

CALDECOTE PARISH COUNCIL

(District of South Cambridgeshire)

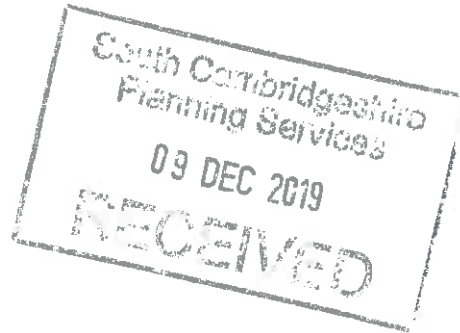
Parish Clerk: Alan Melton

20 St Martins Road, Chatteris, Cambridgeshire, PE16 6JF. M: 0777 152 4093

E-mail: parishclerk@caldecote.gov.uk

www.caldecote.gov.uk

Planning and New Communities
South Cambridgeshire District Council
South Cambridgeshire Hall
Cambourne Business Park
Cambourne
CB23 6EA



6th December 2019.

For the Attention of Michael Sexton.

Dear Mr Sexton

Ref: S/3777/19/NC

Members of Caldecote Parish Council OBJECT to the variation 23 (Water Drainage Scheme).

The proposals are inadequate!

We received a presentation from Mrs Mary Claridge, who has been acting on behalf of the council in researching this application.

Members fully endorsed the letter of objection sent by Mrs Claridge. (Copy enclosed)
Mrs Claridge will be representing our council at the Planning Committee.

Ref: S/4836/18/DC

Members are concerned that this proposal only covers 11 properties and should cover the whole development.

Yours sincerely

A handwritten signature in black ink, appearing to read "Alan Melton".

Alan Melton
Clerk to the Council

South Cambridgeshire Hall
Cambourne Business Park
Cambourne
Cambridge,
CB23 6EA
www.scambs.gov.uk
0345 045 5215



South
Cambridgeshire
District Council

Katy Reeves,
Caldecote Parish Council Clerk
34, Strympole Way
Highfields Caldecote
Caldecote
Cambridge
Cambridgeshire
CB23 7ZJ

Planning and New Communities
Contact: Michael Sexton
Tel: 03450455215
Email: planningcomments@scambs.gov.uk
Our Ref: S/3777/19/VC
Your Ref:
Date 19 November 2019

This letter (with no plans attached) has been emailed to the Parish Council prior to sending out in the post, and for information, to the Ward Members

Dear Sir/Madam

Proposal: Variation of condition 23 (water drainage scheme) of planning permission S/2510/15/OL for Outline planning permission for up to 140 residential dwellings, (including up to 40% affordable housing), removal of existing temporary agricultural structures and debris, introduction of structural planting and landscaping, informal public open space and children's play area, community orchard and allotments, surface water flood mitigation and attenuation, vehicular access points from Highfields Road and associated ancillary works. All matters to be reserved with the exception of the main site access.

Application Ref: S/3777/19/VC
Location: Land East of Highfields Road, Highfields Caldecote, Cambridgeshire, CB23 7NX
Applicant: Miss Hannah Short, Linden (Highfields Caldecote) LLP

Attached is a copy of the above application for your retention.

We welcome any comments your Parish Council wishes to make, but would ask that they are made using either the online web form available, or on the form below and returned no later than 21 days from the date of this letter. After the expiry of this period, the District Council may determine the application without receipt of your comments.

EXPLANATION OF APPLICATION SUFFIX

OL	Outline	LD	Lawful Development Certificate
FL	Full	PA	Prior Notification of Agricultural Development
RM	Reserved Matters	PD	Prior Notification of Demolition Works
LB	Listed Building Consent	PT	Prior Notification of Telecommunications Development
CA	Conservation Area Consent	HZ	Hazardous Substance Consent
AD	Advertisement Consent	DC	Discharge of Conditions
VC	Variation or Removal of Condition		

Below is a link for your convenience to view all copies of documents, plans and forms in respect of the above proposal. As the website updates overnight, these will be available to view the following day from the date of this letter. Please note your comments will be placed on the website.

<http://plan.scambs.gov.uk>

Should the Parish Council wish to request that the application be considered by the District Council's Planning Committee, please state the material considerations and planning reasons. Examples of material considerations can be found below. The Chairman of the District Council Planning Committee will respond to all reasonable requests.

The Parish Council: - (Please delete appropriately)

Supports

Objects

Has no recommendation

Comments:

See attached

The Parish Council *does/does not** request that the application be referred to the District Council Planning Committee *(please delete)

Planning reasons:

See attached

Note: Where a Parish Councils requests that an application is determined by Planning

Committee there is real value and importance in Parish Council representatives attending Planning Committee to support their comments. Please note that the Parish Council can be represented at Planning Committee by any of its Councillors or the Parish Clerk (with the approval of their Parish Council).

Signed.....  Date..... 6/11/2019

Clerk to the Parish Council or Chairman of the Parish Meeting

Guidance:

What are Material Considerations?

EXPLANATION OF APPLICATION SUFFIX

OL	Outline	LD	Lawful Development Certificate
FL	Full	PA	Prior Notification of Agricultural Development
RM	Reserved Matters	PD	Prior Notification of Demolition Works
LB	Listed Building Consent	PT	Prior Notification of Telecommunications Development
CA	Conservation Area Consent	HZ	Hazardous Substance Consent
AD	Advertisement Consent	DC	Discharge of Conditions
VC	Variation or Removal of Condition		

3 Clare Drive
Highfields Caldecote
CB23 7UY
18 November 2019

Dear Sir,

Re S/3777/19/VC – Variation of Conditions
Land East of Highfields Road, Highfields Caldecote, Cambridgeshire, CB23 7NX

Variation S/3777/19/VC seeks to amend a condition imposed by the planning inspector by adding the underlined text:

... The submitted details shall be in accordance with the Site Specific Flood Risk Assessment (5933/R2) dated July 2015 and the Drainage Strategy & SUDS Report (project ref 7135) dated October 2019 and shall

This variation is totally unacceptable and must be rejected.

If the amendment stands it effectively accepts the Drainage Strategy & SUDS Report complete with all of the errors and issues previously notified to SCDC in detail in response to S/3660/19/DC including:

1. The Drainage Strategy is still based on sandy soil – it is heavy clay
2. Permeable road paving will not work on heavy clay and requires additional drainage
3. The planned ditch dimensions are inconsistently and inadequately stated,
4. Minor re-routing of the ditch is required away from Damms Pastures

Supporting detail previously submitted to S/3660/19/DC is also copied onto the following pages, together with the detail of the corrected runoff calculations for soil type 4.

Linden must now submit a new revised Drainage Strategy and site design for approval by SCDC addressing the above issues.

In addition, the Drainage Strategy & SUDS Report specifies only drainage of the northern (Phase 1) part of the site. It does not address drainage of the remainder of the site at all. The original inspector's condition refers to the whole site. If the variation is accepted, there would be no requirement to specify any drainage conditions of developments on the southern (Phase 2) part of the site. Objections to drainage to the southern part of the site have already been accepted by the Drainage Officer (eg use of French drains was rejected).


Yours faithfully



1 - The Drainage Strategy is still based on sandy soil

The updated Drainage Strategy (<http://plan.scambs.gov.uk/swiftlg/MediaTemp/1158735-923137.pdf>) is still based on calculations for sandy soil (soil index 1 sandy, region 1) calculated for the wrong region of the country. The soil is almost completely impermeable clay, and standing water can now be clearly seen from Highfields road. This means that the runoff rates are drastically underestimated (approx. half the correct values)

Linden/Causeway/Walker Calculation Input from Page 35 of Linden Drainage Strategy and SUDS report:

CAUSEWAY 	
Site Makeup	Greenfield
Greenfield Method	IH124
Positively Drained Area (ha)	
SAAR (mm)	
Soil Index	1
SPR	0.10
Region	1
Growth Factor 1 year	0.85
Growth Factor 30 years	1.95
Growth Factor 100 years	2.48
Betterment (%)	0
QBar	
Q 1 year (l/s)	
Q 30 year (l/s)	
Q 100 year (l/s)	

Linden - Soil type 1: Sandy

- Basis for Linden claims of no flooding.
- For 1.7Ha built-up area of site Linden figures:
- 1 year event = **3.22 liters/sec**
- 100 year event = **13.1 liters/sec**
- Even wrong region in UK – understates value

Reality - Soil type 4: Clay

- **Nearly double runoff in reality**
- 1 year event = **5.22 liters/sec**
- 100 year event = **21.38 liters/sec**
- Based on IH124 drainage calculation with corrected location and soil type and Linden declared area.

Actual runoff will be even higher as detailed below.

- Higher values correlate with runoff values presented by Gladman at appeal
- True run-off will be significantly higher than the 'reality' figures above as paved cul-de-sac will run off into roads, and soil is closer to type 5.
- Detailed evidence supporting revised runoff using HR Wallingford industry standard calculations previously submitted and available on request.
- **The runoff calculations must be re-run with the correct soil type**
- **The surface drainage system (ditches, piped drainage) must be set to the right size for the real drainage conditions**
- **Sizing at junctions where multiple pipes converge needs to be recalculated**

Note also Linden plan 'Drainage and External Levels Plan Sheet 5'

(<http://plan.scambs.gov.uk/swiftlg/MediaTemp/1158735-922086.pdf>) shows the attenuation pond with the permanent water level at 2m below the surrounding ground level. In-fact this site is under water for most of the winter and spring.

- **The pond design and flow control must be redesigned with the remainder of the piped drainage system.**

2 - Permeable paving will not work on heavy clay and requires additional drainage

Linden plan 'Drainage and External Levels Plan Sheet 1' (<http://plan.scambs.gov.uk/swift1g/MediaTemp/1158735-922084.pdf>) shows paved roadway areas that are undrained (some using permeable paving, some using impermeable paving).

- No gullies serve these block paved road areas. While some of these block paved areas are described as permeable, they are on impermeable clay, so will not drain and should be treated as impermeable for drainage purposes.
- As a comparison, in Damms Pastures, immediately adjacent to this development and with the same soil type, 2 gullies are provided in a block paved area and Damms Pastures still has standing water. For comparison Damms Pastures has an area slightly smaller than the undrained paved area behind the proposed Plot 60.



- Surface water will run off these areas onto the roads, drastically increasing the amount of water that will flow through the piped system to the attenuation pond. In some parts of the site, this will approximately double the area being drained by the piped system.
- Additional piped surface water drainage is needed on the areas of hard standing.
- The piped system sizing needs to be redesigned, resubmitted and reviewed in the light of
 - the correct soil type, and
 - the larger area being drained

3 - The planned ditch dimensions are inconsistently and inadequately stated

Ditch Dimensions

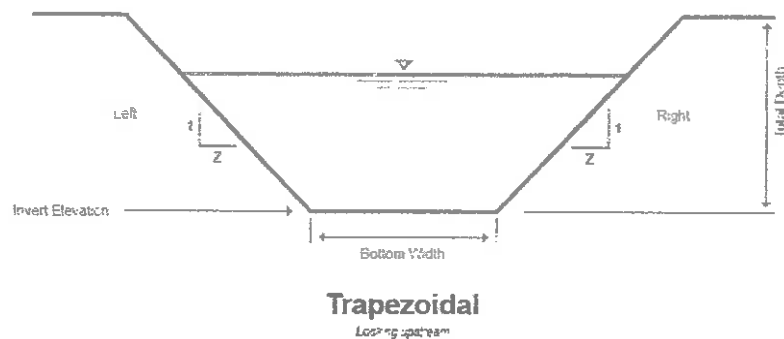
The plans are inconsistent: the Ditch Strategy

(<http://plan.scambs.gov.uk/swiftlg/MediaTemp/1158735-922091.pdf>) shows ditches 900mm deep, while the Drainage and External Levels Plans show ditches 600mm deep. Ditch widths are not specified. No minimum ditch flow calculation have been presented (including Highfields road overtopping).

As background a minimum size of ditches for the site was agreed at a meeting <https://scambs.moderngov.co.uk/documents/s96009/> in January 2016 between residents, SCDC, the Flood Authority, Gladman and Gladman's drainage consultant.

- The ditch size and levels should be reviewed and the ditch bottom width, depth and slope be clearly specified.
- The ditch sizing should be sufficient to support the fall of the land, the recalculated runoff from the whole site and overtopping from the Highfields Road Award ditch.

We expect the ditch should be specified as minimum of 1m wide at the bottom width and trapezoidal sizes of slope 2 parts horizontal to one part vertical. Ref the following diagram bottom width minimum 1m, and $Z=2$. Taken from <http://learn.hydrologystudio.com/culvert-studio/knowledge-base/working-with-channels/>



French Drain

For clarity, we understand that the French drain on the southern edge of the site has been withdrawn, as inappropriate for clay soil. It is still shown on the plans

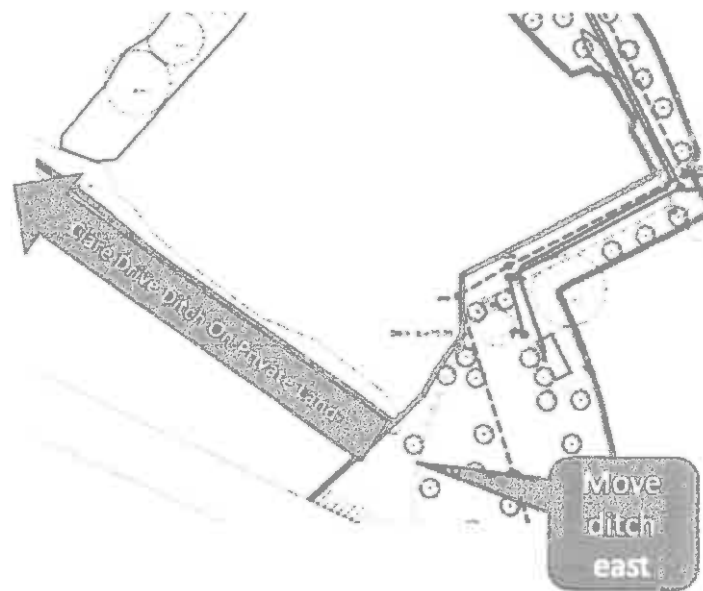
- Any ditches should be traditional, maintainable open ditches, rather than French drains
- Confirm that the southern French drain will not be constructed, and southern drainage will be part of a revised drainage plan

4 - Reroute ditch away from Damms Pastures

The Drainage and External Levels Plan Sheet 4

<http://plan.scambs.gov.uk/swiftlg/MediaTemp/1158735-922100.pdf> brings a new ditch very close to 2 existing ditches which flow into the Highfields Road Award ditch. Any overtopping in this corner of the site would give significant risk of flooding in the rest of the village.

- **This ditch should be shifted as far as possible to the east, towards the piped system, moving the corner (currently marked at E535574, N258845) south east, beyond the housing line as illustrated below.**



Appendix – Drainage Calculations



Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by: Philip Claridge

Site name:

Site location:

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: 52.21316° N

Longitude: 0.01599° W

Reference: 2933288397

Date: Oct 07 2019 13:27

Runoff estimation approach IH124

Site characteristics

Total site area (ha): 1.7

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

SOIL type: Default Edited

HOST class: N/A N/A

SPR/SPRHOST: 0.37 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

SAAR (mm): Default Edited

Hydrological region: 536 536

Growth curve factor 1 year: 5 5

Growth curve factor 30 years: 0.87 0.87

Growth curve factor 100 years: 2.45 2.45

Growth curve factor 200 years: 3.56 3.56

Growth curve factor 200 years: 4.21 4.21

(3) Is SPR/SPRHOST ≤ 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

Q_{BAR} (l/s): Default Edited

1 in 1 year (l/s): 3.57 6.01

1 in 30 years (l/s): 3.11 5.22

1 in 100 year (l/s): 8.76 14.71

1 in 200 years (l/s): 12.72 21.38

1 in 200 years (l/s): 15.04 25.28

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.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.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrocutions or any other organisation for the use of the data in the design or operation characteristics of any drainage scheme.

