11 Conclusions

11.1.1 This report provides an assessment, in accordance with NPPF, of the potential increase in flood risk to and caused by a proposed retail foodstore development to the east of Old Mill Lane and to the north of Twibell Street, Barnsley. For those elements that potentially increase flood risk, mitigation measures are suggested.

11.1.2 The Environment Agency Flood Zone Map and Strategic Flood Risk Assessment (2010) locate the site within Flood Zones 1 (low risk), 2 (medium risk) and 3 (high risk).

11.1.3 Comparison of modelled flood levels provided by the Environment Agency to the topographic survey of the site indicates that the extent of Flood Zone 3 is less than that shown on the Environment Agency Flood Zone Map.

11.1.4 It is considered that the probability of the site flooding from fluvial sources is low to high and from surface water is low to medium. Flood risk from all other sources is considered to be low.

11.1.5 Details of the existing and proposed drainage is contained within the Drainage Strategy Report (WSP, 2011).

11.1.6 Finished site levels should be engineered to provide positive drainage and prevent ponding. Gradients of external areas, where possible, should be designed to fall away from buildings, such that any overland flow resulting from extreme events would be channeled away from the entrances. The accumulation of standing water would therefore not occur and thus not pose a risk to the development.

11.1.7 Detailed design of site levels should also mitigate against the risk of any highways, surface water or sewer flooding in the vicinity of the site.

11.1.8 Preliminary calculations have been undertaken based on the 1 in 100 year plus climate change 'worst case' predicted flood level, the masterplan layout and recent topographic survey data. These preliminary calculations show that compensatory flood storage is not required. Detailed 2D hydraulic modelling will be undertaken at the detailed design stage.

11.1.9 The Environment Agency have recommended that the finished floor level should be set 600 mm above the 1 in 100 year plus climate change flood level.

11.1.10 The main food superstore will be developed on 'stilts', providing flood mitigation. In addition, it is recommended that flood resilience measures be incorporated into the design of the buildings. Further information is contained in 'Improving the Flood Performance of New Buildings – Flood Resilient Construction', Department of Communities and Local Government, May 2007 and www.ciria.org.

11.1.11 The site is not located within an Environment Agency flood warning area, however a detailed flood plan / evacuation plan will be developed as part of the detailed design.

11.1.12 Access to the main retail store (for both customers and service vehicles) is proposed via a new road bridge over the River Dearne from a spur to the Wickes roundabout on the new Quality Bus Corridor. This will be designed above the 1 in 100 year plus climate change flood level. In addition, a separate pedestrian access will be available directly from the A61.

11.1.13 The proposed development should not increase flood risk to the site or to other land providing that the suggested mitigation measures are implemented.

Appendices, Figures & Tables

Appendix A Introduction

Appendix A1 Documents referred to for Data

Document	Website address
Environment Agency Flood Risk Map	http://www.environment-agency.gov.uk/
Environment Agency Groundwater Vulnerability	http://www.environment-agency.gov.uk/
Chronology of British Hydrological Events	http://www.dundee.ac.uk/ geography/cbhe
Barnsley Unitary Development Plan	http://www.barnsley.gov.uk/planning-local-plans
Barnsley Local Development Framework	http://www.barnsley.gov.uk/pid856
Barnsley Core Strategy	http://www.barnsley.gov.uk/core-strategy-publication
Barnsley Strategic Flood Risk Assessment	http://www.barnsley.gov.uk/0xac16000b_0x00485bbd
Barnsley Flood Risk and Development Guidance	http://www.barnsley.gov.uk/29floodpdf

Appendix A2 List of Consultees

Consultee	Office	Response received at time of drafting report Y/N
Environment Agency	Phoenix House, Leeds	Y
Internal Drainage Board	Dove and Dearne	N
Water Company	Yorkshire Water	Y
Local Authority	Barnsley Council	Y
Local Planning Authority	Barnsley Council	Y
Highways	Barnsley Council	N

Appendix B Existing Site

Appendix B1 Site Location Plan


KEY
Site Boundary
The Fleets
Wakefield Rd
Old Mill Ln
A61
Burton Bank Rd
Peel Pl
Wellington Close
Bowfell View
Tennyson Rd
Clarence Rd
Norfolk Close
Gainsborough Way
Nelson Ave
Cornwall Close
Warwick Rd
Rotherham Rd
Shelley Dr
Burton Rd
Honeywell Grove
Aqueduct St
Issott St
Rockingham St
Honeywell Ln
Honeywell Pl
Greenhill Ave
Honeywell St
Honeywell Close
Harborough Hill Rd
Twibell St
Wharf St
Fleming View
Newlyn Dr
Bodmin Ct
Truro Ct
Helston Crescent
Tredis Close
Ladock Close
Trewan Ct
Camborne
Falmouth Close
A635
Meadow St
Eldon St N
Bridge St
Caxton St
Denton St
Beckett St
Vernon St
James St
Dryden Rd
Mottram St
0 1 km
Map data ©2011 Tele Atlas, Imagery ©2011 DigitalGlobe, Infoterra Ltd & Bluesky, GeoEye, The GeoInformation Group, TerraMetrics
WSP
TITLE:
OLD MILL LANE, BARNSLEY
FIGURE No:
SITE LOCATION PLAN

Appendix B2 Topographic Survey



Survey Notes

Grid: National

Levels: Related to OSGM02 GPS datum

General Notes

LEGEND

BUILDINGS AND WALLS

Building
Building Open Sided
Glasshouse
Foundations (FOUND)
Ruin (RUIN)
Footings
Public House
Sloping Masonry
Walls under 200mm wide (WALL)
200mm and over
Retaining Wall (R/W)

FENCES

Defn descriptions (C/S)
Close Boarded (C/T)
Corrugated Iron (WK)
Interwoven (WR)
Iron Railings (I/R)
Paling (PAL)
Post & Chain (F/C)
Post & Rail (F/R)
Post & Barbed Wire (B/W)
Chestnut Pale (C/P)
Wire mesh (W/M)
Hedge
Gate
ROADS
Road
Kerbs
Edge of Surfacing
Drop Kerb (DK)
Pedestrian Crossing (PC)
Track (TRACK)
Footpath (FP)

STREET FURNITURE

Inspection Cover (IC)
Inspection Cover Gas (IC/G)
Manhole (MH)
British Telecom (BT)
Mercury (MCRY)
Cable TV (CTV)
Kerb Outlet (KO)
Hydrant (HYD)
Earth Rod (ER)
Intake to Eft cover (I/S)
Catchpit (CP)
Lamp/pole (LP)
Drain Pipe (DP)
Rain Water Pipe (RWP)
Soil Pipe (SP)
Air Valve (AV)
Parking Meter (PM)
Petrol Pump (PP)
Coal Chute (CC)
Road Sign (RS)
Information Sign (SIGN)
Direct Name Plate (NP)
Bollard (B)
Lamp Post (LP)
Letter Box (LB)
Traffic Light (TL)
Telephone Call Box (TCB)
Electricity Pole (EP)
Telephone Pole (TP)
Post (P)
Trough (TR)
Chimney (CHY)
Vent Pipe (VP)
Wire Tie (WT)
Stop Valve (SV)
Soil & Vent Pipe (SVP)
Waste Pipe (WP)
Gas Valve (GV)
Water Meter (WM)
Bollard (WC)
Service Marker (MK)
Box Step (BS)
Reflector Post (RP)
Bollard Beacon (BB)
Flag Staff (FS)
Mile Post (MP)
Mile Stone (MS)
Drain (DR)
Basement Light (BL)
Rodding Eye (RE)
Floodbridge (FB)
Traffic Light Control (TL/CP)
Box / Filter (TL/JBOX)
British Telecom (BT BOX)
Electricity or (ELEC BOX)
Gas Box (GAS BOX)
Defn Type Channel (SURF)
Soil Type Channel (SURF)
Electricity Pylon (ELEC PYLON)

OVERHEAD LINES

Electricity (ETL)
Telephone (TEL)

WATER FEATURES

Canal (CANAL)
Stream (STR)
Ditch (DITCH)
Sluice (SLUICE)
Weir (WEIR)
Culvert (CULVERT)
Drip (Land Drain) (DRAIN)
Spring (SPR)
Well (WELL)

TREES AND VEGETATION

Hedge
Edge of wood
or copse
Stump (STUMP)
Individual Tree

Slopes with Hatgh
Greater than 1in
Cliff Face

Marsh
Reeds

SURVEY INFORMATION SIGNS

Permanent Ground Marker (PGM)
Permanent Bench Mark (PBM)
O.S. Trig Station (TRIG)
O.S. Bench Mark (BM)

LEVELS UNKNOWN

Standard Spot Height (SH)
Precision Spot Height (SH)
Bed Level (BL)
Kerb Level (KERB)
Invert Level (INV)
Threshold Level (TH)
Cover Level (CL)
Invert Level (INV)
Canopy Soffit Level (SOFFIT)
Floor Level (FL)

ELECTROMAGNETIC

Beacon (B)
Trial Pit (TP)
Monitor Pin (MON)
Probe Hole (PH)

GENERAL

Safety/Non-Slip Flooring (NSF)
Crash Barrier (CRB)

Sheet Index

Location Plan

Rev.	Date	Description

Surveyed & Drawn by

Chartered Land Surveyors

65 Cross Street, Sale, Manchester
M33 7HF, Tel: 0161 905 1265
www.mali-shillaghen.co.uk
survey@mlltx.co.uk

FS 14126

Client

WSP

THREE WHITE ROSE OFFICE PARK

MILLSHAW PARK LANE, LEEDS, LS11 0DL

Project

PEEL CENTRE

BARNSLEY

PHASE 4

Drawing Title

TOPOGRAPHICAL SURVEY

Drawn By	Date	Survey Date	
S.M	18/08/08		Aug 2008
Checked by		Scale	
MER	18/08/08		1 : 250

Drawing No: 11806/1

Revision:

Appendix B3 Consultation Responses

Hamilton, Sarah

From: Joy , Matthew <MatthewJoy@barnsley.gov.uk> on behalf of Planningpolicy <Planningpolicy@barnsley.gov.uk>
Sent: 19 July 2011 13:31
To: Hamilton, Sarah
Subject: RE: Flood Risk Enquiry - Old Mill Lane

Sarah

In answer to your query the Council has a Strategic Flood Risk Assessment but, does not have a Surface Water Management Plan or a Water Cycle Study.

The relevant UDP Policies are ES4 and ES5. SPG 29 Flood Risk and Development is also applicable.

However, the LDF Core Strategy has been found sound by the Inspector following examination, and although it will not be adopted until September 2011, its policies carry significant weight and will supersede the UDP policies. I therefore draw your attention to LDF Core Strategy policies CSP 3 and CSP 4.

Regards
Matthew Joy
Planning Policy

From: Hamilton, Sarah [mailto:Sarah.Hamilton@WSPGroup.com]
Sent: 12 July 2011 14:29
To: Planningpolicy
Subject: Flood Risk Enquiry - Old Mill Lane

Dear Barnsley Council,

WSP has been commissioned to undertake a Flood Risk Assessment for a site off Old Mill Lane, Barnsley. Current plans are to redevelop the site as a large foodstore and associated petrol station together with 2 smaller retail units.

Please can you inform me whether you have any of the following:

- Strategic Flood Risk Assessment;
- Surface Water Management Plan;
- Water Cycle Study;
- Any policies that relate to flood risk / drainage within the LDF or UDP;
- Any supplementary guidance in relation to flood risk / drainage;
- Whether any of the above will become available in the near future.

Many thanks and kind regards,

Sarah

Sarah Hamilton
Senior Engineer, Property & Development

Three White Rose Office Park, Millshaw Park Lane, Leeds LS11 0DL.
Tel: +44(0)113 395 6243
Fax: +44(0)113 395 6201
Website: www.wspgroup.co.uk

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Hamilton, Sarah

From: Atkins , Wayne <WayneAtkins@barnsley.gov.uk>
Sent: 16 August 2011 09:57
To: Hamilton, Sarah
Cc: Bell , Derek
Subject: RE: Old Mill Lane, Barnsley
Attachments: Old Mill Lane.pdf

Sarah

The attached PDF shows the approximate location of culverted watercourses crossing your site which must be protected during your works. The exact location of the apparatus should be determined on site prior to commencement of any works. A 6 metre easement will be required for any watercourses crossing the site.

It is believed a colony of Bats roosts within the culvert coming from a northerly direction therefore an ecological survey will be required.

Records of public sewers in the area are held by Yorkshire Water who should be consulted.

There are no records of flooding from the culvereted watercourses shown on the attached plan. Please consult Yorkshire Water regarding flooding from Public sewers and the Environment Agency regarding flooding from the River Dearne.

I assume the site is to discharge to the River Dearne, therefore please consult the Environment Agency regarding discharge rates.

The Council has a generic Corporate Flood Plan for the management of internal services in response to flooding events but has no specific flood plan for this site.

For information regarding emergency arrangements and guidelines available for development sites within potential flood risk areas please speak to the Environment Agency as this area is partly within the Environment Agency designated flood zone for the River Dearne.

Regards

Wayne Atkins
Senior Engineer - Drainage, Policy and Programming
Barnsley Metropolitan Borough Council
Highways and Engineering
Network Management
Westgate Plaza 1
PO Box 603
S70 9FA
Telephone: 01226 772182
Fax: 01226 772196
E-mail: wayneatkins@barnsley.gov.uk

From: Bell , Derek
Sent: 12 August 2011 14:12
To: Atkins , Wayne
Subject: FW: Old Mill Lane, Barnsley

Wayne,

Haven't you dealt with this one already …??

Cheers ~ Derek

From: Hamilton, Sarah [mailto:Sarah.Hamilton@WSPGroup.com]
Sent: 12 August 2011 13:41
To: Bell , Derek
Subject: Old Mill Lane, Barnsley

Hi Derek,

I have been passed on your contact details by Rob McCarthy.

WSP has been commissioned to undertake a Flood Risk Assessment for a site off Old Mill Lane, Barnsley. Current plans are to redevelop the site as a large foodstore and associated petrol station together with 2 smaller retail units.

Please can you inform me of the following:

- Whether you have any plans of culverted watercourses / drainage in the immediate vicinity of the site;
- Whether you have any historic flooding records in the vicinity of the site (either from watercourses, drainage or highways);
- Whether you have any specific policies in relation to drainage from new developments;
- Whether the Council already has an existing Flood Plan that incorporates emergency procedures for the site if it were to flood?
- What emergency arrangements you would expect to be in place in terms of flooding at this site e.g. flood warning, signage, flood plan for the proposed store;
- Whether you have any guidelines available for development sites within potential flood risk areas.

Any advice would be greatly appreciated.

Kind regards,

Sarah

Sarah Hamilton
Senior Engineer, Property & Development

Three White Rose Office Park, Millshaw Park Lane, Leeds LS11 0DL.
Tel: +44(0)113 395 6243
Fax: +44(0)113 395 6201
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