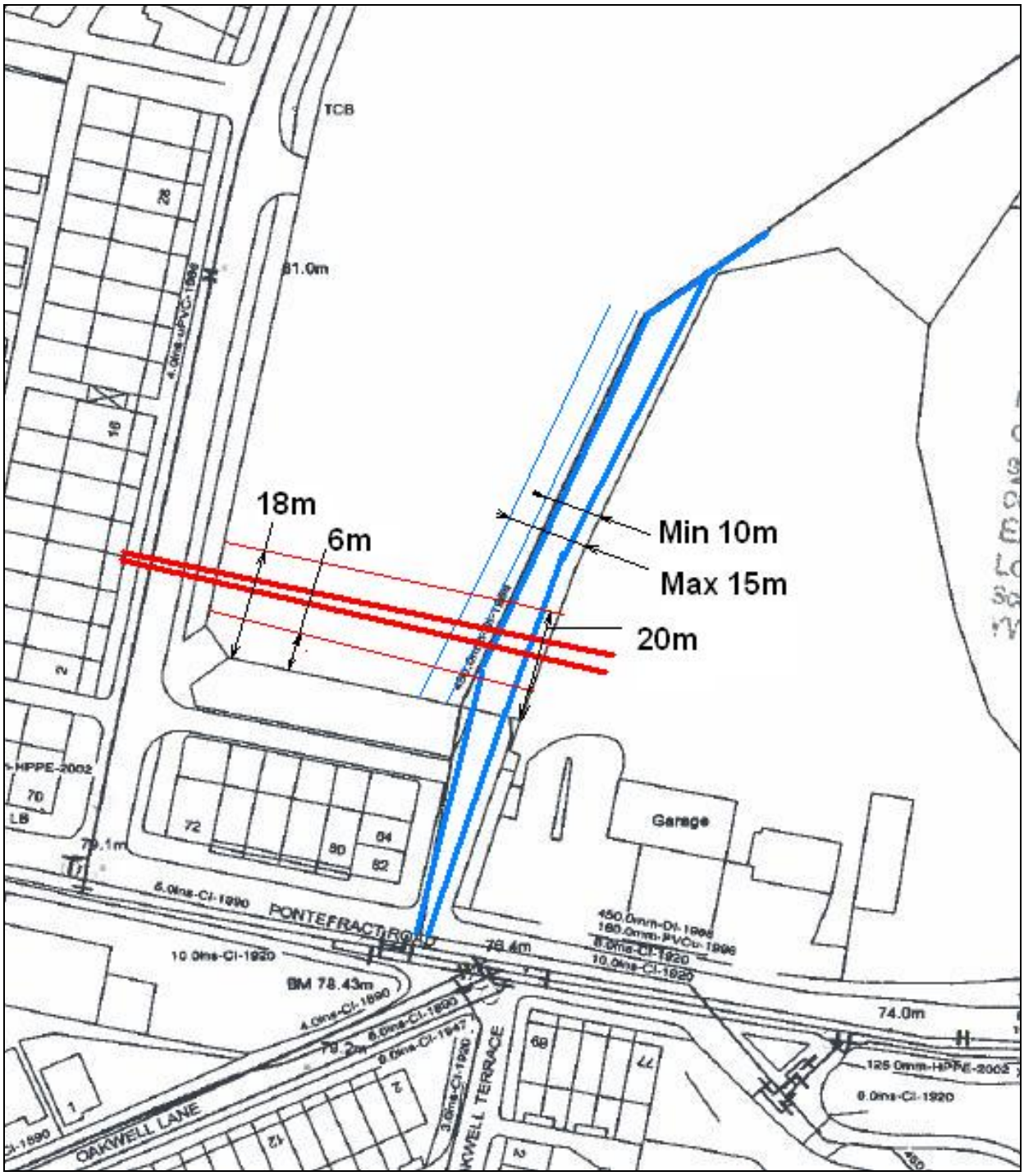
Derivation of Sough Dyke Alignment



Extract from Yorkshire Water Services Mapping



Services Best Alignment Estimates and Consequent Sterilised Areas



(not to scale)

EDITED EMAIL CORRESPONDENCE WITH BARNSLEY MBC

From: Kilner , Steve [mailto:SteveKilner@barnsley.gov.uk]
Sent: 10 February 2010 12:11
To: Phil Hunter
Subject: RE: Request for information: FRA

Phil, I attach a scan of a plan we prepared fro works undertaken in Beevor Court showing the location of Sough Dyke through the complex. You can se that threw are a couple of manholes located on it and it gives a scale of the location from Pontefract Road. This is given in good faith and BMBC can accept no liability in the event of any inaccuracy.

You are right that it will not be in a straight line; traditionally they were constructed to follow the original course of the open stream.

The case officers in both planning and Building Control have now left our employment, but a good starting point would be the following officers:

davidmurdoch@barnsley.gov.uk (Building Control)

joejenkinson@barnsley.gov.uk (Planning Development Control)

Be aware that Planning would have taken advice from the Environment Agecny, contact details provided in my email 03/02/2010.

Regards

Steve Kilner

Policy, Programming, Drainage and Highways Engineer
Development Directorate
Highways, Engineering and Waste Management

From: Phil Hunter [mailto:P.Hunter@thelkgroup.com]
Sent: 04 February 2010 16:44
To: Kilner , Steve
Subject: RE: Request for information: FRA

Steve

Pls ignore the prev.....
I've had a closer look at this and can't get a straight line, or anything like, out of it!

I've found an historic map which shows a watercourse parallel to Pontefract Rd from when the site was a colliery.
I suspect the sough follows the alignment, and so must bend to suit.

I'll investigate ground radar or MR as a possibility to position on site.

Do you have a contact in planning or building control who may have info from the recent apartments to the east?
I would have thought they would have had to place it reasonably accurately, and it is shallower there.

Thanks

Phil

JM Philip Hunter

Associate

From: Phil Hunter
Sent: 04 February 2010 15:50
To: 'Kilner , Steve'
Subject: RE: Request for information: FRA

Thanks very much Steve for the useful info.
So it must pass under No10 Grove St, or close by?

I don't think it will be necessary to drag you out on site at this stage thanks.

However, it would be useful to get an approx distance from Pontefract Rd at Beevor Court. Could you give me your best guess from kerbline or back of footpath? Or alternatively, stand-off from the offices?

I'm thinking of constructing a 'confidence' band through the site based on the houses in Market Close (as they must be >5m off line), the new development to the east, and the approx location at the council offices.
Assuming of course that the sough is straight!

Regards

Phil

From: Kilner , Steve [mailto:SteveKilner@barnsley.gov.uk]
Sent: 03 February 2010 08:29
To: Phil Hunter
Cc: Lesley Slaney; Atkins , Wayne
Subject: RE: Request for information: FRA

Hi Phil,

You are correct in that Sough Dyke passes through the gap in the houses between 10/16 Market Close. It was part of the Planning consent that this gap was left to protect the structure of the culvert and allow future access for maintenance. Same condition was applied for the new development to the east.

The only manhole chamber in the area I am aware of is in the back road at the rear of Osborne House/34 Pontefract Road to the west. There are no further manholes on the culvert until you reach the access road to Beevor Court Council offices. The culvert is very shallow through the woods before this point and used to be visible from the surface.

This information is based on my local knowledge of the watercourse which I have been involved with over a number of years, and I am happy to meet on site to show you the locations. Frankly we will struggle to get a better fix than the rough line (drawn by me) on the plan you attached.

I am aware that the EA carried out a detailed condition survey, and would recommend that you contact their local officer lesley.slaney@environment-agency.gov.uk for who may have some more info. Lesley is new to the area and may well involve me as the fountain of all local knowledge, which of course I am happy to do.

Hope this helps.

Regards

Steve Kilner

Principal Engineer
Policy and Programming, Drainage and Highways

From: Phil Hunter [mailto:P.Hunter@thelkgroup.com]
Sent: 28 January 2010 14:27
To: Kilner , Steve
Subject: FW: Request for information: FRA
Importance: High

Steve

Called but I understand you are in a meeting.

Catherine has copied me your response below (for which, many thanks) regarding Sough Dyke, which crosses the car park in front of the football club.

We are trying to place the alignment more accurately and I wondered if you had any fixed points on record, like manhole covers, that we could use.

I have had a wander around and see there are manhole covers in the footpath on Grove St and just within the eastern boundary of the site about on the attached approx alignment. Do you know if these service the Dyke?

However, I have recently spoken to Steve Woodcott, who thinks the Dyke may come down the gap in the houses on Grove St (which would make sense), which is a lot further north.

I spoke to some guys on the housing development site just to the east and they thought it had been located under their new car-park, and I'm told there is a cover in the wooded area further east again close to the council offices, but I couldn't find that. Would Building Control have any records for the adjacent site?

Any assistance gratefully accepted!

Thanks

Phil

JM Philip Hunter

From: Kilner , Steve [mailto:SteveKilner@barnsley.gov.uk]
Sent: 19 November 2009 09:03
To: Catherine Laverick
Cc: Lesley Slaney; Atkins , Wayne
Subject: FW: Request for information: FRA
Importance: High

Dear Catherine,

Derek Bell has passed this email to me as the most suitable person to make a response. I attach for your information a copy of our standard document outlining the approach we usually require for drainage discharges to ordinary watercourses in our area.

I would comment on your two sites as follows

Area No1 (north of Belgrave Road)
I am not aware of nor have any records of flooding from any source for this area. I am aware that the area is not metalled and currently has no formal drainage system. Therefore for the purposes of your study, this area should be regarded as a green field site.

Area 4 (car park to the east of Grove Street)
I am not aware of nor have any records of flooding from any source for this area. Even though the area is fully metalled, I have no details of any drainage system to which surface water discharges. The area is crossed some 15 metres from the southern Boundary by Sough Dyke (pronounced Sow Dyke). This is a Critical Ordinary Watercourse which has the status of a main river, and as such is under the control of the Environment Agency. I note that you are to contact the EA as part of your information gathering process. I trust they will make appropriate comments with respect to any flow connection limitations and clearances to maintain structural integrity and access for future maintenance.

Regards

Steve Kilner

Principal Engineer
Policy and Programming, Drainage and Highways

From: Catherine Laverick <C.Laverick@thelkgroup.com>
Sent: 18 November 2009 09:21
To: Bell , Derek <DerekBell@barnsley.gov.uk>
Subject: Request for information: FRA

Barnsley MBC
Town Hall
Barnsley
South Yorkshire
S70 2TA

Date: 17th November 2009

Dear D. Bell

RE: Request for Information to Support a Flood Risk Assessment of:
Oakwell Community Assets, Grove Street, Barnsley
NGR 435260, 406125 and 435170, 406410

LK Consult Ltd has been commissioned by Planning and Law Ltd to undertake a Flood Risk Assessment at the land associated with Barnsley FC at the two sites identified above. A plan showing the site boundary is attached.

Could you please provide us with any information in your possession regarding any incidences of, or possible problems with, flooding associated with foul, surface water and land drainage in the area of the site? We are also speaking to United Utilities and the Environment Agency.

Thank you for your assistance. If you require any further information please contact myself on this contact email address or Phil Hunter at p.hunter@thelkgroup.com.

Please let us know as soon as possible if there is a charge for this information so that we can raise the necessary payment.

Yours sincerely,

For and on behalf of Leyden Kirby Associates

Catherine Laverick

Geoenvironmental Scientist

BARNSLEY
Metropolitan Borough Council

Highways, Engineering and Waste Management
Assistant Director: D. A. Richardson , BSc, M.C.I.O.B, M.I.H.T.
PO Box 601 Barnsley S70 9FA

DISCHARGE OF SURFACE WATER FROM DEVELOPMENT SITES - BMBC POLICY IN ACCORDANCE WITH PPS25

For all small sites < 0.05ha (500sq.m) or < 5 houses, no surface water limiting condition is required. Redevelopment of existing buildings in this category which re-use existing surface water drainage systems are exempt.

Greenfield Sites

Surface water discharge is limited to the equivalent greenfield run-off from the area of land naturally flowing to that watercourse. This is normally set at a rate of 5 litres per second per hectare (the area being the gross site area, but excluding any areas which remain as public open space, significant landscaped areas or other undeveloped land). This figure may be reduced where known drainage problems are present in a receiving watercourse.

For sites <1ha and > 0.05ha (500sq.m) a figure of 5 l/sec is used as the practical minima for flow control devices.

Brownfield Sites

The allowable peak flow discharge will be a reduction of at least 30% from the “existing” outflows. This policy may be subject to future change in particular catchments in line with any surface water management plans or if differing criteria are agreed following consultation with the EA.

For a site to be considered for the brownfield allowance, it must have an “existing” surface water discharge at the time of the planning application. This must include a positive drainage system of pipework which discharges to the same outlet as the proposed surface water system.

The developer will need to submit full supporting details with his planning application to qualify for this allowance. Such details will include the existing drainage layout including pipe sizes, gradients and capacities together with connection point at outlets and CCTV surveys showing the outlet positions.

Agreement to existing flows can be sought from BMBC drainage engineers before planning submission stage and any such prior agreement will be honoured against any subsequent change of policy for applications submitted within 6 months.

The prior agreement of Yorkshire Water is also advised where the proposed surface water discharge is to a public sewer. YW may enforce a lower limitation for sewer discharges than that given in planning advice for connection to public sewers. The existing flow used for the calculation of the allowable discharge rate will be taken as the smaller of either the existing pipe capacity or the calculated flow (Q l/sec =140A, where A is the contributing impermeable area in hectares).

Brownfield allowance will not be given where the proposed outlet differs from the existing (e.g. existing to sewer, proposed to watercourse) or for the redevelopment of previous large grassed or garden areas. Brownfield allowance will not be considered where the existing surface water flow is less than 10 l/sec.

Where insufficient or unreliable evidence of existing brownfield discharge is provided, where the proposed surface water outlet is not evident or where connection is made to a different location on the watercourse, then the greenfield rate described above will be used.

Irrespective of the amount of reduction in the peak flows, there is also a requirement to reduce the total volume of surface water. This can be achieved by utilising infiltration SUDs techniques where feasible, by increasing the amount of green space, garden areas, soft landscaping or by using green roofs and water recycling.

Note however that infiltration techniques must not result in ground water problems to downslope landowners or there could be a liability on developers or subsequent owners of the soakaway installation. Full ground investigations and hydro-geological surveys and tests to demonstrate this will not be a problem may be required.

Note that soakaways are currently considered to be the least acceptable option for BMBC adoptable highway drainage systems.

All Sites

For outline applications, developers would not normally submit the existing drainage details and the greenfield allowance will be conditioned. Where appropriate this strategy can be changed to the brownfield condition at full planning stage.

If an application site (regardless of size) is a sub-division of a larger development, then the site discharge allowance will be given pro-rata to the total area and developers will need to collaborate on their provision of surface water drainage systems.

Developers are reminded that whilst planning approvals may condition surface water discharges, there is no right of connection of surface water into off-site watercourses, whether culverted or open channel. Right of discharge must be obtained from the relevant riparian landowner in whose land the watercourse is located. Where a culverted watercourse lies in public highway, this right of connection must be obtained from BMBC.

Developers will be expected to confirm as part of any planning application where the responsibility is to lie for ownership and maintenance of any sustainable urban drainage system or attenuation facilities. Where responsibility is to lie with private owners or management companies, the developer will need to include appropriate legal coverage within deed documentation in accordance with the disclosure requirements.

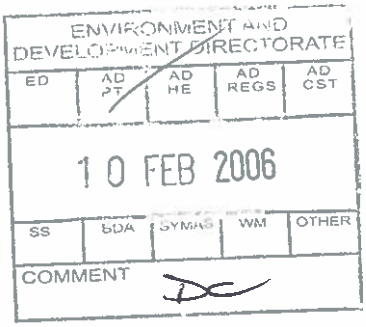
Storage Requirements

All drainage, including sustainable systems, (CIRIA C 609 p.80) must meet the following standards, which are consistent with Sewers for Adoption Edition 6 :-

"Pipe full in 1 in 2 year storm, no site flooding in 1 in 30 year storm, no internal flooding in 1 in 100 year storm plus 30% climate change allowance (PPS 25 para. 4.7)"

Flows between the 1 in 30 year storm and the 1 in 100 year storm plus climate change should be stored on site or may be discharged off-site over-ground, but only provided there are no unreasonable impacts on off-site property compared to the existing situation. (PPS 25 Annex F paragraph F9)

Yorkshire Water



Num

Assistant Director
Planning and Transportation
Barnsley Metropolitan Borough Council
Central Offices
Kendray Street
Barnsley
S70 2TN

Land & Planning
Yorkshire Water Services Ltd
PO Box 500
Western House
Western Way
Halifax Road
Bradford
BD6 2LZ

Tel: (01274) 691111
Fax: (01274) 692643

For telephone enquiries ring:
Z Fayyaz on (01274) 692072

Your Ref: 2006/0070
Our Ref: G000456

1st February 2006

Dear Sir/Madam,

Land Off Grove Street, Barnsley - Proposed Residential Development

Thank you for consulting Yorkshire Water regarding the above proposed development. We have the following comments:

If planning permission is to be granted, the following planning conditions are recommended:

Unless otherwise agreed in writing by the local planning authority, no building or other obstruction shall be located over or within 5.0 (five) metres either side of the centre line of the trunk main, which crosses the site.
(In order to allow sufficient access for maintenance and repair work at all times.)

Unless otherwise agreed in writing by the local planning authority, no building or other obstruction shall be located over or within 5.0 (five) metres either side of the centre line of the sewer, which crosses the site.
(In order to allow sufficient access for maintenance and repair work at all times.)

The site shall be developed with separate systems of drainage for foul and surface water on and off site.
(In the interest of satisfactory and sustainable drainage.)

No piped discharge of surface water from the application site shall take place until works to provide a satisfactory outfall for surface water have been completed in accordance with details to be submitted to and approved by the local planning authority before development commences.
(To ensure that the site is properly drained and surface water is not discharged to the foul sewerage system which will prevent overloading.)

No development shall take place until details of the proposed means of disposal of foul water drainage, including details of any balancing works and off-site works, have been submitted to and approved by the local planning authority.
(To ensure that the development can be properly drained.)

Unless otherwise approved in writing by the local planning authority, no buildings shall be occupied or brought into use prior to completion of the approved foul drainage works.
(To ensure that no foul water discharges take place until proper provision has been made for its disposal.)

Water Supply

OBSERVATIONS:

- A water main crosses the site as shown on the enclosed plan. The presence of the main may affect the layout of the site and therefore I consider it to be a material consideration in the determination of this application. The exact line of the main will have to be determined on site under Yorkshire Water Services supervision. It may be possible for the main to be diverted under s.185 of the Water Industry Act 1991. These works would be carried out at the developer's expense. The cost of these works may be prohibitive.

- There is a 450mm trunk main shown running adjacent to the site. The 450mm trunk main may be affected. It is recommended that no obstruction encroaches within 5 metres on either side of the main i.e. A protected strip width of 10 metres. YWS hold a formal deed protecting this main. (Deed 34182).

- The developer **MUST** protect this main before any work is planned on this site please contact Distribution Asset Management for advice. See contact address below.

- The closest suitable main that can be used for this development is the 160mm pvcu main in Pontefract Road. This is a pressure reduced area, the estimated pressures in the region of 4 bar.

- A water supply can be provided under the terms of the Water Industry Act, 1991.

- For further information and advice, the Distribution Asset Manager should be contacted at the following address: The Water Business Unit (Distribution Assets South/South East), Thorncliffe Hall/Area Office, Newton Chambers Road, Thorncliffe Park, Chapeltown, Sheffield, South Yorkshire S35 2PQ.

Waste Water

OBSERVATIONS:

- The load into Lundwood STW is already above the design level so any additional load is likely to impact on the effluent quality. Ideally the development of the site should coincide with the proposed FFD scheme which is programmed to provide additional treatment capacity by April 2008. This site was not included in the development plan.

- On the Statutory Sewer Map, there is a 900mm diameter public surface water sewer recorded to cross within the site.
  The applicant/agent is being contacted direct.

- In this instance, a stand-off distance of 5 (five) metres is required at each side of the sewer i.e. A protected strip width of 10 (ten) metres.

- Development of the site should take place with separate systems for foul and surface water drainage both on and off site.

- Foul water may discharge to the 750mm diameter public foul/combined water sewer recorded in Pontefract Road, at a point approximately 15 metres from the site.

- The foul water discharge from the proposal to the public sewer network should be restricted - for example, if sewage pumping is required - so as not to exceed 8 (eight) litres per second.

- From the information supplied, it is not possible to determine if the whole site will drain by gravity to the public sewer network. If the site, or part of it, will not drain by gravity, then it is likely that a sewage pumping station will be required to facilitate connection to the public sewer network.

- In the interests of good drainage a separate outfall should be provided for the disposal of surface water.

- The local public sewer network does not have capacity to accept **any** discharge of surface water from the proposal site. The developer and LPA are advised to contact the relevant drainage authorities with a view to **establishing a suitable watercourse** for the disposal of surface water.

- It is understood that a culverted watercourse is located through the middle of the site.

- Furthermore, it is not possible to determine if the site is low-lying relative to the location(s) of the public sewer network. Amongst other things, where the ground level of a site or the level of any basement is below the ground level at the point where the drainage is to connect to a public sewer, the developer may have to take precautions to **prevent the risk of flooding** of the site from surcharge of the public sewer network. Such precautions may include raising the level of the site, having (a) pumped discharge(s) from the site and/or the installation of (a) anti-flooding valve(s).

- An off-site foul water sewer may be required. This may be provided by the developer and considered for adoption by means of a sewer adoption agreement under a Section 104 of the Water Industry Act 1991.

- The public sewer network is for domestic sewage purposes. This generally means foul water for domestic purposes and, where a suitable surface water or combined sewer is available, surface water from the roofs of buildings together with surface water from paved areas of land appurtenant to those buildings. Land and highway drainage have no right of connection to the public sewer network. Land drainage will not be allowed into a public sewer. Highway drainage, however, may be accepted under certain circumstances; if SUDS are not a viable option and there is no highway drain available and if capacity is available within the public sewer network, then the developer will need to enter into a formal agreement with Yorkshire Water Services to discharge non-domestic flows into the public sewer network, utilising Section 115 of the Water Industry Act 1991.

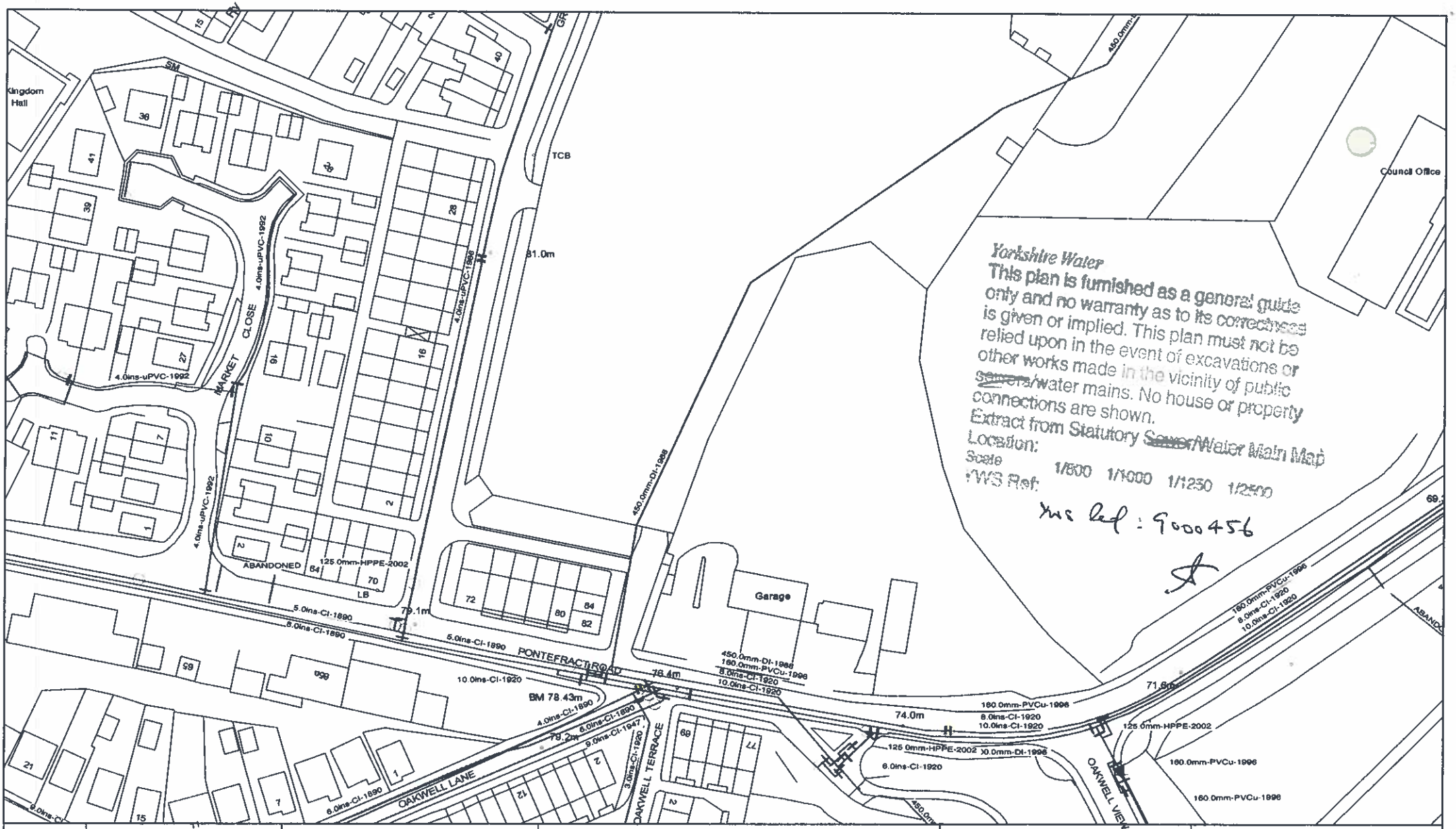
I attach some general information relating to drainage matters.

It is important that Yorkshire Water is informed of the local planning authority's decision on this application.

Please send me a copy of the decision notice.

Yours faithfully

Stephanie Walden
Planning Manager



435103 : 406008	Map Name : SE3506SW	Title	Partial Key Water mains up to 4" in diameter Water mains over 4" in diameter Raw water mains Private water mains
Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : MR Z FAYYAZ Contact Tel : 01274 692645		Notes	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
		Based upon Ordnance Survey map data with the permission of the Controller of Her Majesty's Stationery Office, (c) Crown Copyright. Licence No. WU298581.	Scale : 1:1250 Drg No : Maris No : Date Req : 01/02/2006, 11:55:29 Date Gen : 01/02/2006, 11:55:32 Source :

UPN: WN/PLANNING/006714 Originator: Z FAYYAZ, Appraisals, 0127

YorkshireWater

MWinnard

ENVIRONMENT AND DEVELOPMENT DIRECTORATE

ED	AD PT	AD HE	AD REGS	AD CST
13 FEB 2006				
SS	BDA	SYMAS	WM	OTHER
COMMENT				

MVM

Assistant Director
Planning and Transportation
Barnsley Metropolitan Borough Council
Central Offices
Kendray Street
Barnsley
S70 2TN

Land & Planning
Yorkshire Water Services Ltd
PO Box 500
Western House
Western Way
Halifax Road
Bradford
BD6 2LZ

Tel: (01274) 691111
Fax: (01274) 692643

For telephone enquiries ring:
Z Fayyaz on (01274) 692072

Your Ref: 2006/0069
Our Ref: G000455

7th February 2006

Dear Sir/Madam,

Land Between Grove Street & Queens Road, Barnsley - Proposed Residential Development

Thank you for consulting Yorkshire Water regarding the above proposed development. We have the following comments:

Water Supply

A water supply can be provided under the terms of the Water Industry Act, 1991.

Waste Water

If planning permission is to be granted, the following planning conditions are recommended:

The site shall be developed with separate systems of drainage for foul and surface water on and off site.
(In the interest of satisfactory and sustainable drainage.)

No piped discharge of surface water from the application site shall take place until works to provide a satisfactory outfall for surface water have been completed in accordance with details to be submitted to and approved by the local planning authority before development commences.
(To ensure that the site is properly drained and surface water is not discharged to the foul sewerage system which will prevent overloading.)

No development shall take place until details of the proposed means of disposal of foul water drainage, including details of any balancing works and off-site works, have been submitted to and approved by the local planning authority.
(To ensure that the development can be properly drained.)

Unless otherwise approved in writing by the local planning authority, no buildings shall be occupied or brought into use prior to completion of the approved foul drainage works.
(To ensure that no foul water discharges take place until proper provision has been made for its disposal.)

Surface water from vehicle parking and hardstanding areas shall be passed through an interceptor of adequate capacity prior to discharge. Roof drainage should not be passed through any interceptor. (In the interest of satisfactory drainage.)

OBSERVATIONS:

- The load into Lundwood STW is already above the design level so any additional load is likely to impact on the effluent quality. Ideally the development of the site should coincide with the proposed FFD scheme which is programmed to provide additional treatment capacity by April 2008. This site was not included in the development plan.

- Development of the site should take place with separate systems for foul and surface water drainage both on and off site.

- Foul water may discharge to the 300mm diameter public combined water sewer recorded in Grove Street at a point approximately 60 metres from the site.

- In the interests of good drainage a separate outfall should be provided for the disposal of surface water.

- The public sewer network is for domestic sewage purposes. This generally means foul water for domestic purposes and, where a suitable surface water or combined sewer is available, surface water from the roofs of buildings together with surface water from paved areas of land appurtenant to those buildings. Land and highway drainage have no right of connection to the public sewer network. Land drainage will not be allowed into a public sewer. Highway drainage, however, may be accepted under certain circumstances; for instance, if SUDS are not a viable option and there is no highway drain available and if capacity is available within the public sewer network. In this event, the developer will be required to enter into a formal agreement with Yorkshire Water Services under Section 115 Water Industry Act 1991 to discharge non-domestic flows into the public sewer network.

- Sustainable Systems (SUDS), for example the use of soakaways and/or permeable hardstanding, may be an alternative solution for surface water disposal that is appropriate in this situation. The use of SUDS should be encouraged and the LPA's attention is drawn to PPG25. The developer and LPA are advised to seek comments on the suitability of SUDS from the appropriate authorities.

- Soakaways may be acceptable as an alternative method of surface water disposal, subject to testing and approval of the local Building Control Officer, for the curtilage drainage. The developer must contact the Highway Authority with regard to acceptability of highway drainage proposals.

- Surface water run-off from areas of communal vehicular parking and/or hardstanding etc. should pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the prospectively adoptable sewer/public sewer. 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.

I attach some general information relating to drainage matters.

It is important that Yorkshire Water is informed of the local planning authority's decision on this application.

Please send me a copy of the decision notice.

Yours faithfully

pp

Stephanie Walden
Planning Manager

Yorkshire Water

General Information

1a) Yorkshire Water Services Limited is the Sewerage Undertaker for the area and responsible for the public sewer network together with any treatment and the disposal of the contents. The Sewerage Undertaker is not responsible for drains, private sewers, land drainage, watercourses or highway drainage.

b) Land drainage must not be discharged to the public sewer network.

c) The public sewer network - particularly the public surface water sewer network – could usually discharge to watercourse. Assuming that the Local Planning Authority is consulting with the relevant land drainage authorities, then these bodies may wish to comment on a development proposal that ultimately discharges surface water directly or indirectly to a watercourse.

2a) Where the ground level of a site or the level of any basement is below the ground level at the point where the drainage is to connect to a public sewer, the developer may have to take precautions to prevent the risk of flooding of the site from surcharge of the public sewer network. Such precautions may include raising the level of the site, having (a) pumped discharge(s) from the site and/or the installation of (a) anti-flooding valve(s).

b) Vehicular access, including large tankers, could be required at any time to any Yorkshire Water Services installations in the vicinity of the development site.

c) Where a sewage pumping station (SPS) is located in the vicinity of the site, there could be a loss of amenity for future residents/workers. In order to minimise the risk of odour, noise and nuisance, habitable buildings should not be located within 15 (fifteen metres) from an existing SPS. To reduce the visible impact of an installation, the erection (by the developer) of suitable screening is advised.

3a) An alternative method for surface water disposal could be Sustainable Drainage Systems (SuDS), for example the use of soakaways and/or permeable hardstanding:

b) The use of SuDS should be encouraged and the LPA's attention is drawn to PPG25. The developer and LPA are advised to seek comments on the suitability of SuDS from the appropriate authorities.

c) If soakaways are acceptable as an alternative method of drainage,this must be subject to testing and approval of the local Building Control Officer, for the curtilage drainage. The developer must contact the Highway Authority with regard to acceptability of highway drainage proposals.

4a) Where the proposal includes 40 or more vehicular parking spaces and/or hardstanding etc, surface water run-off should 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.

b) 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.

c) Where applicable, it is imperative that surface water run-off from the forecourt of petrol stations, areas used for the delivery of fuel, areas used for and immediately adjacent to vehicle washing facilities and/or other similar areas where detergent is likely to be used is not discharged to any public surface water sewer network. Surface water from such areas should pass through an oil, petrol and grit interceptor/separator of adequate design before discharge to the public foul or combined sewer network. A trade effluent consent - that may be conditional and, amongst other things, place a restriction on the rate of discharge to public sewer - may be required for such discharges. The developer is advised to contact Yorkshire Water's Industrial Waste Section (telephone 0845 1242429) about any such proposal.

d) If any discharge of foul water from kitchens and/or food preparation areas of any restaurants and/or canteens etc. is indicated, it should pass through a fat and grease trap of adequate design before any discharge to the public sewer network.

5a) Trade effluent may only be discharged to sewer with the prior consent of Yorkshire Water. A trade effluent is any liquid, other than domestic sewage, which is wholly or partly produced in the course of any business. The Industrial Waste Manager should be contacted as soon as possible regarding the acceptability of any proposals which may involve a trade effluent (including vehicle wash-water) or contaminated surface water discharge.

b) The developer is advised to consult with Yorkshire Water's Industrial Waste Section (telephone 0845 1242429) on any proposal to discharge a trade effluent to the public sewer network.