

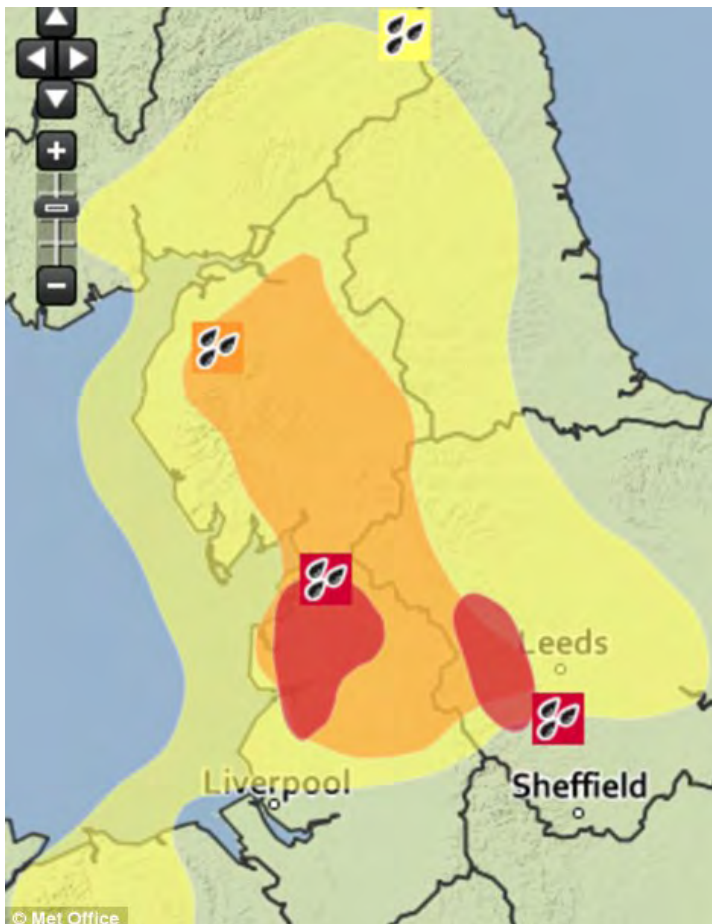
# **FLOODING INCIDENTS SINCE SEFTON** **LOCAL PLAN HEARINGS IN DECEMBER** **2015**

A Photographic record.

Compiled by John Williams on behalf of Formby Residents Action Group.

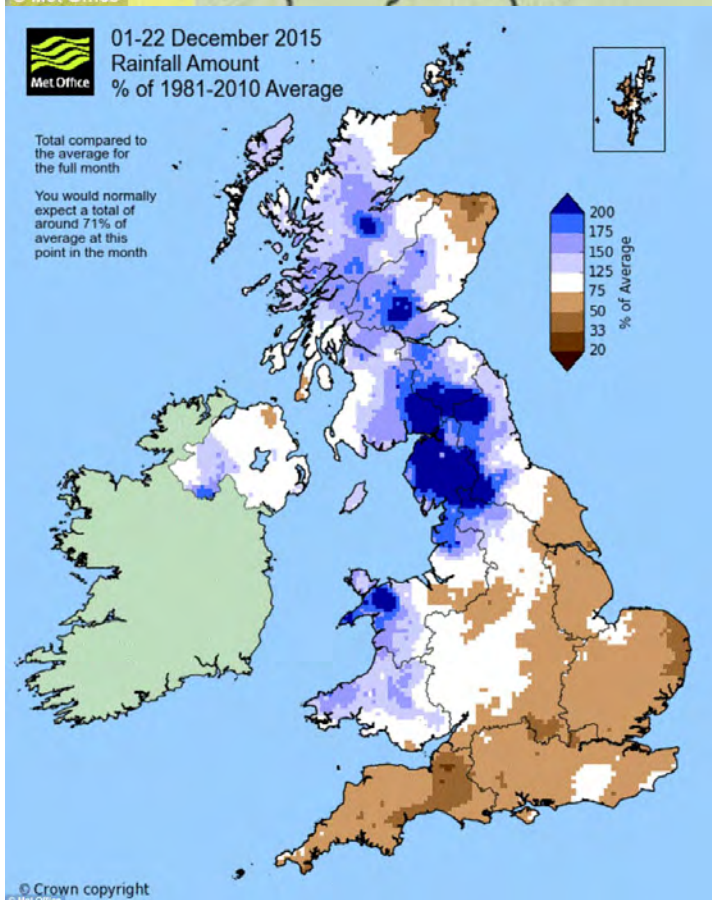
No pictures of internal flooding to identifiable properties have been included in this document so as not to give public evidence that may devalue individual properties. Information about internal flooding incidents may be available from the Environment Agency, United Utilities or Sefton Council.

Only a selection of photographs have been included, should you require further photographs, please contact Formby Residents Action Group or John Williams, who will be able to supply several other views of many locations.



Storm Eva and Storm Frank both officially “missed” Sefton during December 2015. The following photographs therefore should NOT be counted the result of exceptional rainfall.

Source: Met Office



Before the storms hit, Sefton had only “AVERAGE” rainfall for December 2015 meaning that the ground was no more saturated than it would otherwise have been in any other year. As “usual” though, the ground is saturated.

Source: Met Office

## LYDIATE, MAGHULL AND MELLING



### **Coppull Road, Lydiate** – Boxing Day 2015

This road is just off Lambshear Lane so is intrinsically linked to site number MN8.1 (safeguarded land) Lambshear Lane and MN2.28 Liverpool Rd, Lydiate

The surface water systems cannot cope with the current level of development in this area so development that does not drain water away will make this situation worse. Any designs incorporating soakaways or site storage of surface water (whether in lined or natural, breathable ponds) are not suitable for areas where this happens. ONLY drainage designs where water can successfully be drained well away from these sites and existing flooding locations should be considered. If this does not fit in with Sustainable Urban Drainage Systems best practice, you should consider the vital service that existing greenfield sites like MN8.1 and MN2.28 carry out in providing a buffer to prevent roads like this from even worse flooding.

At least someone was having fun at this very worrying time.



## Lamshear Lane

itself also flooded (top) - like Formby, the entire surface water system ends up in land drainage ditches, although they are “sustainable” and attenuate the flow, the ditches cannot cope with the level of rain causing hazards to both property and public highway.

The other side of the same development site,

## Moss Lane, Lydiate

once again flooded. This regular problem location needs to be solved before development takes place. The water coming off the fields (at greenfield runoff rates) is too great for the land drainage systems to cope.

Both Boxing Day 2015

You will recognise this location looking toward the Meadows pub, as being near the entrance to Maghull Town Hall on

**Hall Lane** (where the Local Plan Hearings were held.)

This flooding is particularly worrying as United Utilities have already fitted a storm water tank in the grounds of the Town Hall complex to mitigate the flooding problem in this area of Maghull, but this is actually the watercourse overflowing that was the initial cause of this flooding.

Boxing Day 2015



Top:- **Hall Lane** also suffered flooding on the other side of Northway to the Town Hall.

Middle:- Further along **Northway**, just before Switch Island, the main A59 was flooding. This was particularly worrying as it is close to Fouracres where serious internal flooding occurred in 2012.

Coming from Switch Island, to avoid this flooding you have to go along the new Brooms Cross Road and take the next junction into Maghull along Bridges Lane and Sefton Lane.

Pictures from Boxing Day 2015



Further downstream, the next main road linking Maghull to Brooms Cross Road was also flooded in several places. This picture is of **Sefton Lane** which was later closed because of the flooding.





Two other pictures of **Sefton Lane/Bridges Lane** and one of **Dovers Brook**

This flooding is not caused by blocked gullies or a lack of capacity in the highway drainage (Sefton Council) or public sewerage systems (United Utilities) – but, as you will see by the photograph below, Dovers Brook was so high, it was higher than the bridge soffit, also higher than the road that drains into it. This is an extremely serious situation as there have been several recorded instances of the cottages in the photographs suffering from internal flooding. The amount of detritus gathering against the bridge shows that the water had been at that height for some time.

Photos taken Boxing Day 2015





**Dovers Brook** continued at a very high level on the other side of **Bridges Lane** – note how close it is to flooding the adjacent properties.



The Council attempted to clear the flood on **Bridges Lane** between **Dovers Brook** and the **River Alt** but because the water was coming back from the River Alt this exercise would have proved a little difficult.



Eventually the road was closed to traffic because of the flood, which meant traffic would have to turn round and go along Lunt Road.



But **Lunt Road** was also flooded

Boxing Day 2015



### **Waddicar Lane, Melling** – Boxing Day 2015

This road is between the two sites proposed for Melling. (MN2.30 and 2.31) This picture is of the exact location previously mentioned during the Local Plan Hearings as having a flooding problem. Too much water flows off site MN2.30 which means that site MN2.31 floods, cannot cope with the flow, and floods the road (Waddicar Lane) and frequently floods properties on the left hand side of the picture. Roads such as Chapel Lane, Woodland Road, Rock View and the Chestnut Walk estate all flood because they are lower than Waddicar Lane.

The surface water systems cannot cope with the current level of development in this area so development that does not drain water away quicker than the current rate will make this situation worse. Any designs incorporating soakaways or site storage of surface water (whether in lined or natural, breathable ponds) are not suitable for areas where this happens. ONLY drainage designs where water can successfully be drained well away from these sites and existing flooding locations should be considered. If this does not fit in with Sustainable Urban Drainage Systems best practice, you should consider the vital service that existing greenfield sites like MN2.31 to the left of this picture and MN2.30 to the right, carry out in providing a buffer to prevent roads like this from even worse flooding. To have the site MN2.30 being drained by a pump (as the developer claims UU have approved) giving out the current greenfield runoff rate of the site, plus any surface water runoff at times of rain like this, will obviously make this flooding worse, not better – it would be extremely frustrating to residents finding that they call the fire brigade out to pump away this water only to find the water is being pumped in at a greater rate from the site MN2.30 on the right of this picture.



## SOUTHPORT



A run of locations in the northern part of Southport that are in the same catchment all flooded.

Top: The **Botanic**

**Gardens** flooded in several locations. The land drainage system here flows out through The Pool watercourse flowing north. The ground is so saturated that the watercourses in the area are unable to take the existing flow. Any surface water put into soakaways in this area will overwhelm the existing system faster than the current rate, and any in ground storage systems will displace existing storage in the ground making this situation worse.

Due to The Pool watercourse and surface water system being unable to take the flow, it overflows into the combined sewerage system in

**Verulam Road** (middle)

and **Merlewood**

**Avenue** (bottom) both roads flood with a mixture of foul sewage and surface water. This combined sewerage system then flows into Bankfield Lane, off which sites are proposed in the Local Plan. Clearly that system is unable to cope with the existing flow. United Utilities are supposed to have already “solved” this problem (never mind applying “mitigation” measures), clearly this was insufficient to cope with the existing flow never mind additional foul flow from new developments and any accidental overflow from surface water system. Note: the rain had stopped by the time these photographs were taken on Boxing Day 2015



Immediately north of Verulam Road is **Balmoral Drive** (left) which also flooded, the next main road parallel to Balmoral Drive is **Preston New Road** (below) which also flooded. These roads are served by combined public sewers (foul and surface water both in the same pipe) with land drains or watercourses, mostly culverted, running through the gardens. Sefton Council have many records of land drainage flooding in the gardens of the majority of roads in this area. The ground is simply not suitable for soakaways as it becomes saturated at very low levels of rainfall – this is in spite of the network of land drains across this entire area. A number of residents therefore connect gullies on their paved areas into the foul property drains, which obviously contributes to the flooding. Any significant development in this area will obviously add to the existing problems by putting water in the ground quicker (through soakaways) or displacing the existing water and obstructing the natural flow of water in the ground (through in ground storage systems) or add to the already over capacity combined sewerage system. Only drainage systems that positively drain the water away can help this situation – so called Sustainable drainage systems are not suitable for all locations and may indeed prove detrimental in saturated ground conditions like this.



IT IS OBVIOUS THAT ADDING ANY EXTRA FLOW TO THE SEWERS THAT ARE OVERFLOWING IN THESE LOCATIONS WILL ADD TO THE FLOODING THAT ALREADY EXISTS. These sewers are “combined” so will have to take the foul drainage from any new developments – for example new developments in this area will connect either into Bankfield Lane or Balmoral Drive where the sewers already overflow.

Site MN2.3 is on **Balmoral Drive** and site MN2.2 is on **Bankfield Lane** (see previous pages)

On page 25 of document EN32, JBA Consulting make a number of statements about the Balmoral Drive site are proved wrong by known regular and current events –

The site MN2.3 is NOT suitable for “infiltration SUDS” as the water does NOT infiltrate now, the ground is saturated, the watercourses cannot cope with the existing flow and significant surrounding areas suffer standing water for significant periods of time.

Therefore surface water risk is NOT minimal as stated in EN32 - surface water flooding happens EVERY year and even at times of average rainfall.

No mention has been made of the repeated sewer flooding in this area (as shown on the previous two pages) – the sewers in the area are “combined” (foul and surface water in the same pipe) and as the land drainage systems in the area don’t work properly the sewers end up taking more surface water than they were originally designed for and therefore significant flooding occurs. This applies to both sites MN2.2 and MN2.3

Any Flood Risk Assessment or “site screening exercise” that misses such obvious problems is quite clearly insufficient and very worrying that Sefton Council as the Local Authority seems to lack “Local” knowledge about these sites.

Residents are clearly baffled by statements from the Council and developers that clearly contradict the view from their window. It is NOT “anecdotal evidence” when these roads flood – it is fact that these roads flood, and not just occasionally but on a regular basis. To be told that “everything is fine” and “it doesn’t flood here” are simply rejected as lies by residents - but the residents find it astonishing that their own Council are not supporting them on this issue.

The public are also somewhat upset that in “the real world” it is obvious that the sewers in these areas are not coping with the flow they are trying to take, the public get great sympathy and agreement from United Utilities staff when they are on site, but then only get generic statements in written replies because the water companies are afraid of admitting there are problems. The lack of power that United Utilities have to prevent further load on their sewers is worrying enough but then Planning Officers then misquote UU claiming there is “no objection” is wrong.

The same is true with the Environment Agency – staff who know that there are problems in these areas but written replies are often made of generic platitudes. So, if the EA actually object to the development of a site it really means that they have such serious concerns about a development that the usual statement of, “We draw your attention to advice about building in Flood Zone 3,” is not strong enough from their professional advisory point of view. It should be noted that, even if the EA are cajoled into withdrawing their objections to a site, they will have still put on record their serious concerns and would be well within their rights to tell the public in the future that the Council went ahead with a development against their original advice.

Brownfield sites (MN2.3) should take priority over greenfield sites (MN2.2), but where there are so many concerns about existing LAND DRAINAGE FLOODING and EXISTING SEWER FLOODING, the public expect NPPF Ch 10 para 100 (about not making flooding worse) to come to their aid - for these sites, the existing situation is so serious that ANY additional flow in the sewers WILL make the flooding worse, and any IN GROUND STORAGE of water will obstruct the land drainage flow, so ABOVE GROUND grey water recycling is the only real option for surface water here.

### Sewage Treatment Works

It should be noted that the Bankend Sewage Treatment Works already has problems. It not only has problems with being overwhelmed at times of storm (due to a significant proportion of Southport being drained by combined sewers that take both foul and surface water in the one pipe, rather than separate foul and surface water sewers) but also needs to maintain the quality of the water discharging from it. To do this the operators sometimes shut off the penstocks to prevent more watered down sewage coming into the treatment works. This results in water backing up in the drainage systems of Southport. This practice came to light after the installation of a multi-million pound scheme to intercept all the storm sewage sea outfalls appeared to fail to solve the flooding problems it was designed to help. The new sewer is a 2.7m diameter tunnel with a 600mm half pipe dry weather flow channel in the invert. This pipe in the form of a tunnel was laid from outside what was the Kingsway nightclub (near the Royal Clifton Hotel) on the Promenade, all the way to sewage treatment works at the north end of Southport. The operators of the sewage treatment works shut off the penstocks and use this tunnel as temporary storage to prevent the treatment works from being overwhelmed. This results in surcharged sewers and flooding incidents in areas that don't normally flood.

### Land Drainage Pumping Stations

Sefton Council have also carried out major works to alleviate flooding problems, including the installation of a pumping station on the Marshside Drain on Marshside Road. This land drain had been suffering flooding incidents since the housing estates were built adjacent to Marshside Marsh. The pumping station was built in the late 1980s to early 1990s so should be nearly paid for, or at worst only have a few years of loan repayments left.



The Pool watercourse (that was flooding further upstream – shown above causing flooding starting at the Botanic Gardens) was unable to discharge to the **Three Pools** watercourse due to the level the Three Pools had reached. Sefton Council had previously tried to aid the flow of The Pool by diverting part of it through North Road once The Pool emerges from The Stray (the strip of land travelling northeast at the back of Balmoral Drive from the Botanic Gardens car park) This picture shows the Three Pools almost breaking its banks and flooding gardens at the north east side of Southport, once this happens there would be serious flooding on this side of Southport.



Even newer estates with separate sewerage systems were suffering flooding problems.

**Eamont Avenue** (top),  
**Melrose Avenue** (Bottom left) and **Glenpark Drive** (bottom right) all had serious flooding issues due to their surface water systems being unable to cope despite the improvements detailed on the previous page. Looking at maps or Southport you can see how close these roads are to existing watercourses and Marshside Marsh





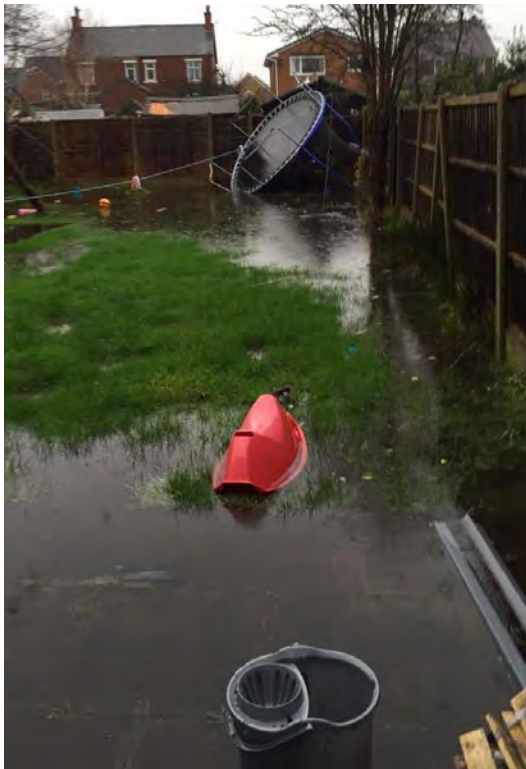
**Pauls Lane** (above and below) in Southport suffered significant flooding problems. These pictures show the importance of ensuring all properties being built not just above known flood levels but also above the level of the road in order to protect them from flooding.





Gardens in the north of **Southport** were also severely affected. Locations of these properties have not been named here to protect the property owners as this document will be publicly available.

Photographs taken on Boxing Day 2015





**Kirkham Rd** (above) and **Lytham Road** (below) are regular known flooding locations (photos from Boxing Day 2015)







## Christ the King

**School** field completely flooded (top) Bentham's Way/Stamford Road. (Boxing Day).

## Dobbies Car

**Park** (middle) on Bentham's Way – which has a SUDS installed to cope with high levels of rainfall, but still flooded (Boxing Day) near site MN2.6

Still flooded (9<sup>th</sup> January 2016), and getting worse by the day is the David Wilson Homes / Hydrock site bounded by

## Town Lane

and Town Lane Kew (bottom). The water on this site is now so deep that waves have formed on it. One

has to ask the wisdom of the design from the consultant which states, *“enabling works is characterised by a programme of surcharging”* and *“for the surcharge programme to mobilise groundwater and push it off the site through the consolidation process, we applied our groundwater modelling skills to design a 1km long hydraulic containment barrier along the high risk sections of the boundary to prevent this.”* This is clearly not

acceptable as it is causing previously unseen saturation levels in soils and flooding to adjacent areas. Where is this groundwater going to be “pushed off site” to? How will this work with the EA switching off the nearby Boundary Brook pump? Who is responsible for this scheme going ahead?

## FORMBY



### **Sixteen Acre Lane** ditch

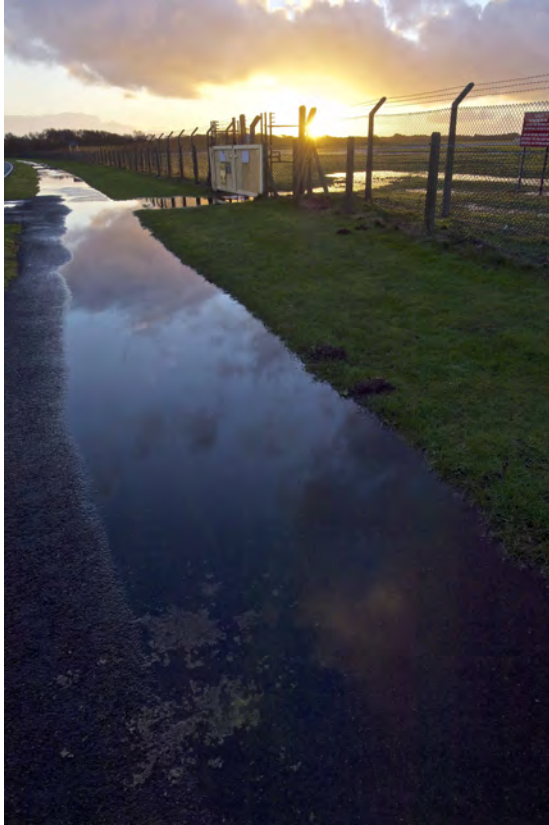
and the site to be developed north of Brackenway MN2.12.

**Top** – picture of the ditch and the site taken on 12<sup>th</sup> December 2015 showing the ditch flooding over into the field. Water backing up from Downholland Brook because the non-return flap is closed.

**Middle** – picture taken 12<sup>th</sup> December 2015 showing the culvert under the Bypass submerged.

**Bottom** – picture taken after the Boxing Day (26<sup>th</sup> December) storm missed Formby.

As this flooding is a regular occurrence, it might be fair to assume the landowner may want to sell this land. This flooding shows that the FRA for this site seriously underestimates the quantity of water. JBA Consulting are correct in suggesting that some sites may benefit from mitigation measures installed off the site but may be slightly out in suggesting that this site is suitable for soakaways!



Since the New Year, other land drainage problems have appeared in the vicinity of site **MN2.12 Brackenway**.

Currently the watercourses serving Woodvale Airfield are not working correctly (photos 8/1/2016) to the extent that the watercourses are overflowing, causing flooding to the airfield site but then running off the site onto the cycle track of the Bypass and running back towards Formby and trying to get into Wham Dyke through this circuitous route.

This is all caused by the developer of the golf training centre on the other side of the bypass raising the site levels, putting in lined water storage systems in the form of ponds and finally not including the watercourse from the Airfield site. Does their design sound familiar?



Note:- Further north along the Bypass, at the junction with Coastal Road and Liverpool Road, the problems explained about site SR4.09 Land South of Coastal Road are currently happening again. The water flows off the site, the land drains are unable to cope and water comes up out of the gullies on the Coastal Road flowing along the road causing a water hazard at the traffic lights junction of Liverpool Rd/Formby Bypass/Coastal Rd/Moor Lane. The water also causes problems to footways, cycle track, the caravan site entrance and the area of the electricity substation near the traffic lights. Sefton Council have already been out to try and correct this problem but as of the 12<sup>th</sup> January this problem is still on going. It cannot be stressed too strongly how fragile the existing land drainage systems are these low lying areas and how they will overflow into other catchment areas, the Local Plan and site FRAs seem to ignore this.



**Altcar Lane** at the junction with Liverpool Road near site MN2.17 –

Top – picture taken 12<sup>th</sup> December 2015.

Middle picture taken 26<sup>th</sup> December 2015 looking in the opposite direction.

This is the location where the developer is wanting to continue the housing development along the southern side of the road and where JBA Consulting (in document EN32) suggest in ground storage may be suitable for surface water management and storage. The ground is saturated, the water flows off the field into the highway drain, which then cannot discharge because the watercourses are already full because the water is flowing off the field!

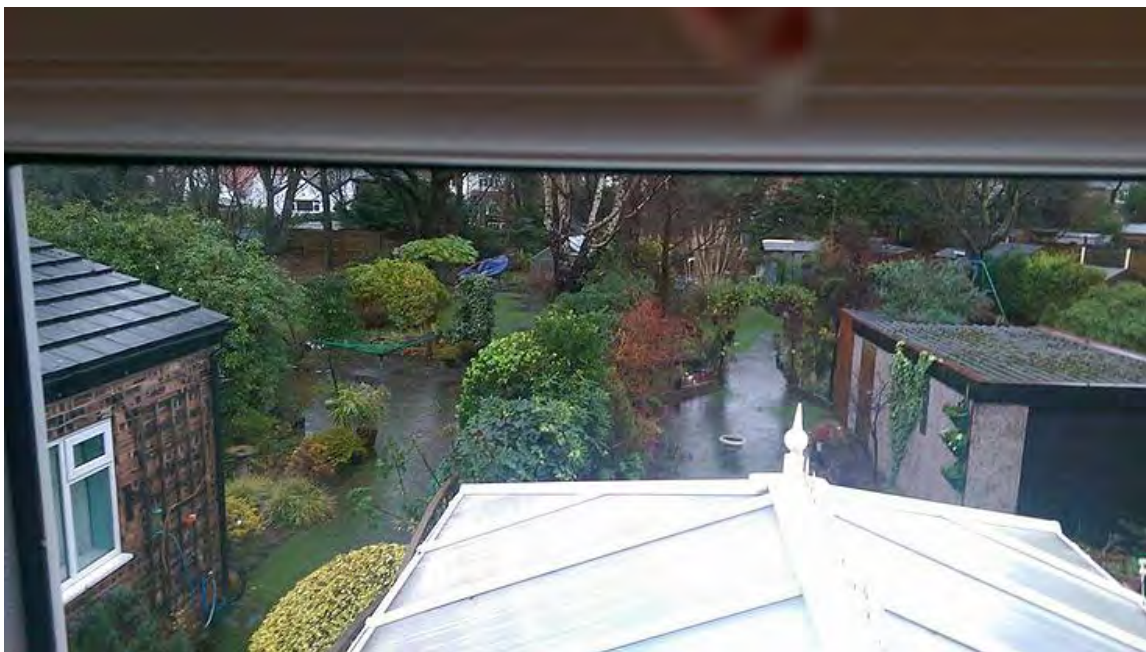
**Phillips Lane** – taken 12<sup>th</sup> December 2015.

The highway drain in Phillips Lane connects into a surface water public sewer which connects into a riparian owned watercourse. This adds complication to the already difficult situation of managing surface water in this area. This system discharges under the Bypass at Cartmel Drive and into the watercourse known as Boundary Brook (running through the Football Club site). The entire system runs slow, even without additional development being added at the downstream end of this system



In some roads (again unnamed here to protect residents anonymity amongst) garages and gardens had also flooded on Boxing Day 26<sup>th</sup> December.

This happened because the land drainage systems in these areas were unable to take the flow and discharge to other watercourses - (including Dobbs Gutter in the case of one of these pictures)





Yet again **Stephensons Way** Industrial Estate flooded on 26<sup>th</sup> December 2015 because the non-return flap valves were closed where this surface water system discharges to Downholland Brook. Water simply cannot discharge from Formby when the flap valves close due to the height of water in Downholland Brook. This causes flooding because the water from upstream areas continues to come down to these lowest lying areas – obviously the same will happen if the sites north and south of this estate are developed. Any storage in the ground will obstruct the natural flow of water to Downholland Brook making the situation worse. In the picture below, water can be seen coming up out of the sewers at the manholes.





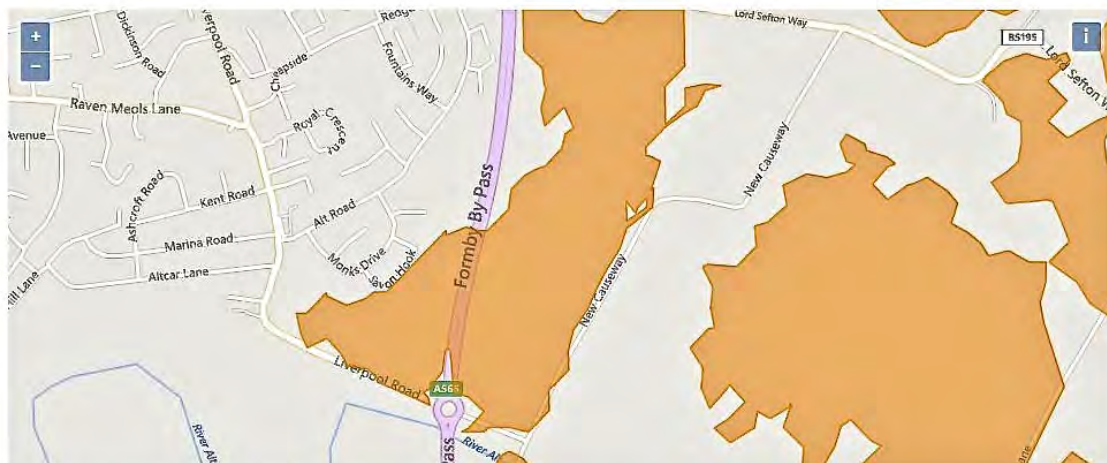
The outfalls from **Bull Cop** and **Stephensons Way** into Downholland Brook remained submerged and therefore “locked” shut for several days after the rain on Boxing Day. These pictures were taken on 28<sup>th</sup> December 2015 on a bright, dry, sunny day. With these watercourses “locked” for such a period of time it is obvious that the ONLY storage left to cope with the water coming downstream from the catchment areas for outfalls like these is on the other side of the embankment of Downholland Brook. In this case the catchment area for Bull Cop ditch comes all the way from near Formby Railway Station, through the village (Chapel Lane), School Lane, Kenyons Lane, Bull Cop and under the Bypass. The only land available to act as a buffer or for storage is the “Site North Of Formby Industrial Estate” that is included in the Local Plan. The FRA and design submitted by the developer ONLY includes storage for water that lands on their site and assumes that they are going to discharge water at the “theoretical” greenfield runoff rate. Firstly their calculations are wrong because the photos prove the site doesn’t discharge any water for several days at a time and secondly if they do discharge water at a “greenfield” runoff rate (through whatever means, including pumping for example) they will be increasing the existing flow off the site and therefore make flooding worse elsewhere by keeping other non-return valves “locked” for longer.





The above picture shows just how high the **River Alt** was on Boxing Day, 26<sup>th</sup> December 2015 at the bridge over the Formby Bypass near the northern access roundabout to Formby (Liverpool Rd). This water is even higher than previous photographs of this location submitted as evidence to the Local Plan. This shows that although the pumping station at Altmouth has been refurbished and improved, and is operating to its full capacity, the water level here (and as shown for the same day in Maghull) is lapping at the soffit of the bridge structure. This is not a safe level to be operating the river at. It would not be advisable to build near the River Alt, nor add any extra flow to it.

The screenshot below from the gov.uk (EA) website shows a flood warning map for this area, even though the storm officially missed the area, because the rainfall was on the catchment area of the River Alt, it put Formby at risk of Flooding.



The shaded areas show the potential extent of flooding

## Flood warnings for: England and Wales

1:57pm Saturday 26 December 2015





The flood warnings were correct with fields on both sides of the Bypass flooding on Boxing Day. Such was the level of ground saturation that the river did not need to overflow for the flooding to take place. As the River Alt was so high the ditches were unable to discharge because the outfalls were “locked”. AS27 pictured left.

It is this kind of flooding that appears to be hidden from consultants and their Flood Risk Assessments then fail to take this into account, claiming the land doesn’t flood when it obviously does.



The Flood Warning Map, wasn’t quite right though. The two pictures on the left are of **Alt Road Park**

(Immediately adjacent to proposed site **MN2.16** which the developer is proposing to raise by an average of 900mm). This was not shown as at risk for this flood warning, which is particularly worrying as this park is immediately adjacent to Tintern Drive. Obviously, the development design of site MN2.16 will push more ground water into this park and possibly towards the adjacent properties.



The land drainage system simply cannot cope with the current flow as they are unable to discharge due to the level of water in the River Alt and Downholland Brook, therefore flooding occurs on a regular basis. The water flooding these sites is only partly water that has landed on the site – most of the water that floods these sites is from the rest of the catchment area. This is obvious as the amount of standing water on these sites is greater than the total rainfall recorded.



Sefton Council has installed a series of **Groundwater** monitor devices in various locations. One such place is **Alt Rd Park** – the picture above taken on Boxing Day 2015. A local resident has also been monitoring the groundwater at this location manually. The table on the right shows the depth of groundwater below the surface on the dates stated. Photographic evidence is available of when these readings were taken. It would be interesting to compare these results with Sefton’s official records. Note that in summer the water was at a manageable level below surface and how many times groundwater is above ground. This does not seem to tie in with the developer’s FRA.

Date	Time	Depth below ground level in cm
04/08/15	17.00hrs	92.00cm
05/08/15	09.40	90.50 (Low tide)
05/08/15	15.27	90.50 (High tide)
10/08/15	16.00	92.00
14/08/15	20.00	59.00 (After rain)
19/08/15	16.15	73.00
23/08/15	18.00	84.40 (After rain)
26/08/15	17.00	60.30 (After rain)
01/09/15	16.20	64.00
04/09/15	13.00	64.00
20/11/15	14.30	13.00
01/12/15	13.30	13.00
03/12/15	10.00	17.00
04/12/15	11.00	02.00
06/12/15	13.55	09.80
08/12/15	14.10	25.30
10/12/15	14.30	16.80
11/12/15	13.20	21.20
12/12/15	14.56	00.00 (AT GROUNDLEVEL OR ABOVE)
13/12/15	14.12	00.00 (AT GROUNDLEVEL OR ABOVE)
14/12/15	13.21	02.10
15/12/15	15.34	07.40
16/12/15	16.20	05.20
17/12/15	12.40	16.70
18/12/15	12.10	30.50
19/12/15	12.40	25.40
20/12/15	13.42	00.00 (AT GROUNDLEVEL OR ABOVE)
21/12/15	14.07	00.00 (AT GROUNDLEVEL OR ABOVE)
22/12/15	12.20	00.00 (AT GROUNDLEVEL OR ABOVE)
23/12/15	12.19	02.40
24/12/15	14.34	02.20
25/12/15	12.45	02.10
26/12/15	10.45	00.00 (AT GROUNDLEVEL OR ABOVE)
26/12/16	15.33	00.00 (AT GROUNDLEVEL OR ABOVE)
27/12/15	13.39	00.00 (AT GROUNDLEVEL OR ABOVE)
28/12/15	10.57	00.00 (AT GROUNDLEVEL OR ABOVE)
29/12/15	15.55	00.00 (AT GROUNDLEVEL OR ABOVE)
30/12/15	09.44	00.00 (AT GROUNDLEVEL OR ABOVE)
31/12/15	09.15	00.00 (AT GROUNDLEVEL OR ABOVE)
01/01/16	10.40	00.00 (AT GROUNDLEVEL OR ABOVE)
02/01/16	15.00	00.00 (AT GROUNDLEVEL OR ABOVE)
03/01/16	13.39	00.00 (AT GROUNDLEVEL OR ABOVE)
04/01/16	12.35	00.00 (AT GROUNDLEVEL OR ABOVE)
05/01/16	09.42	00.00 (AT GROUNDLEVEL OR ABOVE)
06/01/16	10.25	07.40
07/01/16	13.00	00.00 (AT GROUNDLEVEL OR ABOVE)
08/01/16	10.18	00.00 (AT GROUND LEVEL OR ABOVE)



Even before the storm that missed Sefton on Boxing Day, several sites were already saturated to the extent of being flooded.

Photos from the **23<sup>rd</sup> December 2015** show site **AS27** (top), site **MN2.16 Liverpool Rd** (middle) and site **MN2.49 Football Club** (bottom) show all three sites having serious problems on such a bright sunny day. The land is saturated to this extent because more water is coming in from the relevant catchment areas than is capable of being discharged. When all three sites are like this it normally indicates that Downholland Brook and the River Alt are running not just higher than the non-return flap valves but are running higher than the ground level in these locations preventing water from permeating through the ground into the river.

It should be noted that the owner of the site MN2.49 has already tried mitigation measures to reduce the flooding problem. Unfortunately, these measures have merely resulted in water accumulating where these measures have been implemented. In order to solve the problems indicated for these sites, the water **MUST** be drained off the sites. As two of these sites are adjacent to Downholland Brook, which cannot take any more water, there is nowhere for the water to be drained to.

In document EN32 JBA Consulting state that many sites may need mitigation measures off site to enable development – this is extremely difficult for these sites.



Unless you can drain the water AWAY from this location, this problem will continue. As water already floods the Brackenway site, storing water on the site should be not acceptable. A “natural” pond will merely fill to exactly the same level water reaches now, a “lined” pond will merely displace water here now making flooding worse and preventing water from travelling through the site. The rain landing on this site is not the problem, it is the inability of the water to discharge from the catchment area as a whole that accumulates here.

With the level of saturation already affecting land drainage in the area – when the storm didn’t quite hit Formby and Sefton on **Boxing Day**, the rain obviously had a greater effect than has been suggested in the Flood Risk Assessments and Network Flood Modelling for these sites suggest. This is clear for the **Brackenway** site. Pictured here is **Hawksworth Drive** and **Sixteen Acre Lane Ditch**. The official level of rainfall “should not have produced this level of flooding” for many of the areas, but because the ground was already saturated by “average rainfall” the surface water system were unable to cope.

This is caused by the level of water in Downholland Brook/the River Alt being already high enough to close the non-return flap valves and “locking” the watercourses that discharge to them. In this case, the water therefore backs up in Southport Old Road ditch, Eight Acre Lane ditch, Sixteen Acre Lane ditch and then the surface water sewers and highway drains are unable to discharge to the watercourse causing flooding to the public highway and, on several occasions since 2000, internal flooding to properties.

The top two photographs show a Sefton Council gully wagon having drawn water off to discharge elsewhere – unfortunately there aren’t many places that could take extra water.

The FRAs and Network Modelling by consultants need to be compared to these real world situations and adjusted accordingly – if the Network Modelling does not show this flooding, the modelling is **WRONG**.



**Boxing Day** saw the **Brackenway** site almost completely under water. Where will this water go when a development goes ahead? The ground is already saturated, the watercourses cannot take any more flow. The properties themselves and site construction will displace this water as will any raining of site levels. "Digging a hole" will simply fill with water, and putting in a lined pond will displace this water in favour of water that lands on this site.

The systems were so overwhelmed that water from both soakaways (that DO NOT work in this area) where the gullies overflow on properties and go into the foul system, and highway drainage systems that overflowed going into the foul system, produced an overwhelmed foul system which had water powering up between manhole cover and frame in several location. The bottom picture shows this on **Hawksworth Drive**.



On **Boxing Day**, site **MN2.49**

## (site south of **Formby Industrial Estate**

– known as the Football Club site) (**top and middle pictures**) was also suffering from flooding, including on the raised football pitches.

This was caused by the water coming in from the upstream catchment area being greater than the watercourses and outfalls can cope with and discharge successfully. Boundary Brook, that runs through and bounds this site, was unable to discharge to Downholland Brook because the non-return flap valve was closed by the height of water in Downholland Brook. This effectively had “locked” the watercourse for the duration of, and beyond, the period of rainfall on Boxing Day.

Any development on this site, including raising land levels to put in additional sports facilities will take away the existing natural storage that this site affords. The ground is already saturated so in ground storage systems are not likely to have any improvement effect and will take away the benefit this site gives to upstream areas.

The inability of Boundary Brook to discharge to Downholland Brook on **Boxing Day** resulted in flooding immediately upstream of the MN 2.49 site. Pictured above is **Redgate** at the junction with Alt Rd. (The surface water sewer only has to cross Alt Rd and go through Cartmel Drive to join boundary Brook on the other side of the Bypass from here). Many properties on the Alt Rd estate were built lower than the road so are particularly susceptible to internal flooding if the highway floods.



As already shown for **Hawksworth Drive**, the water on **Boxing Day** wasn't just surface water system flooding. The photographs here are: -

Top – foul manhole on the highway of **Redgate** overflowing;

Middle – private foul manhole on **Redgate** overflowing; and

Bottom – road gully in **Savon Hook** (immediately adjacent to site MN2.16 Liverpool Rd) having taken foul sewage in the system, complete with toilet paper due to the foul system overflowing and then overwhelming the surface water system.

Part of the reason for this is that many of the properties are on soakaways – which DO NOT WORK in these areas. The gullies on the soakaways taking the roof drainage overflow and send rainwater down the foul gullies (normally outside the kitchen at the rear of these properties) which then overwhelms the smaller foul system as well as the surface water system. Many properties in the area suffer from overflowing foul gullies on their properties during heavy rainfall, but where properties are higher than the road, the pressure within the system causes the water to be forced out between manhole cover and frames.

Unfortunately this problem has been exacerbated by residents realising that the soakaways don't work so connecting paved areas into the foul gullies on their properties.

**Soakaways** have NEVER worked on part of the Alt Rd estate, including **Redgate**. This part of the Alt Rd estate was built and occupied in 1965. During the winter of 1965 a significant number of properties suffered severe garden flooding because the soakaways were having no effect. The developer (Wimpey), came back and laid land drains in the gardens between Alt Rd/Redgate Drive and Alt Rd/Friars Walk and connected this land drain into the system that crosses Alt Rd and enters the Alt Rd Park land drain. We therefore have a highway drainage system that flows in one direction and an unrecorded land drainage system flowing in the opposite direction. No-one was required to keep records of where these land drains went in.



## The **Park Close/Park Rd**

flooding near the entrance to the Powerhouse site may have been solved.

These pictures were taken on **12<sup>th</sup> December 2015** - **REPORTED AS RESOLVED ON 18<sup>th</sup> December 2015**

A Formby Parish Councillor took on the matter by contacting United Utilities about their surface water public sewer not discharging, Sefton Council about their Highway Drains and road gullies not working and the Environment Agency about Hoggs Hill Lane Ditch not taking the flow from the UU surface water and causing highway flooding.

United utilities reported back to confirm they had found a blockage in a manhole before the outfall into Hoggs Hill lane Ditch. The blockage was made of concrete and appears to have been done by the developer of the Powerhouse site in order that they may “stank off” the flow in the surface water sewer to make a connection to the surface water sewer on land they had bought (two outfalls from the Park Rd estate actually went through the gardens of the properties that the Developer of the Powerhouse site bought in order to make the access road to their site.

It is customary to use a “stopper” to stop the flow in a sewer whilst you make a new connection (these are like a wheel with a tyre on that expands to fill the pipe as you turn the centre screw). Although “stoppers” are not particularly expensive, you tend not to leave them behind as you will use them on your next job.

United Utilities confirmed they had no record of an application for a new connection to this sewer and were not impressed at spending most of a day breaking out the concrete that was causing the blockage. The Planning Department may wish to take this up with the developer.



## Outside Sefton



During the Local Plan Hearings, it was mentioned on several occasions about the dangers of building near water hazards, including canals. It was claimed for several sites in Maghull, Lydiate and Melling that canals are low risk, despite Sefton having experienced a catastrophic failure of a culvert under the canal at Maghull. It was also stated that it is extremely unlikely that the canal would actually overflow.

Unfortunately this is not true. This photograph is of the

### **Leeds Liverpool Canal**

at Rufford showing that the canal is overflowing having breached its banks. Canals do take a certain amount of surface water as they need to be “topped up” constantly. This is because water is being released from sections via locks and the fact has to be faced that a clay lined canal does permanently leak. Unfortunately, this means that canals can and do get overwhelmed and overflow. Boxing Day 2015



## Building on flood plains:

During the Local Plan Hearings, more than one developer claimed that they would never develop land that is at risk of flooding, which we already know not to be true, but here are two pictures from the Daily Mail website showing firstly a site due for development that is completely flooded and below, a relatively new housing estate that is flooded. Both of these are reported to be in Yorkshire with the pictures taken on Boxing Day 2015.

It is worrying that developers claim they won't build in such locations. It is understandable that developers can be caught out in town centres but where greenfield sites are known to flood already one has to ask why they are being considered.

Photos copyright Warren Smith and Glen Minikin/SWNS



The information contained in this document has been provided for the sole purpose of showing flooding incidents, ground conditions and river levels at times of storm, confirming that it may be unwise to put additional load on surface water drainage by imposing significant developments in these areas - bearing in mind the EA and the Met Office have suggested that the storms in question did not officially release their full force on Sefton, although some flood warnings were issued.

This document has been compiled using information from multiple sources. It can in no way be viewed as a comprehensive list of flooding locations. It is meant to give a general idea of the spread of incidents across Sefton, in particular on Boxing Day 2015. Many people do not want information about flooding incidents to be publicised as they believe it may devalue their property. No information is given about internal flooding incidents of properties, only publicly available information has been used to create this document.

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And others

# The recent flooding should raise concerns about general Flood Risk Assessments, Mitigation and Sustainable Urban Drainage Systems

## Flood Risk Assessments

Just because a Flood Risk Assessment has been or will be carried out on a site doesn't mean the site should be developed.

If a Flood Risk Assessment carried out for a site does not conclude that the flooding shown for the site and surrounding area matches real world evidence (like the photographs in this document, for example), it means the calculations, methodology used or conclusions of the FRA are wrong. It does not mean that the real world flooding didn't happen.

It is frequently referred to as "anecdotal evidence" when residents inform developers and Planning Authorities that flooding has occurred. It then comes across as seriously offensive when residents' concerns are dismissed by someone waving a bit of paper and saying that, "The Flood Risk Assessment and Flood Maps for this site show it doesn't flood," when this is contrary to the real world that residents live in.

This drives residents to lose trust in both the developers and Planning Authorities with accusations of incompetence and corruption being aimed in all directions by people who feel "hard done by" when flooding already occurs, yet developments get approval without ever addressing the real world problems that already exist.

Residents expect Planning Authorities to follow recommendations in the NPPF and to protect them against irresponsible and inappropriate developments and therefore expect Flood Risk Assessments to be accurate and truthful in their conclusions.

If the Flood Risk Assessment for a site that is known to flood every year, for example, does not show it flooding with "average" rainfall and doesn't conclude those problems need to be properly solved, there is clearly something seriously wrong. If that FRA had been deliberately dishonestly compiled or incompetently produced it would be very worrying indeed, but not as worrying as a correctly and competently produced FRA that concludes a development will make the flooding situation worse, and yet the Planning Authorities then don't read the FRA just assuming that it says the development will be fine and give approval on the basis that, "It's all fine, we've had a Flood Risk Assessment done." (It's like fitting seat belts to a car and not using them – just because they are there doesn't mean you're safe if you don't use them properly.)

The FRA and network modelling for the Brackenway/Sixteen Acre Lane site clearly shows that the development will make the flooding situation worse, and yet the site and the development design are still in the Local Plan, unchanged. How many other FRAs on other sites are the same – concluding that the flooding will be made worse and yet sites and designs remain in the Local Plan?

Obviously, it depends what information the FRA includes and what conclusions it comes to. A Flood Risk Assessment that only covers flooding from the sea will obviously be insufficient for a city such as Birmingham, likewise a Flood Risk Assessment for a site that already suffers from Groundwater flooding, but does not consider Groundwater flooding risk will be wholly insufficient and will give an inaccurate assessment of the real world risks for that site.

It is very concerning that the Planning Department appears to merely accept an FRA, without reading it, putting it in the file and going ahead with the development. This particularly appears to be the case with certain sites in the Local Plan where the FRAs seem to preclude the sites but the Council are wanting to include the sites anyway.

A number of the FRAs submitted to the Council for the Local Plan appear to be significantly lacking in “factual” information. They seem to rely on inaccurate flood maps and disregard real world flooding events and issues dismissing them as “anecdotal” evidence. Claiming, for example, that the last flooding event for the Brackenway site in Formby was in 2012 is seriously misleading. Whilst it would be correct to state that September 2012 was the last time there was recorded internal flooding to properties in Hawksworth Drive (adjacent to the site), it does not accurately represent the number of times Sixteen Acre Lane Ditch had overflowed or how many times the site itself had suffered from flooding. Not taking such information into account seriously underestimates the quantity of water that will need to be stored to prevent further flooding incidents. This could be why developers for some of the sites indicate that their FRA shows no flooding until greater than a 1 in 100 year storm and yet properties already flood at return periods of 1 in 30 and more frequently.

We have seen that the Flood Risk Assessments for certain sites (Liverpool Rd, Formby and Brackenway, Formby, for example) actually show that the development WILL make the existing flooding problem worse and yet Sefton Council seem determined to go ahead with the developments. This is specifically against the guidance of the NPPF Ch 10 paragraph 100.

It also doesn't leave Sefton Council a leg to stand on when flooding occurs – they cannot claim they weren't made aware that flood risk would increase with these developments. The developer could legitimately claim that they informed the Council through their FRA and the Council “approved” the design and the Planning Application. It is not even a case that “a local campaigner” brought it to their attention so they would ignore such interference. In the case of the Brackenway site, the developer's own submission shows flooding will get worse after the development, the Council then appointed JBA Consulting to “assess the Flood Risk Assessment and flood modelling,” who also state that that the developer's documents show that the development will make flooding worse, and then an ex-member of staff from Sefton's own Drainage Section summarizes the JBA consulting document highlighting the same points. The Planning Department have been told three times that the development of this site WILL cause increased flood risk and yet the site is still in the Local Plan – Why? How much evidence do Sefton Council need to come to a common sense decision based on fact rather than just because they “want to develop the site”? It almost appears as though Sefton's Planning Department are wanting to develop the site out of spite because people are campaigning against it, rather than objectively assess the site for flood risk and remove it from the Local Plan “for the greater good,” and because the NPPF says you should not develop sites that will increase flood risk elsewhere.

As already stated at the Local Plan Hearings for the Liverpool Rd, Formby site – it appears that no-one has actually read some of these Flood Risk Assessments, not even the developers themselves, as they would surely not submit a Flood Risk Assessment that shows the development will cause additional flooding? Then, to find that the Planning Officers include the document as evidence to be given to the Planning Committee claiming it supports the development is simply quite astonishing!

We therefore have to ask the question that if these documents are being ignored, what is the point of producing them, and what is the point of having Planning Legislation and Guidance if it can be simply ignored and overridden?

What level of proof does Sefton's Planning Department require in order to show that either the design submitted by a developer or the site itself should be rejected on real world flooding or theoretical flood risk – whether current or future? Surely a Flood Risk Assessment that shows increased risk of flooding should cause a site to be rejected? If the consultant (JBA Consulting) then raises queries showing that the FRA is flawed by making the situation look better than it actually will be (by using assumed rather than actual levels), then surely that is further proof that the site WILL flood and should be rejected? Why bother requesting another FRA and system modelling on the existing design when you should improve the design before doing another FRA and network modelling?

We also have to ask, who is going to pay to correct the problems once the developments have been built? It is always more expensive to “cure” a problem than it is to prevent it happening in the first place – as is installing a design on a greenfield site rather than trying to work round the buildings on developed land. Considering some of the FRAs and network modelling submitted show the problems will INCREASE after development, it is unlikely the developer will feel compelled to pay up as they will say the Council approved the application based on the information the developer submitted and therefore do not feel that they have done anything wrong.

### **Mitigation**

We need to accept that sometimes words are used by people because they are “trendy” or new management speak. One such word is “Mitigation.”

I would suggest that people check the meanings of the words “mitigate” and “mitigation.”

Mitigate does NOT mean “solve the problem,” at best it means “lessen”, “reduce” or can even mean to “fight against”. Therefore, providing sandbags can be counted as “mitigating the effects of flooding.” (to say “mitigate the risk” is correct, to say “mitigate against the risk” is almost like saying “mitigate against against the risk”) Providing sandbags does not “solve” the problem, does not make the water go away and does not reduce the level of water outside someone's house, at the very best it just changes what the level the water will be before it gets into the property.

When a Council Officer makes the generic statement that, “We believe the site can be developed with the implementation of suitable mitigation measures,” the first question should always be, “What are those mitigation measures, and surely it is better to solve the problem rather than just mitigate it?”

When building new properties there is no excuse for building in locations that flood, and no excuse for putting existing properties at greater risk (as noted in the NPPF) – the priority MUST be to develop land that is at the least possible risk of flooding (as noted in the NPPF), so why are so many sites in the Local Plan either already flooding or at greater risk of flooding? Is it just because the current landowners want to sell the land because they can't cure the flooding problem? That most definitely does not make the land suitable for development.

Mitigation measures may be suitable for protecting EXISTING properties from flooding where it is not possible to “solve” the problem outright, but if the best you can do for a new estate is to “mitigate flood risk,” then you should consider not building there in the first place. Mitigation should only be used where it is not possible to “solve” the problem – if the only reasons something is “not possible” is because of policy, then the policy is wrong and should be challenged. Quoting “policy” is not good enough – policy can change from one week to the next so it would appear very

foolish to future generations if the only reason houses flood in the future is because it was “in line with current policy in 2016”, when with a little forethought and design, the problem could have been solved before it ever occurred. Another reason quoted for not “solving” the problem is that the solutions are on land that does not belong to the developer – again, this appears to be foolish in the extreme to the public. If a solution is there and it’s not done now because the developer doesn’t own the land now, we will probably find the same developer buys the additional land in the future and proposes to develop it anyway – in effect, by stopping a solution being implemented because the land is currently not in the ownership of the developer is like saying that the land will NEVER become available, which is obviously untrue. Although Planners are rightfully very wary of “ransom strips”, we cannot allow houses to flood just because Planners did not ask a developer to negotiate with another landowner. Where solutions are available they should be implemented, where solutions are not available you should consider the land as currently “not the best available” and look to develop other land first. If this is the only land available, it should be made clear to the government and not suggested that the land is “the best and most suitable available” – if it is not suitable for significant development, it should be stated openly.

It is obviously wrong to treat sites as individual when they are part of the Local Plan – we should be looking at how sites fit into the greater area of the towns and the borough as a whole, and how the development will affect the whole area, not just “to provide houses” – what is the point of building more houses that are at risk of flooding? We should only be building properties that are at lower risk of flooding, and in the process of doing so, remove other properties from an “at risk” position. At best, by mitigating flood risk on a new site, in Sefton, you can only maintain the current situation for existing surrounding areas because of the ground conditions, but the true situation is that you will make matters worse for existing adjacent properties. How this is not obvious to people, we do not know. The same water will be there before and after development, but collected quicker after – so if it floods now, it will after development as you will find it extremely difficult to store water in the ground when the water table is already breaking the surface of the ground. The only way to add storage in such situations is above ground level (for example water butts) with at least a cubic metre of storage per property.

It appears that “mitigation” is only used when the expert consultants KNOW that they CANNOT SOLVE THE EXISTING PROBLEM so at best they will design systems to mitigate, or reduce, the problem. In view of the amount of flooding experienced recently in the UK, mitigation measures are obviously not good enough and in trying to mitigate problems rather than solving them, we may be making the problems worse and solutions more difficult in the future. Network modelling has shown that the mitigation design for the Brackenway site in Formby WILL MAKE FLOODING WORSE.

### **Sustainable Urban Drainage Systems.**

There are a wide variety of different Sustainable Urban Drainage Systems (SUDS), not all of which are suitable for all locations.

Again, like the magic words “Flood Risk Assessment” and “Mitigation”, the mere mention of “SUDS” seems to mean that the Planning Department will accept whatever design is submitted without even checking if it is suitable for the site, the ground conditions, or what effect it will have on existing adjacent properties.

It is interesting to note that for the Brackenway site, according to the Flood Risk Assessment supplied by the developer the SUDS suggested will make flood risk worse, not better. Other than

rainfall, the main cause of flooding in Hawksworth Drive is watercourse locking which the FRA and network modelling show will have a greater effect after development and yet the Planning Department have accepted the design and FRA as being suitable for the site – which both are clearly not.

The best SUDS designs are not large scale water retention systems that in themselves become a hazard but are systems that much closer mimic the existing condition – providing, of course, that no flooding takes place now as you would need to prevent that from happening again by providing betterment.

To understand how Sustainable Urban Drainage Systems work, you first have to understand how existing land drainage systems work. In doing so you must also take into account how new SUDS will interact with the existing land drainage system. It is therefore obvious that where there are already land drainage problems such as groundwater flooding, it would be, at best, unwise to put additional water into the ground. It should also be borne in mind that where the groundwater table breaks surface on a regular basis it means the ground is saturated so that any “lined storage system” in the ground will merely displace the existing water in the ground and obstruct the natural flow of water through the soil. This means that the majority of soakaway or in ground storage systems are unsuitable for low lying, highly saturated soil conditions and may even make the current problems associated with many of the sites in Sefton significantly worse. In areas like this it may be better, and substantially wiser, not to use water storage or soakaway systems but to try and get the water to drain away as quickly as possible if there are already problems in those locations. We must accept that significant parts of the proposed Local Plan sites are below High Tide, River Embankments and frequently below the level of water in the rivers and watercourses, therefore, these sites are highly susceptible to flooding now, never mind after development takes place.

The only way to offer betterment by SUDS in situations such as described above is to provide storage that does NOT interfere with the existing drainage of the land. One possible method to offer betterment would be to provide above ground storage of site generated water for each individual property. This has other significant advantages of, a) not having large water storage hazards on sites, and b) providing grey water recycling opportunities for the new householders, therefore reducing their potable water consumption for non-drinking purposes. It does have the disadvantage of placing responsibility for the system on each householder, which they may not maintain correctly. It can be that, over time, homeowners may not have the time or money to maintain the systems and a reduction in the benefits of such a system will become apparent. This will have only a gradual effect rather the often catastrophic effect of failures in large scale water storage systems.

It seems that many Planning Officers in the Council who take decisions on these matters are perhaps not the people best placed or most experienced in these matters – it is also difficult to assess training in these areas as many CPD (Continuing Professional Development) sessions are provided by manufacturers so are sometimes little more than sales exercises for the products that are being sold to developers. This can therefore result in a conflict of interest where developers will then also “sell” the idea of a product to the Planners as a way of including Sustainable Urban Drainage Systems and Mitigation measures rather than actually solving the problems associated with a site.

### **So what happens next?**

Unfortunately, even if it can be proved that a Flood Risk Assessment indicates that a site is unsuitable for significant development, even if mitigation measures prove to not help the site in



preventing flooding and even if Sustainable Urban Drainage Systems prove to unsuitable for use on the site – there are two significant “tests” that can override all common sense. They are called the Sequential Test and the Exception Test.

These tests seem to circumvent all common sense for sites. They seem to have been designed for very high land value areas (for example, in London) where there is a significant need that overrides normal financial constraints that apply to the rest of country. This really is how they should be described and realistically viewed, but, on too many occasions they are used for areas where such real pressures do not apply, resulting in irresponsible and inappropriate development that is going to cause both physical (flooding) problems and financial (Council Tax and increased insurance cost) pressures on both the Council and residents.

It is precisely this irresponsible and inappropriate development that the Planning system is supposed to prevent, but it is now being turned on its head by subjective tests that can arbitrarily overrule normal factual based processes.

The official line is that,

*“The Sequential Test ensures that a sequential approach is followed to steer new development to areas with the lowest probability of flooding.”* Which all sounds fine until we get to, *“Only where there are no reasonably available sites in Flood Zones 1 or 2 should the suitability of sites in Flood Zone 3 be considered.”* Which seems to trump all before it. (from

<http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/the-aim-of-the-sequential-test/> )

and for the Exception Test,

*“Essentially, the two parts to the Test require proposed development to show that it will provide wider sustainability benefits to the community that outweigh flood risk, and that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall.”* (from

<http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/the-exception-test/> )

Sadly these both only seem to be used to justify building in flood plains against all other evidence. It is also very worrying when Planning Officers take a view that a site provides “benefits to the community that outweigh flood risk” when we have seen so much devastation elsewhere in the North West over the last month where it would be very difficult to claim that anything “outweighs” the problems caused by the recent flooding. Again, we would ask, who can be held responsible when such a decision is taken? The cost ends up on the resident with the cost of clean-up, increased insurance costs and increased Council Tax or Income Tax just to pay for the work that need to be done to correct a problem that should never have been allowed to happen in the first place.

### **Conclusions**

- 1) An accurate Flood Risk Assessment must be carried out BEFORE including a site in the Local Plan. It is not acceptable to include sites in the Local Plan and promote them as suitable for immediate development unless you know they are deliverable. Sefton Council produced a draft Local Plan and then published the Local Plan without first checking to see if the sites were suitable, even though it is a matter of clear public knowledge that many of the sites in the Local Plan ALREADY FLOOD. It cannot have gone unnoticed that members (and ex staff members) of Sefton Council’s own Drainage Section (now called Flood and Coastal Erosion Management) have visited most of the sites, or existing roads immediately adjacent to these

sites, due to regular flooding incidents. To then find that solutions to the existing problems are not being proposed at all, only plans to “mitigate” the problems for the new site, is simply not good enough bearing in mind the more frequent flooding incidents that are happening.

- 2) If a Flood Risk Assessment concludes that the design for a site is going to make flooding worse – DON’T DO ANOTHER FLOOD RISK ASSESSMENT....DO A BETTER DESIGN.
- 3) Flood Risk Assessments must be read and approved by a member of the Planning Department, who must then be held as the “responsible officer” for such matters should the FRA be proved to be wrong or insufficient. Any indications that the FRA shows problems must be highlighted before any application gets to Planning Committee – this is because members “trust” Planning Officers not to send anything to committee that may have such problems. All queries and corrections must be addressed BEFORE approval is given – not giving approval with “conditions” that could be removed at a later date. Once the development is underway, the developer will obviously not take too kindly to being told their FRA was insufficient.
- 4) Mitigation measures must be assessed against whether it would be better to “solve” the problems rather than merely “mitigate” them. Mitigation is obviously grasping at straws on a development knowing that the problem can’t be “solved”. In view of recent flooding events hitting the national news, this is obviously not good enough. We need positive design philosophies that solve rather than fight against existing problems. Why do so many of the sites in the Local Plan require “mitigation” measures? It is obvious that a series of sites almost adjacent to each other with a series of mitigation measures will have a cumulative effect on the drainage of an area. It is expected that the Local Plan should take into account such matters rather than viewing each site as individual entities, but this does not appear to have happened in the preparation of the current plan.
- 5) Sustainable Urban Drainage Systems must be individually assessed for their suitability for the sites in question. It seems particularly obvious that sites that already flood or have saturated soil conditions, are not suitable to either soakaway or water storage systems. It is also obvious that sites that have such existing problems should have the water drained away with suitable systems first – this is because if water already stands on the site, the same quantity of water will be there after development, as well as collecting the water quicker the development will displace this water, making the problem worse for existing surrounding sites.
- 6) The difference between Flood “Risk”, Flood Maps and whether somewhere actually already floods needs to be applied correctly. The public are baffled by being told that a site only has a 1 in 100 year chance of flooding when they see the site flooded for several weeks every year. There also appear to be serious failings in flood models submitted by developers where their calculations do not come close to showing the existing flooding situations. It is therefore difficult to believe a developer’s plans will improve the situation when they can’t even show the current situation correctly.
- 7) In Document EN32, JBA Consulting state that many sites may be best served by mitigation measures being provided off the site – this should be considered a priority to reduce the existing flooding problems (this would help with items 4 and 5 above). Failure to observe this recommendation from JBA Consulting will only result in badly designed sites that will merely move existing problems onto adjacent properties.
- 8) We have to ask that whoever applies the Sequential Test or Exception Test must be held responsible for their actions. Claiming that anything outweighs flood risk is very dangerous. It is somewhat surprising that sites that are known to already flood and are at obvious risk

(mainly due to their levels and proximity to sources of flooding) seem to pass these tests without too much trouble.

- 9) We need to move away from the culture of having the Planning Department jump for joy when an application comes in with the statement that, "We have carried out a Flood Risk Assessment and are suggesting mitigation measures in conjunction with a Sustainable Urban Drainage System." This seems to mean that Planning Permission will be given even if the Flood Risk Assessment says that the mitigation measures and the SUDS will make the flooding worse. This is seriously unacceptable and shows that the buzzwords "Flood Risk Assessment," "Mitigation Measures," and "Sustainable Urban Drainage Systems," seem to count for more than real world flooding problems and guarantee approval even without anyone actually reading the documents in question. To then find that consultants are appointed to assess the FRAs and designs and conclude that the designs will make flooding worse and yet the Planning Department insist on keeping the site in the Local Plan anyway is more than a little disconcerting, especially for those already suffering from flooding.
- 10) We need to ask, how bad the flooding would have been in Sefton had the same quantity of rain that had previously fallen on Cumbria and Lancashire (and in particular somewhere as close as Croston) actually landed on Sefton? Would the proposed new developments have improved this situation? Obviously not – they would have taken out valuable storage capacity in the ground, obstructed the natural flow of water in the ground and added to the flow in already over capacity sewers (you should avoid ever hold back foul sewage).
- 11) Finally, it is clear that that the public authorities of Sefton Council Drainage Section and United Utilities have already carried out significant flood alleviation works on land drainage and sewer networks in Sefton, knowing that making new connections to either network will return those systems to the previous surcharged conditions they were in. We therefore seem to be in a cycle of flood alleviation schemes, followed by development which puts the situation back to where it was, which then requires further flood alleviation schemes to correct those problems and the cycle continues. It appears somewhat astonishing that Sefton Council Planners have already allocated any funding gained from the Community Infrastructure Levy to anything except flood alleviation schemes which must surely take priority over other types of minor improvement schemes. Knowing that funding for any publicly funding schemes is under great pressure must surely mean that priority should be given to schemes that will protect property from flooding.