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**APPENDIX A2**  
**CROOKHAM VILLAGE PARISH**  
**NEIGHBOURHOOD DEVELOPMENT PLAN**  
2016-2032 - Referendum Version

**Published by Crookham Village Parish Council, July 2020**

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## APPENDIX A2 - FLOODING

- a) Parish flooding map
- b) Relevant maps from the HDC Strategic Flood Risk Assessment (SFRA), July 2016
- c) FACE IT Press Release 022 Hart Valley Unsuitable For Further Housing As Flooding Strikes Again - January 2014.
- d) Zebon Copse Residents Association – photos from reports

See reports FLOODING around Zebon Copse Estate, dated 1 April 2007, 20 July 2007 & January 2014

- e) FACE IT Response to Hart District Outline Planning Application 14/00504/Major Land at Watery Lane
- f) SuDs talk, by Annette Blackwell

### Parish Flooding Map

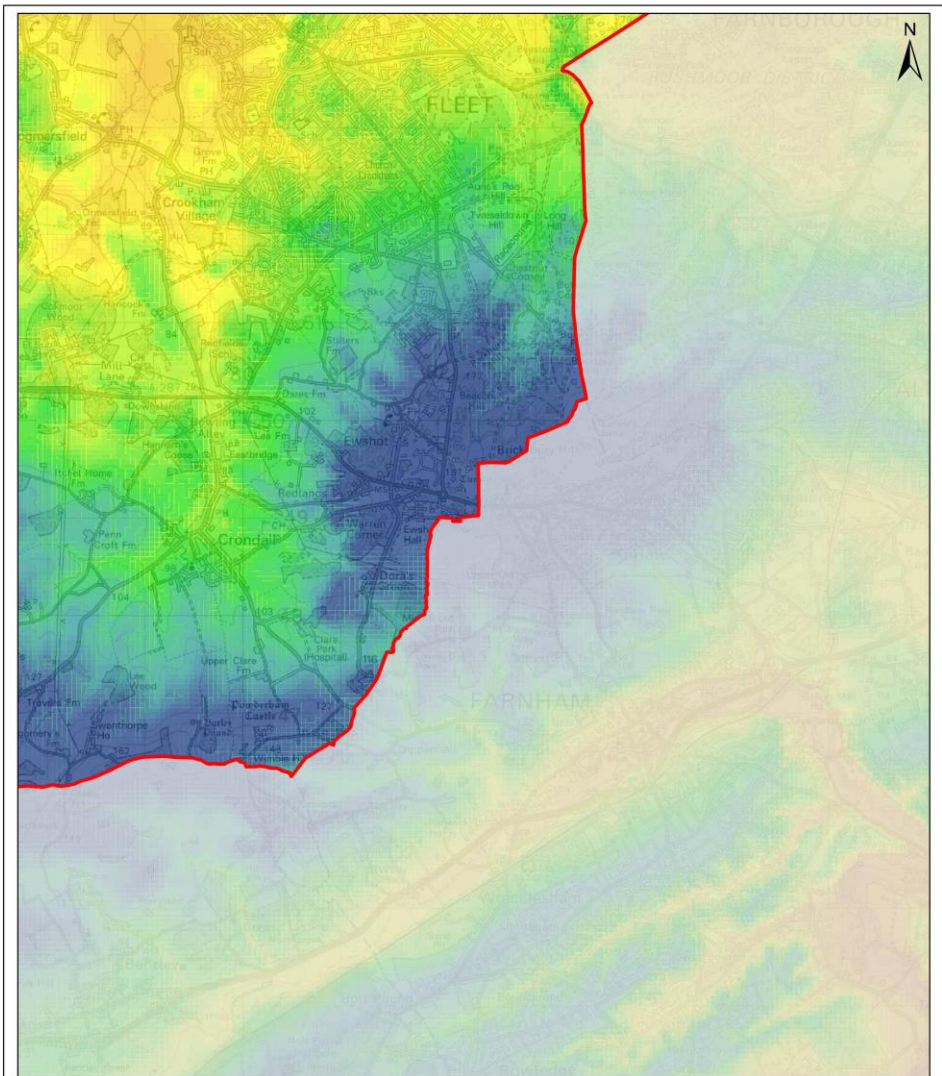


Figure 1 - Parish Flooding map

## **Relevant maps from the HDC Strategic Flood Risk Assessment (SFRA), July 2016**

The following maps are those relevant to the Crookham Village parish in the Hart District Council Strategic Flood Risk Assessment, Volume 2, Maps, July 2016

([https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwixud-N1b3hAhWQQRUIHXb7C1YQFjAAegQIAxAC&url=https%3A%2F%2Fwww.hart.gov.uk%2Fsites%2Fdefault%2Ffiles%2F4\\_The\\_Council%2FPolicies\\_and\\_published\\_documents%2FPlanning\\_policy%2FSFRA%252012th%2520December%2520FINAL.pdf&usq=A0vVaw36HFXrxJwqYsAJZGHA1Nsh](https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwixud-N1b3hAhWQQRUIHXb7C1YQFjAAegQIAxAC&url=https%3A%2F%2Fwww.hart.gov.uk%2Fsites%2Fdefault%2Ffiles%2F4_The_Council%2FPolicies_and_published_documents%2FPlanning_policy%2FSFRA%252012th%2520December%2520FINAL.pdf&usq=A0vVaw36HFXrxJwqYsAJZGHA1Nsh))



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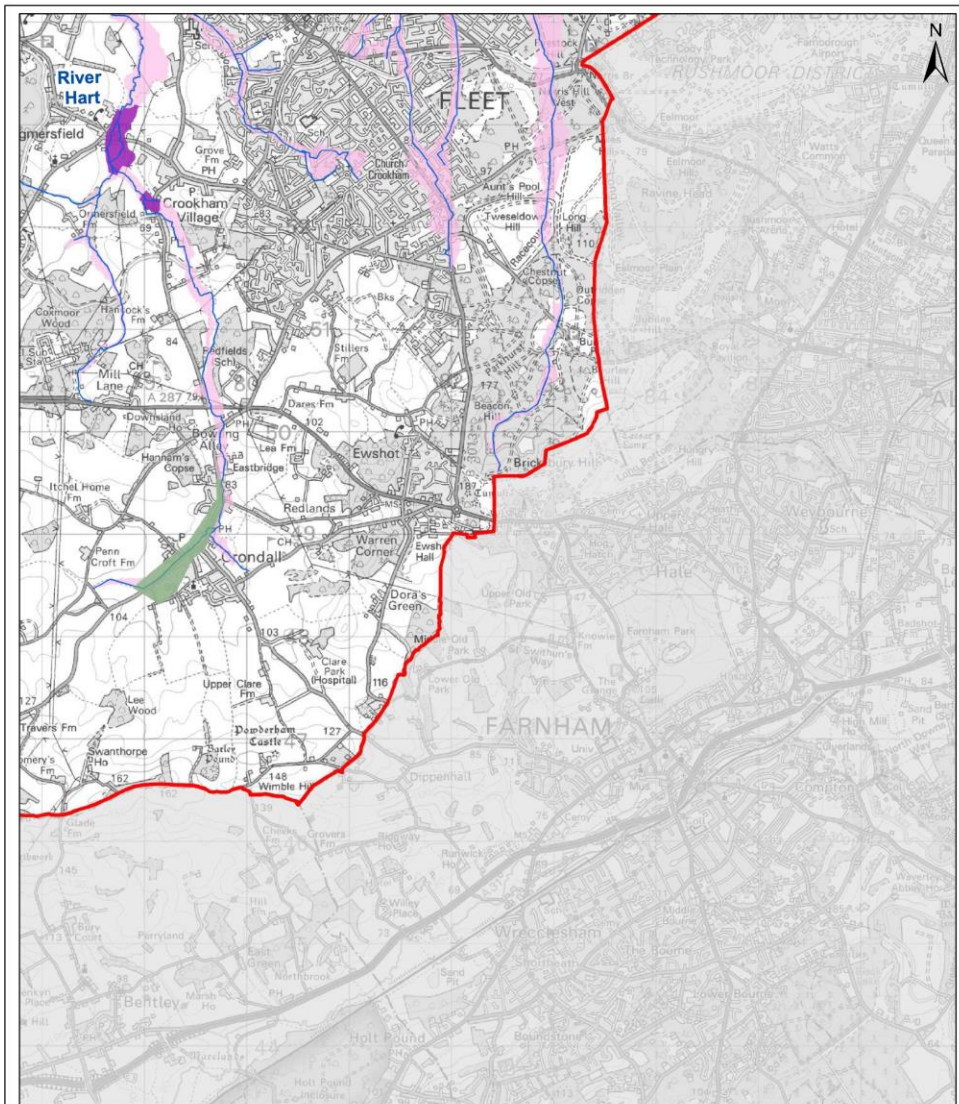
Figure 2-3 - Topography

<b>Legend</b>					Strategic Flood Risk Assessment		
Study Area							
DRAWN BY	CHECKED BY	PASSED BY	DATE	SCALE @ A3	ISSUING OFFICE	DRAWING NUMBER	REV
HT	ST	LM	24/04/2015	1:70000	E.Grinstead	CS072101_Fig2.3	-

LAYOUT FILENAME: F:\Environment\Z\VE1\CS000000\GIS\ARC\mxd: XXXXXXXX.mxd

Figure 2 - HDC SFRA – Fig. 2.3 - Topography





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Figure 3-3 - EA Flood Warning and Flood Alert Areas

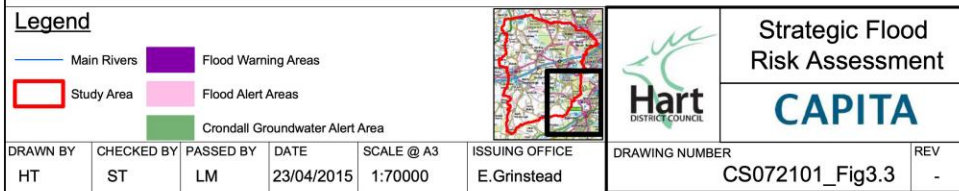
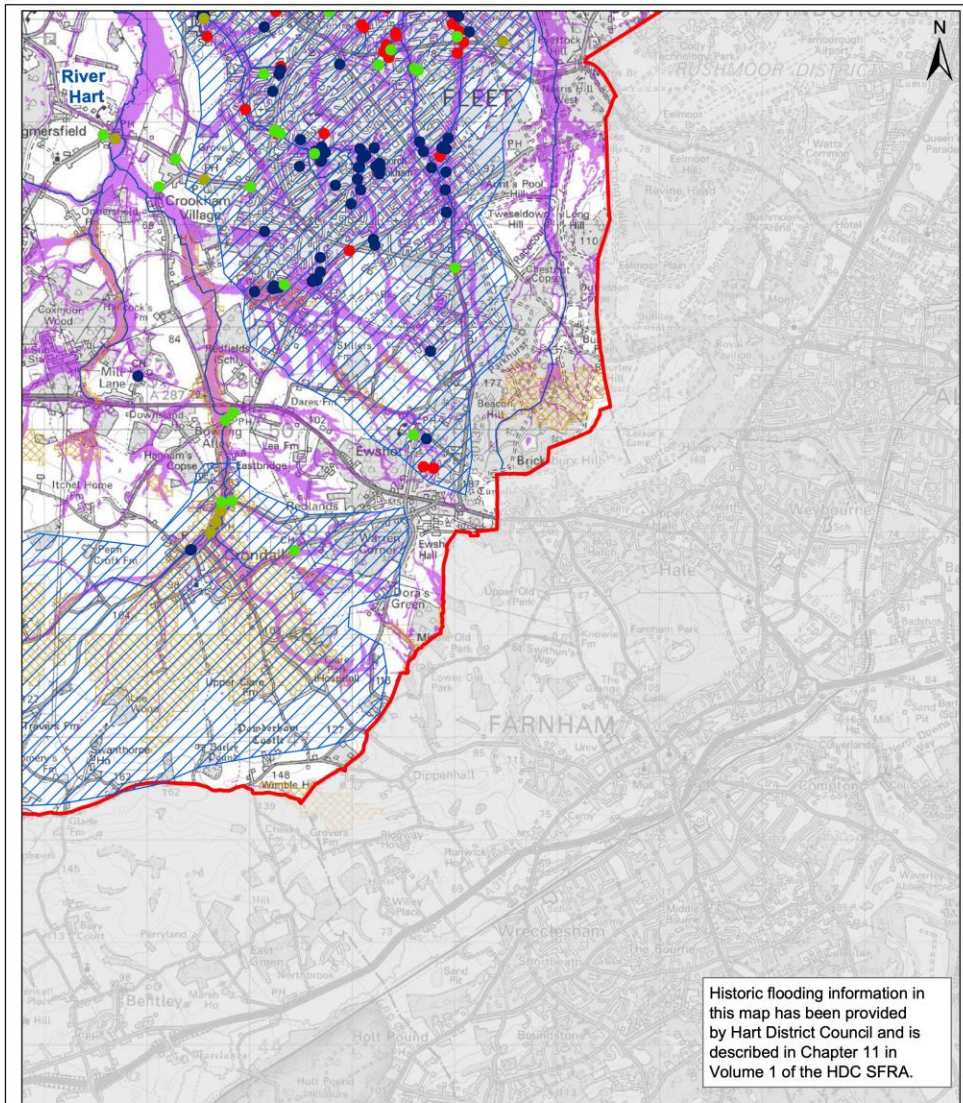


Figure 3 - HDC SFRA – Fig. 3.3 - EA Flood Warning and Flood Alert Areas



Historic flooding information in this map has been provided by Hart District Council and is described in Chapter 11 in Volume 1 of the HDC SFRA.

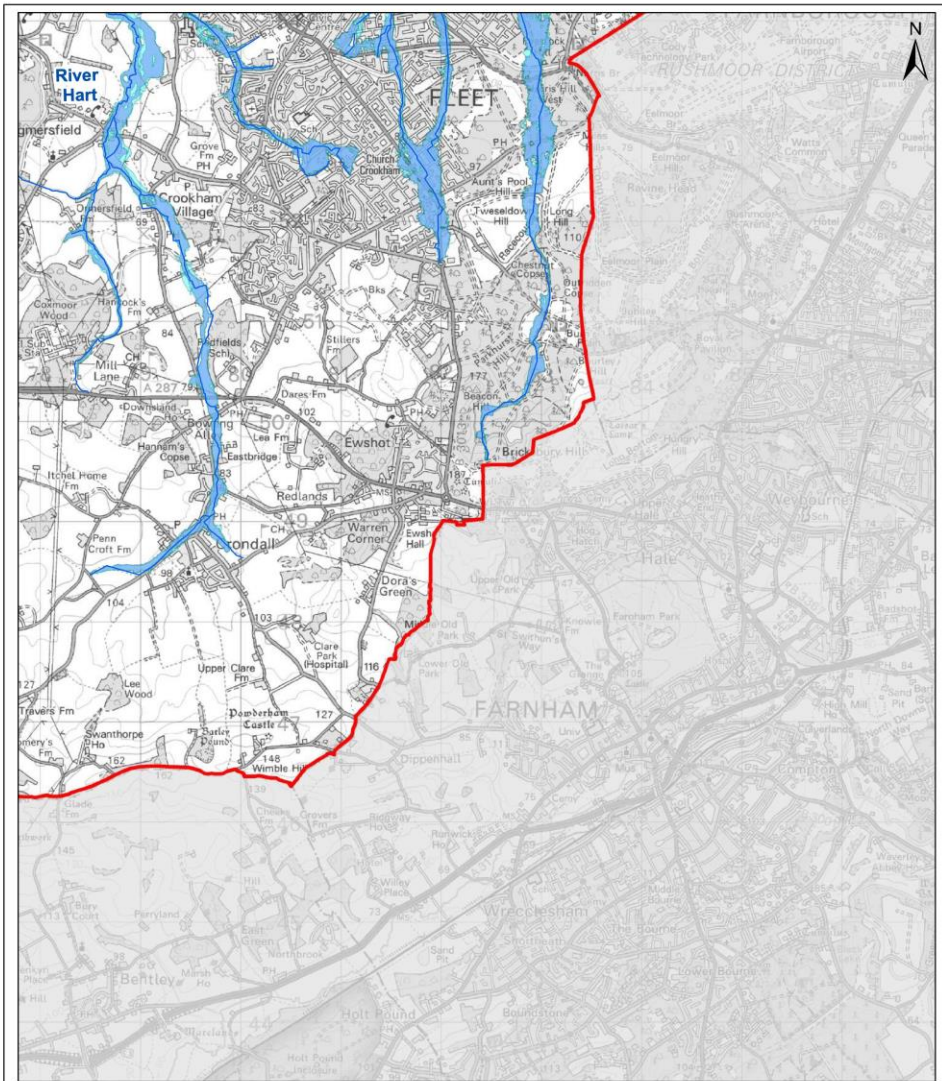
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**Figure 4a-3 - Indicative Flood Problem Areas and Causal Areas**

<b>Legend</b> Causal Areas Main Rivers Study Area Indicative Flood Problem Areas - Groundwater Indicative Flood Problem Areas - Surface Water		Historic Flooding Records 2007 Historic Flooding Records 2014 Historic Flooding Records 2015 Historic Flooding Records 1988 Historic Flooding Records 1990			<b>Strategic Flood Risk Assessment</b>  		
DRAWN BY	CHECKED BY	PASSED BY	DATE	SCALE @ A3	ISSUING OFFICE	DRAWING NUMBER	REV
GA	LM	LM	02/11/2015	1:35000	London	CS072101_Fig4a.3	-

Figure 4 - HDC SFRA - Fig. 4a.3 - Indicative Flood Problem Areas and Causal Areas





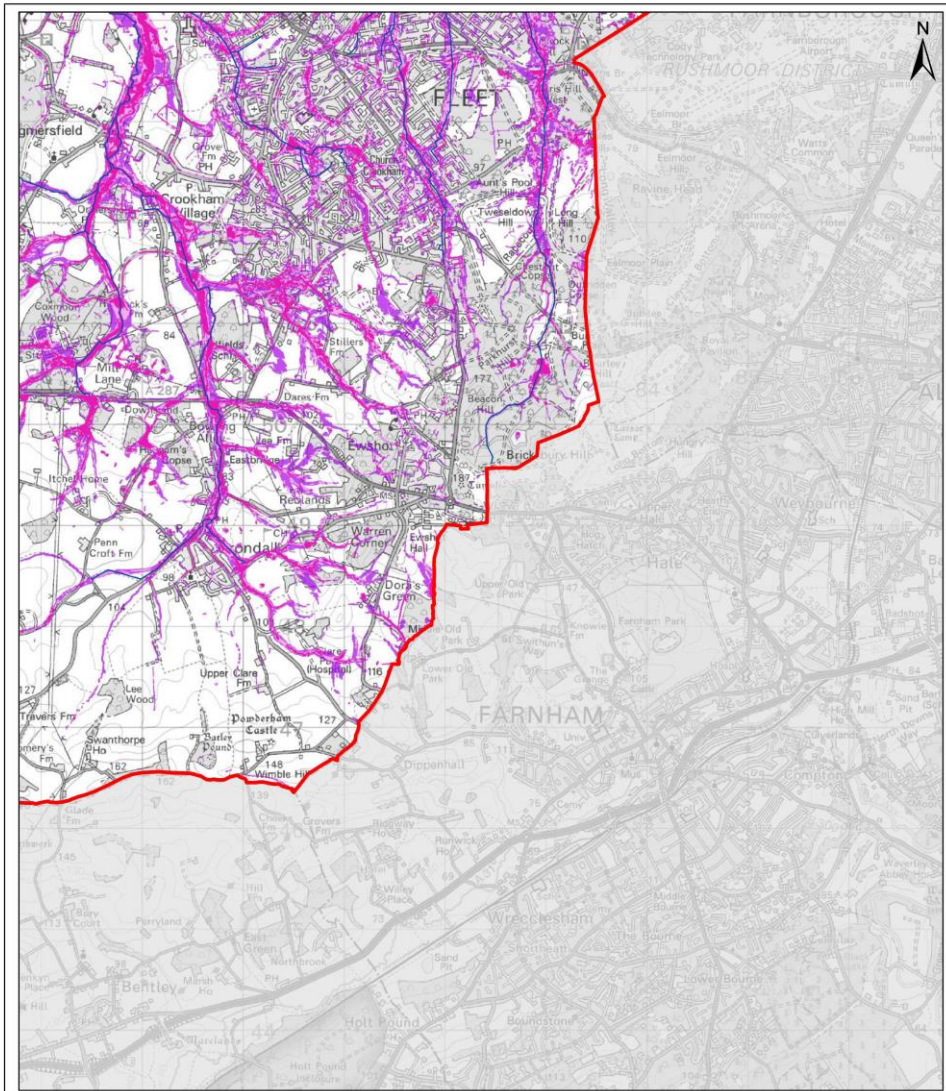
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Figure 5-3 - EA Flood Zones

<b>Legend</b>					Strategic Flood Risk Assessment		
Main Rivers	Flood Zone 3				<b>CAPITA</b>		
Study Area	Flood Zone 2						
DRAWN BY HT	CHECKED BY ST	PASSED BY LM	DATE 24/04/2015	SCALE @ A3 1:35000	ISSUING OFFICE E.Grinstead	DRAWING NUMBER CS072101_Fig5.3	REV -

Figure 5 - HDC SFRA - Fig. 5.3 - EA Flood Zones



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Figure 8-3 - Surface Water Flooding

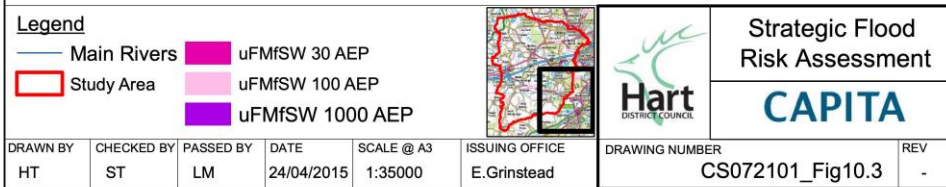
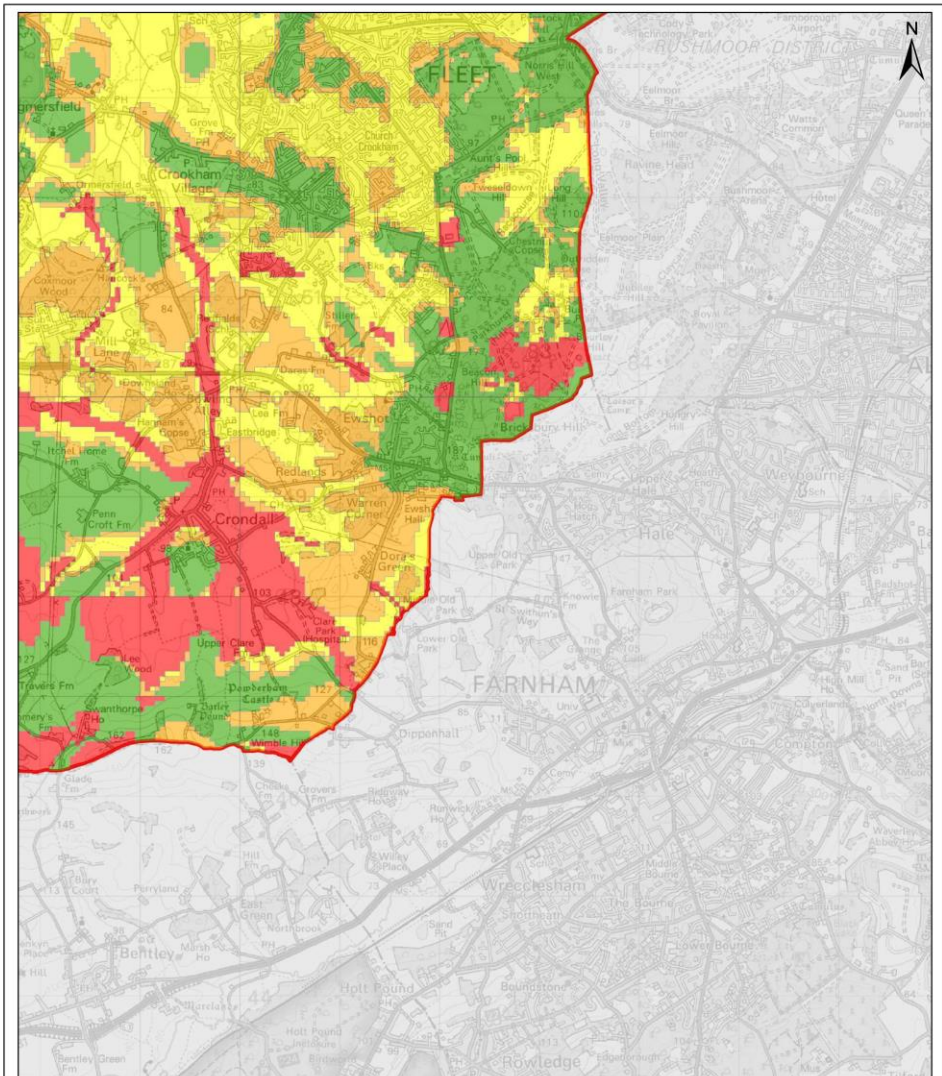


Figure 6 - HDC SFRA - Fig. 8.3 - Surface Water Flooding





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**Figure 9-3 - Infiltration SuDS Suitability**

<b>Legend</b> Study Area <b>Drainage Summary</b> Highly compatible for infiltration SuDS Opportunities for bespoke infiltration SuDS Probably compatible for infiltration SuDS Very significant constraints are indicated				Strategic Flood Risk Assessment 			
DRAWN BY HT	CHECKED BY ST				PASSED BY LM	DATE 24/04/2015	SCALE @ A3 1:35000

Figure 7 - HDC SFRA - Fig. 9.3 - Infiltration SuDS Suitability

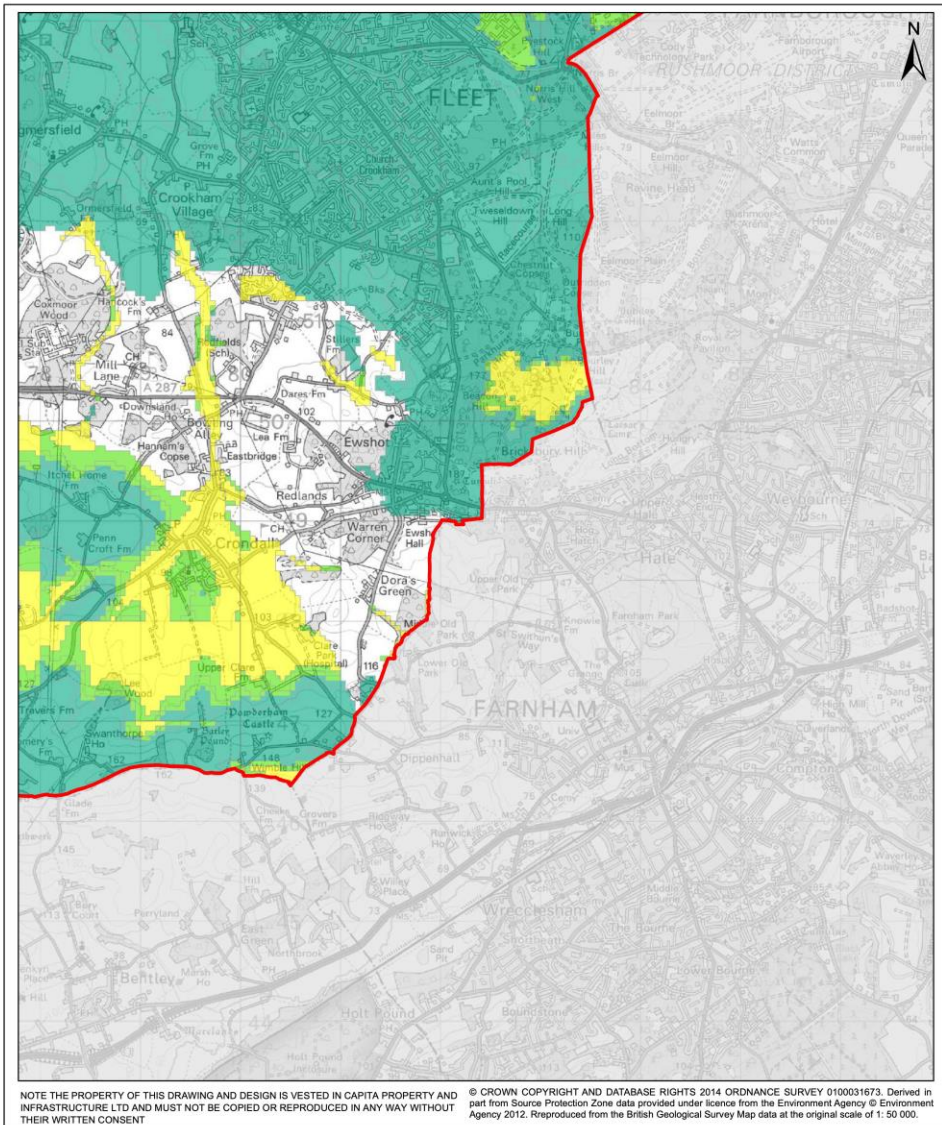
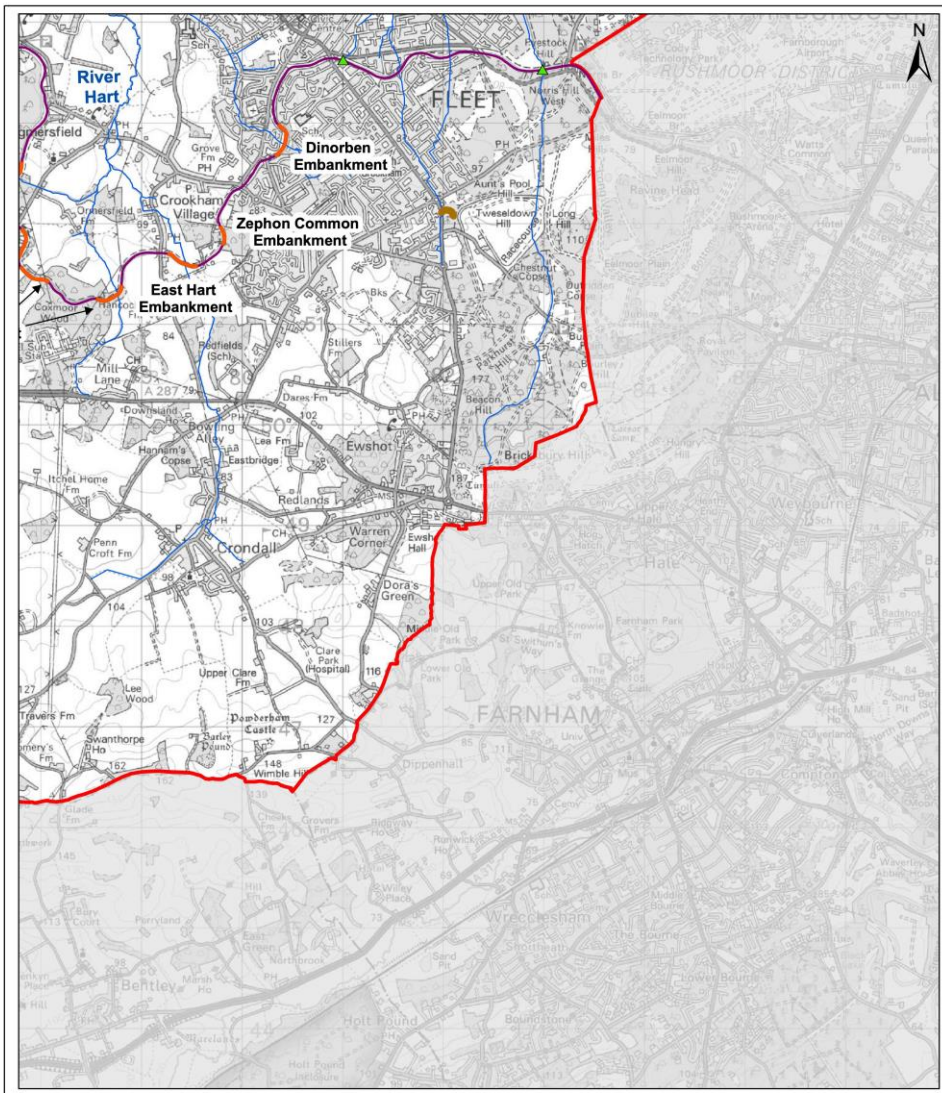


Figure 10-3 - Groundwater Flooding

Legend			Strategic Flood Risk Assessment				
Study Area	Potential for groundwater flooding to occur at surface			CAPITA			
Limited potential for groundwater flooding to occur	Potential for groundwater flooding of property situated below ground level						
DRAWN BY	CHECKED BY	PASSED BY	DATE	SCALE @ A3	ISSUING OFFICE	DRAWING NUMBER	REV
HT	ST	LM	24/04/2015	1:35000	E.Grinstead	CS072101_Fig12-3	-

Figure 8 - HDC SFRA - Fig. 10.3 - Groundwater Flooding





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Figure 11-3 - Canal Embankments & Flood Defences

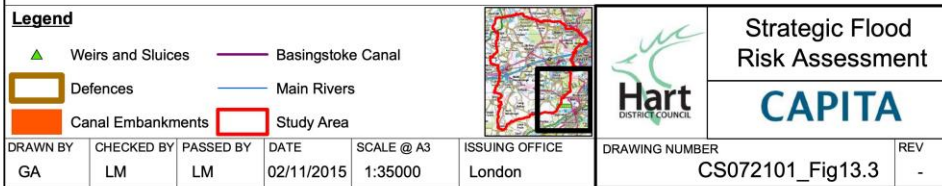
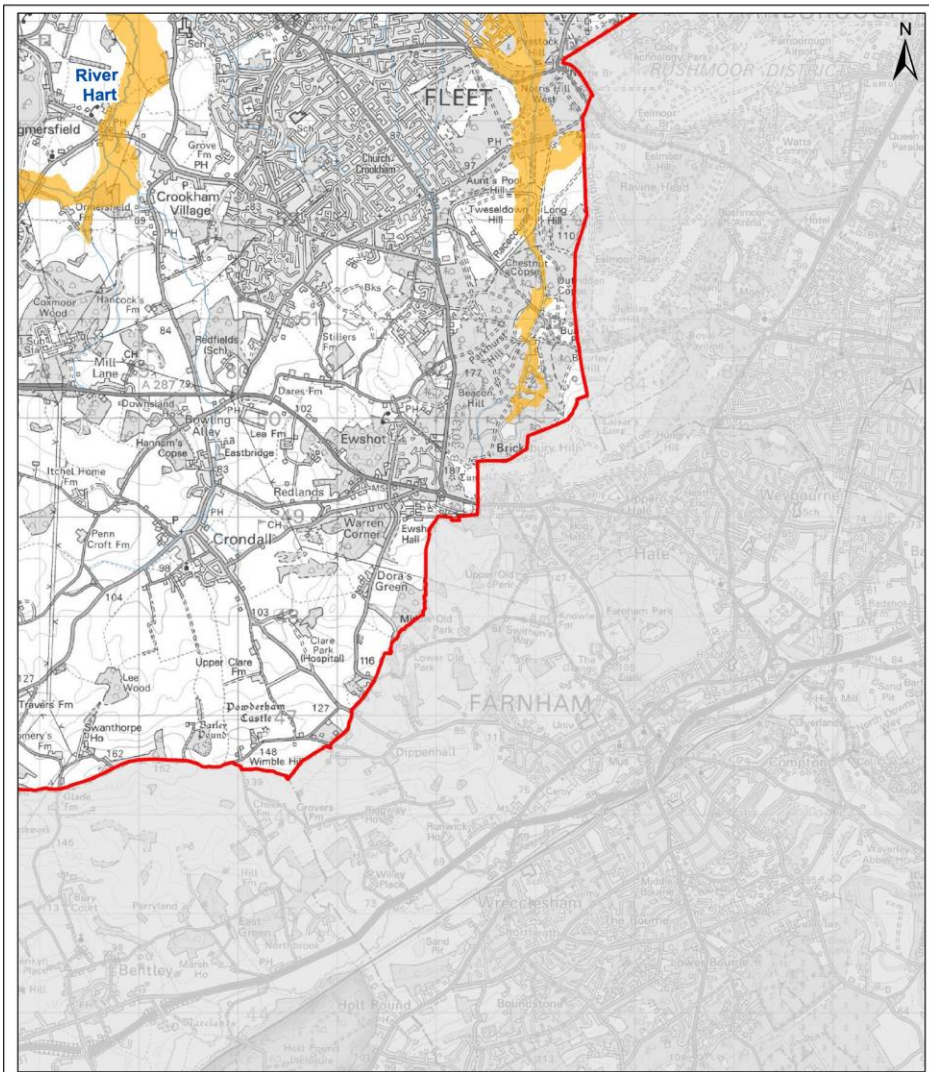


Figure 9 - HDC SFRA - Fig. 11.3 - Canal Embankments & Flood Defences



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Figure 12-3 - Flood Risk from Reservoirs

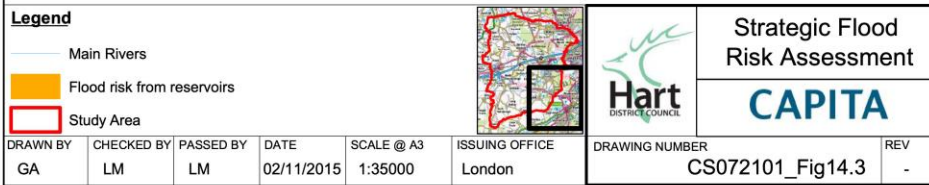


Figure 10 - HDC SFRA - Fig. 12.3 - Flood Risk from Reservoirs



**FACE IT Press Release 022 Hart Valley Unsuitable For Further Housing As Flooding Strikes Again - January 2014.**

HART VALLEY UNSUITABLE FOR FURTHER HOUSING AS FLOODING STRIKES AGAIN  
Nature vividly demonstrated the course of the Hart River over the weekend of the 4th Jan 2013 as we saw some of the heaviest rainfall in recent years. Man-made drainage systems failed the test and the ditches, streams, and rivers that have naturally drained this area for centuries took over their role as the low-lying land of the River Hart Valley again showed its unsuitability for further housing development.

At Hitches Lane to the West of Fleet the drainage system could not cope and water running through the low-lying land came out of drains and flooded the road although drivers continued to brave the flood with dramatic results.



IMG001  
Hitches Lane



IMG002  
Hitches Lane

Further along the valley at Dogmersfield, the River Hart flooded houses and gardens and the roads became impassable due to flood waters.



IMG003  
Gardens flooded at Dogmersfield



IMG004  
Gardens flooded at Dogmersfield



IMG005  
Road impassable at Pilcot Road,  
Dogmersfield

Slightly upstream at Crookham Village the river broke its banks and low-lying fields were flooded. There was run-off across Crondall Road and in Stroud Lane with the road having to be closed for some time.



IMG006  
River Hart bursts its banks at  
Crookham Village



IMG007  
Flowing water in Stroud Lane,  
Crookham Village

Further upstream the natural water meadows of the River Hart near the Basingstoke Canal and at Zephon Common Lane showed their true nature. Here the river again broke its banks and created a massive flood plain on the fields almost reaching nearby homes. Three households were cut off by the flood until late evening on Saturday. Had this water not been held here by this flood it would have been even more serious downstream in Crookham Village, Dogmersfield and Hitches Lane.



IMG008  
Poulter's Lane Water Meadows



IMG009  
Fields at Zephon Common Lane



IMG010  
Course of River Hart at Zephon  
Common Lane

Further along the valley the stream and ditches around the aptly-named Watery lane filled up and over-flowed further soaking the land at Albany Farm.



IMG011  
River Hart bursts its banks at  
Watery Lane



IMG012  
Waterlogged land at Watery Lane

This land holds water during the winter that will be slowly released providing the gentle trickle of water into streams and rivers that sustains life in the dry summer months. Martin Grant is proposing to build on this land and provide an urban drainage scheme based on 'balancing ponds' to absorb the water that the land would normally do. On the Zebon Copse Estate, the man-made drainage systems failed to cope with the run-off from roads and housing, with 'balancing ponds' overflowing and flooding the roads and



gardens of the estate. The adjacent roundabout on Redfields Lane next to Redfields Garden Centre was also dangerously awash. This overflow also passed run-off water into the Hart Valley contributing to the flooding downstream.



IMG013  
Zebon Copse Balancing Pond  
overflows to roads  
Church Crookham

IMG014  
Roundabout awash at Redfields  
Lane  
Church Crookham

Back in 2007 there was similar major flooding in the estate as the balancing pond overflowed. The 2007 flooding was supposedly due to be 'once in 500 year rainfall' but here we are seven years later with the same or worse problems.

A FACE IT spokesperson said "The weather over the last month has demonstrated why the Hart River runs in a valley and the area has a high water table. Water meadows and low-lying land act as natural water storage in the peaks of the season and naturally release it over time into the streams and rivers. These events show the unsuitability of this land for further large-scale development and the inadequacy of the provision in existing developments for the peak events which occur with apparently increasing frequency and severity."

FACEIT is the local campaign group for the Fleet and Crookham areas of Hart with an increasing membership and profile. The group has been actively engaged in the planning process and has encouraged Hart to review and improve local plans for the benefit of the community and the environment.

Ends

Pictures courtesy of FACE IT members.

For further information see [www.faceit-group.org](http://www.faceit-group.org) or contact [publicity@faceit-group.org](mailto:publicity@faceit-group.org) or [action@faceit-group.org](mailto:action@faceit-group.org)

## Zebon Copse Residents Association – photos from reports

See reports FLOODING around Zebon Copse Estate, dated 1 April 2007, 20 July 2007 & January 2014



*Figure 11 - Brandon Road adjacent to the main balancing pond, 2003*

Brandon Road adjacent to the main balancing pond was too deep to cross wearing Wellington boots and was a challenge to cars



*Figure 12 - Redfields end roundabout, 2003*

A strong flow of water from the Redfields end roundabout ran along Brandon Road (here seen from the junction with Barn Meadow Close looking towards Redfields Lane) and contributed to the flooding opposite the balancing pond.

Roadside drains were blocked by fallen leaves, which compounded the problem. Cleaning the drain covers proved to be a fruitless exercise, since they immediately obstructed again with further leaves.



*Figure 13 - Brandon Road roundabout, 2003*

Looking South from the Brandon Road roundabout along Redfields Lane as Robert Hopkins, HCC highways engineer, prepared to close the road. Flood water at the end of Watery Lane was too deep for safe passage of cars.



*Figure 14 - Flooding at Du Maurier Close, November 2006*





*Figure 15 - Brandon Road balancing pond - July 2007*

The bund along the western side of the main balancing pond on Brandon Road was breached at SU 5031 5140, allowing water to flow across the southern side of Rebecca House to 5 and 6 Rasett Mead and Nos 25



*Figure 16 - Brandon Road balancing pond breach, July 2007 - Natural contours retained the water at the northern western edge of the pond area.*



Figure 17 - Brandon Road balancing pond overflowed from a point close to its northeastern corner (July 2007).



Figure 18 - Ewshot Lane - Runoff from the QEB site July 2007

This picture was taken from Ewshot Lane at SU 8082 5120 looking northeast. The water at this point was over a foot deep and moving very quickly. There were two feeds: One from the right of the picture and the other from straight ahead.





*Figure 19 - Ewshot Lane July 2007 - looking towards Redfields Lane from same place as above figure*



*Figure 20 - The ditch across the entrance to Redfields Garden centre, July 2007*

The ditch across the entrance to Redfields Garden centre was over full and spilling further water onto the road.



Figure 21 - Nether Vell Mead affected by the flow down Ewshot Lane and across Redfields Lane, July 2007



Figure 22 - Aldershot Road / Redfields Lane, Winter 2013/14





Figure 23 - Brandon Road balancing pond, Jan 2014



Figure 24 - View from Burnt House of flooded fields on Zephon Common Lane, winter 2013/14

It was reported that Zephon Common Lane was flooded to a depth of 2.5 feet, making it impassable to normal vehicles and thus cutting off properties from Poulter's Bridge Cottage to Riverside Cottage.



Figure 25 – end of Gables Road (at junction of Aldershot Road)



Figure 26 – Redfields Lane (outside St. Nicholas' School gate)





Figure 27 – Redfields Lane, approaching St. Nicholas' School and A287



Figure 28 – The roundabout in front of Redfields Garden Centre



*Figure 29 – Next to Brook Meadow Farm, Dogmersfield*



*Figure 30- Pilcot Road, leaving Crookham Village towards Dogmersfield*





Figure 31 – Redfields Lane



Figure 32 – Stroud Lane / Crondall Road



*Figure 33 - The driveway and road outside Forge Cottage on The Street*



*Figure 34 - The floods recede - Forge Cottage, January 2015*





*Figure 35 - The floods finally recede from the garden of Forge Cottage, Jan 2015*





## FACE IT Response to Hart District Outline Planning Application 14/00504/Major Land at Watery Lane

**Annex D: FLOOD RISK**  
**DATED 22 APRIL 2014**

### **INTRODUCTION**

The following is made up firstly of quotations taken directly from The Environment Agency's published response of 12 November 2013 to Martin Grant's pre-development application for Watery Lane (available at the Hart Planning website). The pictures are taken from a flood risk assessment report produced by Searchflow (Homecheck Professional Flood Report, Ref 32162348\_1, dated 12 August 2010) for a home buyer, who was in the process of buying No. 9 Tryplets at that time, with the outline of the Watery Lane development superimposed on the relevant part of the 1 in 100 year flood risk map. The final pictures show, in larger scale, that a significant area of proposed housing in the Watery Lane development lies within the 1 in 100 year flood risk zone.

### **HISTORY**

The western end of the Zebon Copse estate has suffered from frequent surface water flooding:

- Brandon Road pond has overflowed 4 times since 2000
- Run-off water from the western part of the QEB development will flow into the already strained Zebon Copse drainage<sup>1</sup> (and indeed did just that in January and February 2014)

The proposed Watery Lane development is likely to have a significant impact on Zebon Copse:

- Run-off water from Zebon Copse flows into this land
- Large areas of the proposed housing are in the flood risk zone
- Latest building standards require flood risk levels that are higher than was the case for Zebon Copse
- This could further exacerbate the flood risk for Zebon Copse

### **ENVIRONMENT AGENCY'S RESPONSE**

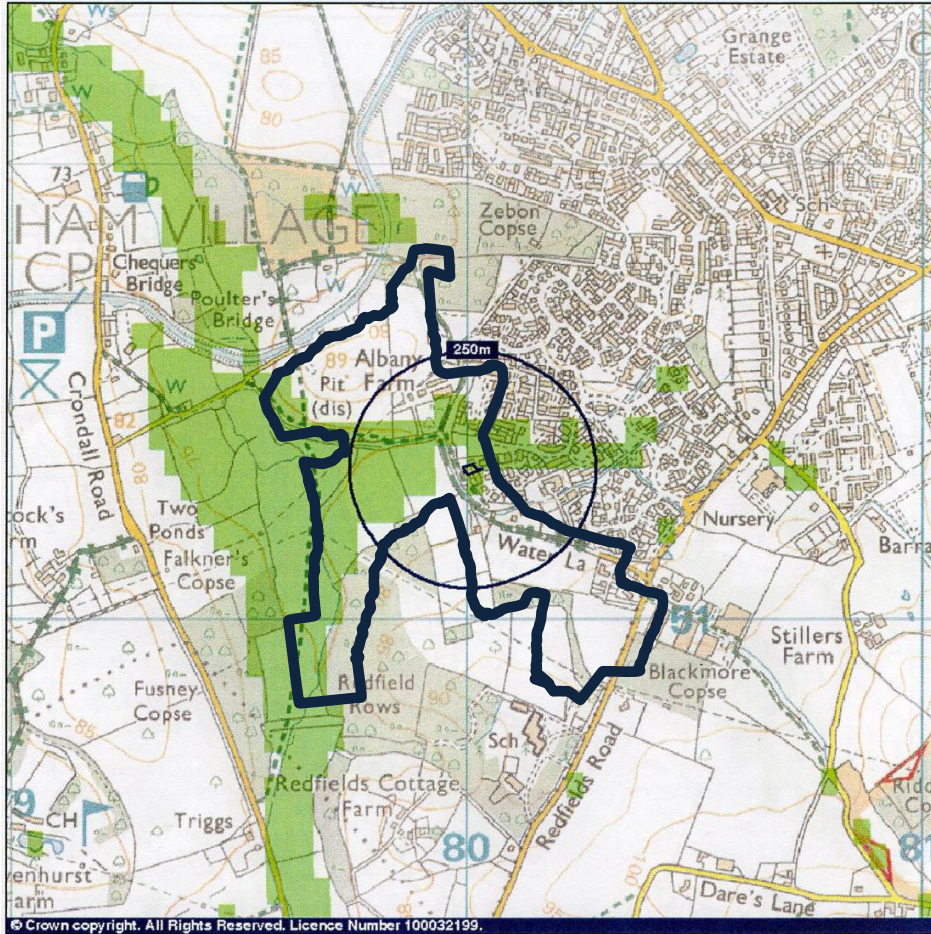
- "The site ... has areas located in Flood Zones 3 and 2 of the River Hart ... designated a main River"

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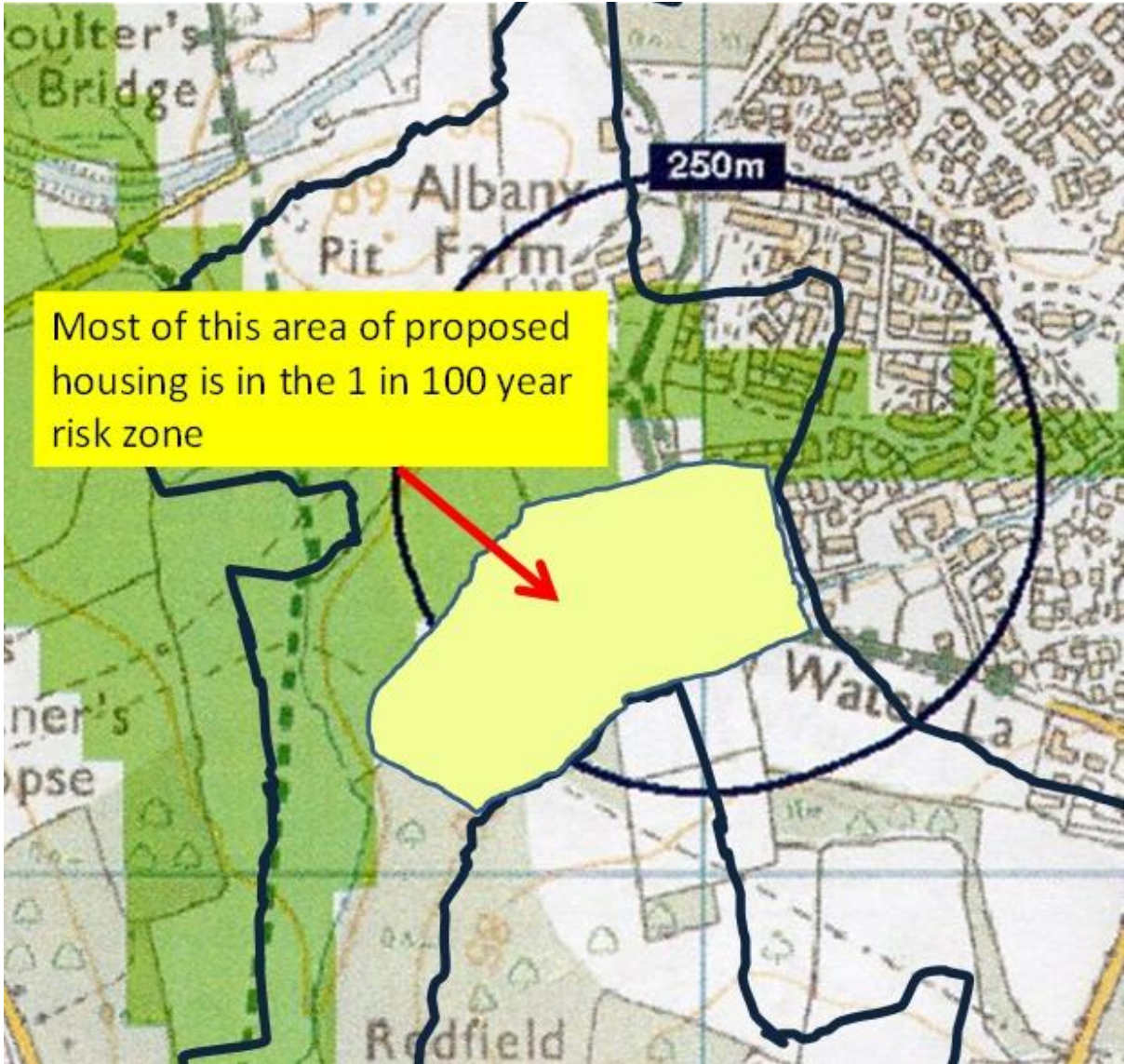
<sup>1</sup> See Report "Flooding around Zebon Copse Estate, Church Crookham, Hants GU52, by David Jackson, Chairman, Zebon Copse Residents' Association, 1 April 2007. Page 11 refers to the Q.E.B. Developers Consultants Water Quality & Hydrology Technical Appendix 'I' July 2003, page 9, quoting as follows, "the (QEB) site is currently drained by natural run off and infiltration. It is proposed to drain the site by utilising the same points of discharge as existing"

- “The site is down slope of much of Church Crookham and ... receives much of the runoff from this urban area”
- “A Flood Risk Assessment ... should address the following issues”...
  - “Demonstrate that the development will not increase flood risk elsewhere” and “that there will be no loss of floodplain storage up to the 1 in 100 plus climate change storm event”
  - “Finished floor levels should be set 300mm above the 1 in 100 plus climate change flood level”
- Surface water
  - The surface water strategy should show that “The site will not flood from surface water up to a 1 in 100 year storm with a suitable allowance for climate change”
  - “Surface water ... must be controlled such that ... water from roads and car parks does not flow into any watercourse or conventional drains. Measures for this may include adoption of SuDS”
  - Preference is for “infiltration over discharge to a watercourse”
  - “If infiltration methods are likely to be ineffective then discharge may be appropriate”
  - “The proposed site is situated on London Clay.” ... “The hydrogeological situation could limit the possibility of infiltration SUDS techniques”





Rough outline of proposed Albany Park development  
- overlaid on 1 in 100 year flood risk map (shown in green)





## SUDs talk

Copy provided by the author, Annette Blackwell, Burnt House, Zephon Common Lane

I have lived in my house for 23 years; fifteen of those years full time (I worked in the Far East for the first seven years of owning it so wasn't here all the time then). My house and my neighbours' house, Poulter's Bridge Cottage, are the closest properties to the proposed SANG. My house is approximately 150 metres away from the SINC and I can see the entrance to the track leading to the kissing gate from my back door. Between my house and the SINC is the River Hart, which runs along its boundary. The river is closer to the SINC than it is to my house.

The River Hart flows at the bottom of the field at the back of my house and then through a culvert underneath the Basingstoke Canal. The culvert acts like a bottleneck following heavy rainfall, which helps protect the properties downstream in Crookham Village, as once the water level reaches the top of the culvert (six foot high, I believe) the water backs up and floods the field. According to the Environment Agency website, the part of the field closest to my house is in Flood Zone 2, which means there is up to a one in one thousand chance of this occurring each year (see the map). As you can see from the photographs, this is misleading and the pictures contained in this document show water backed up to the bottom of my garden (beyond the one in one thousand year mark) on two occasions. In fact, this has happened at least eight times in the past fifteen years; three of these occasions during the summer months when there had been heavy rain after a spell of sustained dry weather (I do not have a record of the dates). Both sides of the river were under water on these occasions. There have been many anxious moments during the past twenty-three years when heavy rainfall is forecast, and many nights I have been in and out of bed during the night, watching the rise in the water level.

Anecdotally, the field next to my house flooded, a few years ago, to the one in one thousand mark, just after the farmer had cut the hay. This followed heavy rainfall after a period of sustained dry weather. The huge cylindrical bales of hay wrapped in black plastic were scattered over the field and became waterborne, floating towards the culvert. One or two acted like a cork in the culvert and the water backed up very seriously until the farmer managed to get them free on the other side of the tunnel. I can't remember the exact date but I don't think you cut hay at any time other than the summer. It was not more than ten years ago. There was another serious flood up to this mark in July in 2007 (the twentieth, I think) following a cloudburst early one morning, but I am not certain of the exact date. Again, heavy rain after a dry spell.

When this level of flood is reached my three sets of neighbours who live further down the lane at Riverside Cottage, Zephon House and Poulter's Bridge Cottage are completely marooned. They cannot get their cars to Crondall Road and there is no other vehicular access out. In years gone by they have had to wade through the water with their children and we have driven them to school.

I have a well in my garden and, for most of the year, the water level in the well is a few centimetres only below the level of the ground outside it. I presume this shows the high water table in the immediate area. The patch of grass opposite my house, and the verge up to the river, is green and lush, no matter how dry the weather has been. It is perhaps appropriate to note that the lane my house is in, Zephon Common Lane, was also called Watery Lane up until about

twenty years ago when this section, west of the swing bridge, was renamed. It was named Watery Lane for obvious reasons.

The site of the proposed SANG is known as Hillyburrow locally, and despite having had dogs for the past fifteen years, and despite living so close to it (as I have said, I can see it from my back door), I rarely walk with them on the footpaths through the field. The reason is, the ground is extremely waterlogged and slippery. For most of the year, you are in danger of slipping over and you come home with a dog that needs to be hosed down. My neighbours are the same and walk elsewhere. My neighbours at Zephon House usually go to the SPA at Caesar's Camp, at Beacon Hill and my neighbours at Poulter's Bridge walk the canal. They have a long-haired bearded collie (enough said) and I have never seen them on Hillyburrow.

I take my dog in the car to Crondall each day and walk around the farm tracks there. Part of the reason for having a dog, as I see it, is the social aspect. I have made many good friends from walking my regular route and my dog benefits from meeting and romping with other dogs. If you walk the area of the proposed SANG you rarely meet anyone. Hand on heart, the last time I walked the footpaths over Hillyburrow was about three years ago.

I have heard that Lyme disease has been reported in this area. I see roe deer very frequently in the vicinity of my house, the SINC and the SANG, and that is another deterrent from walking there. Where there are deer, there are ticks. This might be a factor that will put dog walkers off.

I have many times seen the horses that graze the SANG area up to their knees in water at the same time the grassland is carpeted in buttercups, which I believe is in June. The buttercups obviously love the wet, rich marshy conditions there.

I have outlined my concern if the proposed development at Watery Lane goes ahead, not least for the several householders in Zebon Copse that keep sandbags in their garages as a matter of course. I am concerned that there will be extra run off which will add to the flood risk. In addition, and in my experience of living next to it for twenty-three years, the area proposed for the SANG is unsuitable and will not be an attractive option for dog walkers and for recreational purposes.



26 November 2006 Taken from my bedroom window



22 December 2013






Taken 25 April 2014. Part of the proposed SANG with a boardwalk which was put in place to make walking the footpath easier and less wet underfoot.



Flood Zone indicated on Environment Agency website. Light blue area indicates 1 in 1000 year risk but flood level has been up to this level and beyond on at least 8 occasions in the past 15 years. Pictures above show the water at this level on two occasions (2006 and 2013) The Environment Agency wording is:

- **Light blue**  shows the additional extent of an extreme flood from rivers or the sea. These outlying areas are likely to be affected by a major flood, with up to a 0.1 per cent (1 in 1000) chance of occurring each year.

My pictures show water exceeding this mark on two occasions in the last ten years.

## Brooks Meadow flooding – 20<sup>th</sup> July 2007 (approx. 17:41)

Paul Rutherford kindly sent the following comments and photos of the flooding that occurred on his property, Brooks Meadow, on 20th July 2007.

Extracted from objection to Cross Farm development application

I have lived adjacent to an unnamed stream, known locally as Brook Stream (the ‘Stream’) for nearly 27 years.

This discharges into the River Hart approximately 50 meters downstream from this address.

The stream is to the west of the [*Cross Farm*] Application Site (the ‘Site’).

It floods—particularly if there is persistent heavy rain, driven into the Site’s hillside by a strong westerly wind.

A field forms the northern bank of Brook Stream. Fortunately, it is slightly lower relative to this property.

Therefore, initially when Brook Stream floods (which has done several times in the past) this runs off across the field, north-westerly into the River Hart.

So far, my main property has never flooded (my garage has) – but by the narrowest of margins (Once the responsibility of Thames Water we help mitigate the risk this by annually dredging the Stream).



*Figure 36 - Field between Brooks Meadow and Seven Steps*





*Figure 37 - Brooks Meadow – view of front of dwelling*



*Figure 38 - Brooks Meadow - view from front door of dwelling*



*Figure 39 - Brooks Meadow – Claire standing next to side of dwelling*



*Figure 40 - Brooks Meadow - Adam standing in flood at side of dwelling*





*Figure 41 - Brooks Meadow - Adam inspecting flood water at drain cover*



## Cron dall Road flooding – January 2014

Richard Gwynne kindly provided the following comments and photos of the flooding in January 2014

These pictures were taken in January 2014 following heavy rain. It is not the first time that the river has burst its bank in recent years.

The flow of the river was so great that the banks burst and cut a line straight across the field rather than follow its natural path. The water table is very high in this area, and the water crept up the gardens of the houses on the East side of Cron dall Road. Some items in people's outbuildings were damaged and the property 'Foxes Corner' had to evacuate its furniture from the down-stairs living area to higher ground. This latter property built water defences with sand bags and managed to keep most of the water out, but the outbuildings where the freezers were kept were destroyed, along with their contents.



*Figure 42 - North 1*

River burst its bank and flowing fast. View from property along Cron dall Road view facing North



*Figure 43 - East 1&2*

River burst its bank and flowing fast. View from property along Crondall Road facing east

## Foxes Corner, Crondall Road, January 2014

The previous owners of Foxes Corner, provided the following photographs, showing the extent of the flooding to the garden in 2014.



*Figure 44 - View from upper floor of Foxes Corner*



*Figure 45 - View of Foxes Corner from end of garden*





*Figure 46 - View of garden and Cross Farm fields behind Foxes Corner*



*Figure 47 - View of Cross Farm water meadow behind Foxes Corner*