

# Lidar-Logic

Sujeenthan Jeevarangan,  
LLFA Planning Engineer,  
Oxfordshire County Council,  
County Hall,  
New Road,  
Oxford, OX1 1ND.

11<sup>th</sup> October 2021

Our Ref: LL071  
Application no: 21/00517/F

Dear Sujeenthan Jeevarangan,

## **RE: WROXTON MOTOCROSS PLANNING APPLICATION**

I am writing first to thank you for your guidance so far on this Application. I have a copy of your response dated 22<sup>nd</sup> June 2021 and note from your comment that "*As well as dealing with surface water runoff*" our work is "*required to provide water quality, biodiversity and amenity benefits in line with National Guidance*". I completely agree that this is central to the SuDS process and can only apologise for not taking this area sufficiently seriously.

When I pointed this out to a senior Planning Officer in respect of this Application, I was left with the impression that he thought I had strayed outside my remit. This surprised me, not least because I had assumed these areas also to be central to the Planning process. Accordingly, I am gathering as much evidence as I can on these areas, which will be included in the upcoming revision of our FRA report.

### **Water Quality**

The SuDS Manual Table 4.3, p.63 recommends the best approach to take on this and we will of course follow their advice. We also note your mention of local standard L19, stating that "*At least one surface feature should be deployed within the drainage system for water quality purposes, or more features for runoff which may contain higher levels of pollutants in accordance with the CIRIA SuDS Manual C753*".

### **Biodiversity**

I was impressed recently to learn that newts had been found at one of the ponds on site. Given that the motocross has been in operation for over 40 years, they would seem to be on the right track, at least as far as newts are concerned. There is a risk of straying outside our area of expertise but Table 6.1, p.82 of the SuDS Manual provides what appears to be a good framework for our further recommendations.

### **Amenity**

In considering amenity at the site, I had an interesting conversation recently with a friend, who is a Police Community Support officer. I mentioned Wroxton Motocross and he told me that in the area where he works (Herefordshire), much of the low-level crime was committed by bored teenagers. Looking at Table 5.1 of the SuDS Manual, entitled "*Types of amenity benefits delivered by SuDS*", I note that "*Community cohesion and crime reduction*" is listed as one of the 11 areas covered, as is "*Recreation*". These areas will clearly need to be covered further, in our revised FRA.

## **Surface Water Management**

Thank you for the list of SuDS Flows and Volumes, the LLFA Technical Assessment pro-forma. I started to complete this document and have attached this as my attempt so far. When working on most developments, there will be proposals that would increase the impermeable areas on site and we work on ways to mitigate these proposed changes. The problem that I face with this work is that there really are no impermeable surfaces on the site and none are planned.

I would normally use the ReFH2 methodology to calculate the fully rural, "Greenfield" runoff from that part of the site on which these surfaces would be placed. In this case, that area is zero square metres. When applied to runoff from a site, the ReFH2 methodology always requires impermeable areas and when these are always zero, the analysis finds that flood risk has not been changed by change in the impermeable area at the site. Clearly, the site is very different to nearby agricultural land and I was forced to ask, could flood risk have been changed by something else?

When I wrote the FRA, I considered the likely effects of the track, the hair-pin bends, the ditches and of course the two ponds. I felt at the time that these provide interception of runoff far in excess of what I would see in adjacent fields or would expect from most agricultural uses. In the current version of the FRA, I say that:

*"The system that was designed to manage runoff also has the effect of attenuating it".*

I have no reason to change my opinion now and I note the email of 7th April 2021 from Tony Brummell (MSc CEng FICE FCIWEM MCIHT MCMI), Building Control Manager of Cherwell Building Control Service at Cherwell District Council. I have attached a copy of the email for your information. Mr. Brummell was summarising his earlier comments on land drainage and flood risk to "our Committee", which I take to be the Cherwell District Council Planning Committee. The first of three points that he makes is as follows:

*"What has been done is not materially contributing to flood risk".*

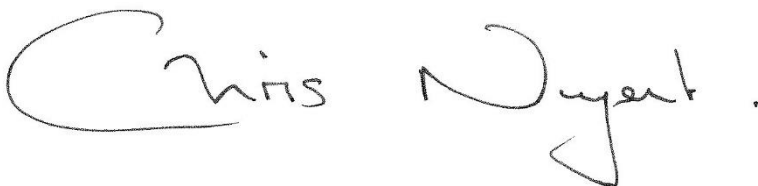
I note that Mr. Brummell's qualifications include "FCIWEM". He is a Fellow of the Chartered Institution of Water and Environmental Management, CIWEM's highest membership grade.

## **Appropriate Mitigation**

When you visited the site, you may have found evidence that neither Mr. Brummell or I found, which supports your decision to object to the use of the site as a motocross track. If that was the case, I would be grateful if you would share that evidence, providing the opportunity for appropriate mitigation to be recommended. Alternatively, your objection may have been based on those many aspects, which I have listed above, which our FRA has so far failed to adequately address.

We would be grateful for your further guidance on these areas, so that we can revise our FRA accordingly.

Yours sincerely



Chris Nugent  
**Principal Consultant, Lidar-Logic**

## SITE DETAILS

1.1	Planning application reference	21/00517/
1.2	Site name	Wroxton Motocross Track
1.3	Total application site area	7.76 ha
1.4	Is the site located in a CDA or LFRZ	No
1.5	Is the site located in a SPZ	No

## VOLUME AND FLOW DESIGN INPUTS

2.1	Site area which is positively drained by SuDS	0 m <sup>2</sup>
2.2	Impermeable area drained pre development	0 m <sup>2</sup>
2.3	Impermeable area drained post development	0 m <sup>2</sup>
2.4	Additional impermeable area (2.3 minus 2.2)	0 m <sup>2</sup>
2.5	Predevelopment use	Agricultural / Motocross
2.6	Method of discharge	Mainly runoff, limited infiltration
2.7	Infiltration rate (where applicable)	Very low
2.8	Influencing factors on infiltration	Low soil permeability
2.9	Depth to highest known ground water table	Variable
2.10	Coefficient of runoff (Cv)	1 x 10 <sup>-8</sup> to 1 x 10 <sup>-6</sup>
2.11	Justification for Cv used	SuDS Manual, Table 25.1
2.12	FEH rainfall data used	FEH (2013)
2.13	Will storage be subject to surcharge by elevated water levels in watercourse/ sewer	No
2.14	Invert level at outlet (invert level of final flow control)	144.24 mAOD
2.15	Design level used for surcharge water level at point of discharge	144.83 mAOD

## CALCULATION OUTPUTS

3.1	Defining rate of runoff from the site
3.2	Max. discharge for 1 in 1 year rainfall
3.3	Max. discharge for QMed rainfall
3.4	Max. discharge for 1 in 30 year rainfall
3.5	Max. discharge for 1 in 100 year rainfall
3.6	Max. discharge for 1 in 100 year plus 40%CC
3.7	Attenuation storage to manage peak runoff rates from the site
3.8	Storage - 1 in 1 year
3.9	Storage - 1 in 30 year
3.10	Storage - 1 in 100 year
3.11	Storage - 1 in 100 year plus 40%CC
3.12	Controlling volume of runoff from the site
3.13	Pre development runoff volume
3.14	Post development runoff volume (unmitigated)
3.15	Volume to be controlled/does not leave site
3.16	Volume control provided by
3.17	Interception losses
3.18	Rain harvesting
3.19	Infiltration (even at very low rates)
3.20	Separate area designated as long term storage
3.21	Total volume control

**From:** Tony Brummell  
**Sent:** 07 April 2021 14:10  
**To:** [cllr.woodcock@hornton.org.uk](mailto:cllr.woodcock@hornton.org.uk)  
**Cc:** Nathanael Stock ; George Smith  
**Subject:** RE: Watercourse at Hornton Grounds Farm

Dear Councillor Woodcock

A retrospective Planning Application has been received which will be considered by our Committee, the target date for which is 20 May.

You will have seen my comments on land drainage and flood risk which are in summary:

- What has been done is not materially contributing to flood risk
- What has been done may have ecological impacts
- An Environmental Permit may be needed (depending on the daily quantities) for the abstraction of water from the stream

The “works on the watercourse” are a matter for Cherwell as Land Drainage Authority. The Environmental Permit is a matter for the Environment Agency. However, whilst I can consider flood risk I am not qualified to consider ecological impacts. I would therefore consult the Environment Agency on this aspect and take their advice before issuing a Land Drainage consent or not.

I should say also that a Planning Consent, a Land Drainage Consent and an Environmental Permit are three entirely separate matters. None are dependent on any of the others.

We will advise the site operator to apply for the Land Drainage Consent and Environmental Permit and have these run in parallel with the Planning Application. Although I have been able to visit the site and give an opinion on flood risk the Environment Agency will not do so unless they receive an application. We do not yet have any named contacts at the Agency for this application or related matters.

The Environment Agency is a statutory consultee on this Planning Application. Whilst their response may cover the need for an Environmental Permit they will not consider the detail in advance of the application for it being made.

Because of its upland location land drainage (in terms of flood risk) is not likely to be a material consideration to the Planning Application, whereas other matters such as the impacts on ecology, landscape, highway and environment (including noise) clearly will be.

**Tony Brummell MSc CEng FICE FCIWEM MCIHT MCMI**  
**Building Control Manager**

**Cherwell Building Control Service**  
Place and Growth Directorate  
**Cherwell District Council**

**From:** [cllr.woodcock@hornton.org.uk](mailto:cllr.woodcock@hornton.org.uk)  
**Sent:** 01 April 2021 11:52

**To:** Tony Brummell  
**Cc:** Nathanael Stock ; George Smith  
**Subject:** Watercourse at Hornton Grounds Farm

Dear Mr Brummell

I am writing regarding your recent report into breaches on land owned (and indeed not owned) by Mrs Kerwood. Please can you confirm that these are being followed up with EA?

As a Parish Council we are providing further evidence to EA and I trust that CDC is likewise liaising with them. Please can you confirm whether:

1. This is you or, if not, who within CDC is pursuing this matter
2. Who at EA the liaison is with
3. Current status

With thanks

Kind regards

Cllr. Woodcock

**From:** Tony Brummell  
**Date:** 12 March 2021 at 08:04:53 GMT  
**To:** Nathanael Stock , George Smith, Amy Sedman  
**Cc:** Chris Woodcock **Subject: Watercourse at Horton Grounds Farm**

The boundary between Horton Grounds Farm and the land on which Wroxton MX takes place is a watercourse which is a minor tributary of the Sor Brook. The watercourse is unnamed and is an Ordinary Watercourse. It is in the Thames catchment.

The watercourse rises within the land of Horton Grounds Farm as an issue of springs and flows eastwards at a generally steep gradient through a steep sided valley. About 300m downstream from its source it begins to form the boundary between the Farm and Wroxton MX and continues to do that for a further 300m or so.

Works requiring a number of consents have taken place on the watercourse to support the MX operation:

- The introduction of at least one weir
- A minor diversion of the watercourse
- The widening of the watercourse to create small pools to impound flows
- Pumping operations to abstract water from the created pools

I visited the site on 10 March accompanied by the owners of Hornton Grange Farm to inspect the watercourse and the works that had taken place on it. My purpose was to identify whether any breaches of land drainage and associated legislation had occurred. No consent applications have been made.

If a Land Drainage consent is applied for, I consider firstly whether a consent is needed and secondly whether a consent can be issued.

It was clear to me in this case that consents are needed and there have been breaches of section 23 of the Land Drainage Act 1991 in that works have proceeded without consent.

When considering whether a Land Drainage consent may be issued I assess the flood risk and ecological implications of the proposal. In this case it is possible that an Environmental Permit is also needed for the water abstraction. Whilst land drainage consents are within the remit of the Local Authority, Environmental Permits are issued by the Environment Agency.

#### 1. Flood Risk

I consider that the flood risk implications of what has been done are minimal. Therefore, on flood risk grounds alone I would be minded to issue a consent under section 23 of the Land Drainage Act.

#### 1. Ecology

I am not an ecologist but I can see there could be potentially adverse ecological impacts from what has been done. I would defer consideration of this to the Environment Agency. Such consideration would generally be based on the findings of an Ecological Survey.

#### 1. Abstraction

An abstraction licence, issued by the Environment Agency, is required if abstraction takes place above a de-minimis quantity of 20m<sup>3</sup> per day. I cannot comment on whether that threshold is exceeded.

Land Drainage and Environmental Permits are entirely independent of Planning Consents. Neither depends on any of the others but where relevant all are needed.

Assuming that a Planning Application is needed for the MX operation, an Environmental Impact Assessment should be requested to support it. If that Assessment specifically includes the impacts on flood risk and ecology in the riparian corridor, it would inform whether a Land Drainage Consent and Environmental Permit could be issued.

**Tony Brummell MSc CEng FICE FCIWEM MCIHT MCMI**

**Building Control Manager**

**Cherwell Building Control Service**

Place and Growth Directorate

**Cherwell District Council**