

Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.

2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.

4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key

Change in flood level (m)

- < -0.180
- 0.180 to -0.160
- 0.160 to -0.140
- 0.140 to -0.120
- 0.120 to -0.100
- 0.100 to -0.08
- 0.08 to -0.06
- 0.06 to -0.04
- 0.04 to -0.02
- 0.02 to -0.01
- NO CHANGE
- 0.01 to 0.02
- 0.02 to 0.04
- 0.04 to 0.06
- 0.06 to 0.08
- 0.08 to 0.10
- 0.10 to 0.12
- 0.12 to 0.14
- 0.14 to 0.16
- 0.16 to 0.18
- > 0.180

Change in flood extent

Former Wet Areas New Dry

Former Dry Areas New Wet

REV	DATE	BY	DESCRIPTION	DATE	BY
001	15/05/2021	MD	Initial design and layout	15/05/2021	MD
002	15/05/2021	MD	Revised design and layout	15/05/2021	MD
003	15/05/2021	MD	Final design and layout	15/05/2021	MD
004	15/05/2021	MD	Final design and layout	15/05/2021	MD
005	15/05/2021	MD	Final design and layout	15/05/2021	MD

BWB

Consultancy Engineering
Construction Management

Birmingham 0191 233 3322
London 0207 407 2879
Manchester 0161 233 4260
Nottingham 0115 924 1100
www.bwbconsulting.com

Client

**A R Cartwright
(Construction) LTD**

Project Title

Chapel Lane, Witherley

Drawing Title

**Mannings n + 20% sensitivity
test: 1 in 100yr+22% event**

Drawn:	A. Phillips	Reviewed:	MD
BWB Ref:	BW/2415	Date:	15/05/2021
Drawn By:	MD	Scale:	As Shown

PRELIMINARY

Project: Originator: Zone: Level: Type: Note: Number: Status: Rev:

ARC100-BWB-EWE-XX-DR-0006 **S2** **P04**



Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.

2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.

3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.

4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key

Change in flood level (m)

< -0.180

-0.180 to -0.160

-0.160 to -0.140

-0.140 to -0.120

-0.120 to -0.100

-0.100 to -0.08

-0.08 to -0.06

-0.06 to -0.04

-0.04 to -0.02

-0.02 to -0.01

NO CHANGE

0.01 to 0.02

0.02 to 0.04

0.04 to 0.06

0.06 to 0.08

0.08 to 0.10

0.10 to 0.12

0.12 to 0.14

0.14 to 0.16

0.16 to 0.18

> 0.180

Change in flood extent

Former Wet Areas New Dry

Former Wet Areas New Wet

REV	DATE	BY	DESCRIPTION	DATE
001	15/07/20	MD	Initial design and layout	15/07/20
002	15/07/20	MD	Revised design and layout	15/07/20
003	15/07/20	MD	Final design and layout	15/07/20
004	15/07/20	MD	Final design and layout	15/07/20

BWB

■ Birmingham 0191 233 3322
□ London 0207 407 2879
□ Manchester 0161 233 4260
□ Nottingham 0115 924 1100

CONSULTANCY SERVICES
www.bwbconsulting.com

Client

**A R Cartwright
(Construction) LTD**

Project Title

Chapel Lane, Witherley

Drawing Title

**Blockage sensitivity test: 1 in
100yr+22% event**

Drawn:	A. Phillips	Reviewed:	MD
BWB Ref:	BW02415	Date:	15/07/2020

PRELIMINARY

Project: Client: Zone: Level: Type: Note: Number: Status: Rev:

ARC100-BWB-EWE-XX-DR-0008 S2 P04



Appendix 3: LLFA Liaison

Dear Alexandros Petrakis,

Thank you for request for pre-application advice. Following review of the submitted documents, I can confirm the following.

The applicant is seeking to produce a flood risk assessment (FRA) for a development on land off Chapel Lane, Witherley.

When determining planning applications, the local planning authority should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where informed by a site-specific flood risk assessment (FRA) confirming it will not put the users of the development at risk. Where a FRA is applicable this should be undertaken in accordance with the National Planning Policy Framework (NPPF) and accompanying Planning Practice Guidance (PPG).

From review of the Flood Map for Planning which shows fluvial flood risk, the Witherley Brook located to the north-west of the site is a main river with associated flood zones 2 and 3 which are located close to the north-west and south-west of the site boundary.

The risk of flooding from surface water map shows areas of the site to be at risk from surface water flooding with some parts located within high risk areas, along the southern boundary of the site there is low risk prevails however around 30m from site the area is high risk areas consume the locality of the unnamed ordinary watercourse.

Other sources of flood risk including (but not limited to) groundwater, canals, reservoirs, sewers, etc. should be considered as part of any forthcoming planning application. The LLFA would recommend reviewing the relevant Strategic Flood Risk Assessment for this area which may contain additional flood risk details.

The proposed site is situated within the Tame Anker and Mease catchment and lies around 100m from the main river the Witherley Brook, to the west of the site boundary an unnamed ordinary watercourse which feeds into the Witherley Brook lies around 50m. The river leads insert details from land outside Fenny Drayton through Witherley, into the Witherley Brook which then flows into the River Anker outside Atherstone. Leicestershire County Council's Infrastructure Planning (Flood Risk Management) team has records of the following flooding incidents within close proximity to the site.

- External property flooding – Atterton Lane, Witherley (0.1km from site boundary)
- Highway flooding – Mythe Lane, Witherley (0.28km from site boundary)
- Overgrown ordinary watercourse – Kennel Lane, Witherley (0.6km from site boundary)
- Highway flooding – Kennel Lane, Witherley (0.6km from site boundary)

It is advised that not all instances of flooding are reported to Leicestershire County Council and as such, there may be a history of flooding for which we have no record.

All development has the potential to increase flood risk so it is essential that all forms of flooding are taken into consideration within any flood risk assessment (where required) or planning application. Where there is insufficient information regarding any aspect of risk, the responsibility to investigate falls to the applicant.

Leicestershire County Council as the Lead Local Flood Authority (LLFA) would expect a sequential approach to masterplan development, locating development in areas at lowest risk of flooding. For development within or in close proximity to Flood Zone 2, or the risk of flooding from surface water is medium or high risk as identifies on the risk of flooding from surface water map, the LLFA would expect finished floor levels to be set at a minimum of the highest level of the following;

- 300mm above the general ground level of the site OR
- 600mm above the Flood Zone 2 water level.

In order to deliver safe development, we advise that single storey buildings or ground floor subdivisions with no access to higher floors, should have access to a refuge set above the 1 in 1,000 annual probability (0.1%) in any year flood level including an allowance for climate change. Basement rooms should have unimpeded access internally to an upper level

From review of the submitted masterplan, the proposed development does not identify the use of any sustainable drainage systems (SuDS) features for surface water drainage. Given the currently undeveloped nature of the site, the LLFA would expect surface water runoff from the site to be suitably managed as per best practice guidance given in the CIRIA C753 The SuDS Manual.

The LLFA would expect any surface water drainage proposal to seek to infiltrate unless demonstrated to be unfeasible. Such demonstration should include infiltration testing in accordance with BRE Digest 365 Soakaway Design.

Should this not be appropriate, the LLFA would expect runoff from site to be discharge to the next most appropriate receptor at rates and volumes no greater than the event specific greenfield values.

Over the lifetime of a development, it is possible that the overall impermeable area contributing to surface water runoff within the site could significantly increase (known as 'urban creep'). Sensitivity testing of a 10% increase in impermeable area should therefore be included where appropriate to ensure that surface water drainage designs can cope with future increases in impermeable areas.

As the adjacent Witherley Brook is classified as Environment Agency main river, the applicant should consult with the Environment Agency to ascertain their requirements which would inform the masterplan. Such requirements would include provision of an easement from top-of-bank to allow maintenance to be conducted. Further, an Environment Agency Permit may need to be sought prior to any works being commenced.

The unnamed ordinary watercourse is classified as an ordinary watercourse; as such consent may be required from Leicestershire County Council in their role as LLFA, under the Land Drainage Act (1991) for any activities within close proximity. Further information on the types of work/structure which require consent together with a template application form can be found on our website under the section 'Regulation of activities on watercourses'.

Leicestershire County Council opposes the culverting of watercourses; however, we recognise there are instances where culverting may be unavoidable. Any applicant will be required to justify the use of culverts and provide information demonstrating that there will be no detrimental effect on flood risk. Please refer to the County Council's Local Flood Risk Management Strategy which contains the culverting policy (Appendix 3) which can also be found on our website.

To safeguard access to watercourses or ditches for future maintenance, inspection and improvement works in the future; clear margins should be provided from the top of banks. A minimum clear margin of 3m should be provided from each top of bank for watercourses less than 2 metres in width, a minimum clear margin of 4.5m should be provided for watercourses 2 metres or greater in width.

The LLFA would expect any future surface water drainage scheme to assess the use of SuDS including but not limited to swales, attenuation basins and permeable paving in line with 'CIRIA C753 The SuDS Manual'. Such above ground SuDS structures would also provide one of the required treatment trains to manage water quality. It should be noted that the LLFA do not consider the use of underground storage tanks or oversize pipes as a suitable treatment train and as such where these are proposed, additional treatment trains should be implemented. Leicestershire County Council, in their role as LLFA, does not adopt SuDS. For enquiries regarding the proposed development and future adoption and maintenance of SuDS features, please direct these to your local District or Borough Council.

Any surface water drainage features should be located within the areas at lowest risk of flooding to ensure they remain operational during an extreme event. Any drainage features should also consider how an extreme event may constrain the discharge from any proposed drainage system and ensure the drainage infrastructure can adequately manage surface water runoff regardless (for example a surcharged outfall).

Where a site-specific flood risk assessment (FRA) is required by NPPF the associated drainage strategy should also provide outline operation and maintenance details along with an indicative proposal of who will maintain any SuDS features over the lifetime of the development.

The LLFA planning checklist and guidance which provides further details can be found [here](#).

If you have any further questions, please do not hesitate to contact us.

Kind regards,

Flood Risk Management (Infrastructure Planning)
Environment & Transport Department
Leicestershire County Council
e. llfa@leics.gov.uk
t. 0116 305 0001

