A. Environment Agency Correspondence
Michael

Enquiry regarding MPSC Rufford Road, Southport, PR9 8LA

Thank you for your enquiry which was received on 19 December 2014 and subsequent payment received on 8 January 2015.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. Our responses are given in blue and some data is also attached.

We have been commissioned to investigate the risk of flooding to the Site. I would be grateful if you could provide information relating to the following:

1. Our initial investigations into flood risk indicate that the Site lies within Flood Zones 1, 2 and 3, based on the current information indicated on the Environment Agency website. However due to the presence of defences, interrogation of the online flood maps show that there is a Very Low likelihood of flooding occurring. Please could you confirm this and provide a more detailed Flood Zone map if one exists. –. The NaFRA banding is displayed as low but the land between the location and the coast is actually benefitting from coastal defences.

2. Please could you provide the modelled flood levels at/in the vicinity of the Site. Please provide all flood levels (to include the lower order events), with and without climate change for the River Wey at this location. – Attached

3. Please could you also provide the most up to date breach mapping that you have available on record. Attached

4. Could you please provide details of local fluvial / tidal defences and confirm the Standard of Protection (SOP) that is offered by both natural and man-made defences. Attached

5. Could you please provide a map showing the location of any Main River channels or Ordinary Watercourses near the Site, and note any development restrictions that would therefore apply. We can provide details on developments on/ next to Main Rivers but not ordinary watercourses so the customer would speak to Sefton Metropolitan Borough Council in this instance.

The nearest Main Rivers to the proposed site are Captains Watercourse and Three Pools Watercourse. The site itself (assumed to be the “works” shown on the mapping) is not adjacent to any watercourse designated Main River. Please check with Sefton Metropolitan Borough Council for any Ordinary Watercourses in this location.

For information, with regards to developments adjacent to Main Rivers: The Environment Agency has a right of entry to watercourses classified as Main River, and a right to carry out maintenance and improvement works. Any works in, under or over a watercourse classified as main river, or within 8m of the top of the bank (easement) would require Flood Defence Consent from the Environment Agency.

6. Mapping included within the Level 1 SFRA shows that the site has not been affected by historic tidal / fluvial flooding. Please could you provide us with more detailed information regarding any historic tidal, fluvial,
groundwater, surface water or sewer flooding affecting or in the vicinity of the site. Alternatively, please confirm that you have no further records of flooding in the vicinity of the Site. We hold no record of flooding at this site.

7. Please could you confirm the likely groundwater levels in the vicinity of the Site. We do not hold any groundwater information.

8. Please could you provide a detailed version of your ‘Updated Flood Map for Surface Water’ in the vicinity of the Site. We do not hold this information so you would have to speak to Lancashire County Council in this instance.

9. Please could you confirm any requirements with regard to floodplain compensation if further development is proposed at the Site. Please also advise any requirements you would have to set proposed finished floor levels appropriately. The information requested is detailed development design information which will be available from our Sustainable Places team and will be a chargeable service. They can be contacted at clplanning@environment-agency.gov.uk

10. If new development is proposed, surface water runoff would be restricted to the existing rate, accounting for the impacts of climate change for the lifetime of the development. Please could you confirm that this would be acceptable. The information requested is detailed development design information which will be available from our Sustainable Places team and will be a chargeable service. They can be contacted at clplanning@environment-agency.gov.uk

We are also writing to United Utilities and Sefton Metropolitan Borough Council who are the Lead Local Flood Authority, requesting details of recorded flooding incidents and flood levels. If you are aware of any other parties that may have useful information please let me know.

I have attached our Standard Notice or licence which explains the permitted use of this information.

Please get in touch if you have any further queries or contact us within two months if you’d like us to review the information we have sent.

Yours Sincerely

Mark

Mark Goucher | Customers and Engagement Officer
Customers and Engagement Team | Cumbria and Lancashire + Greater Manchester, Merseyside and Cheshire
Environment Agency | Richard Fairclough House, Knutsford Road, Warrington WA4 1HT
Contact | 01925 542980| Internal: 721 2980

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Data taken from Lancashire Tidal Modelling 2014. This version of the Flood Map will be integrated into the published Flood Map for Planning map later in 2015.

**Undefended tidal level at return period:**
- Q200: 5.84 m AOD
- Q1000: 6.07 m AOD
- Q200 + CC: 6.43 m AOD

**Defended tidal level at return period:**
No levels available. Site does not flood during defended scenarios.

**Flood Zone 3** shows the area that could be affected by flooding:
- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

**Flood Zone 2** shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

**ABDs (Areas Benefiting from Defences)** show the area benefiting from defences during a 1 in 200 tidal, or 1 in 100 fluvial flood event.
Tidal Breach Map
Southport

Produced: 15 January 2015
Our Ref: CL3590
Grid Ref: SD 37168 19476

Breach Location
1 in 200 Year with Breach
Flood Level (mAOD)
Level - 4.89 mAOD

High : 6.4
Low : 4.8

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B. Strategic Flood Risk Assessment Mapping
THE SWMP OUTPUTS ARE PRESENTED ONLY WHERE MODELING WAS UNDERTAKEN.

THE 1 IN 5 AND THE 1 IN 30 ANNUAL PROBABILITY EVENT OUTPUTS ARE BASED ON MODELING THE PREDICTED MAXIMUM FLOODING VOLUME AT MANHOLES AS INFLOWS THAT ARE DISCHARGED OVER A 1.5 HOUR PERIOD. THIS ASSUMES THEREFORE THAT THE SEWER SYSTEM RECEIVES ALL INFLOWS IN THESE EVENTS AND THAT FLOODING IS SOLELY CAUSED BY INADEQUACY OF THE SEWERS' HYDRAULIC CAPACITY. FOR THE 1 IN 100 ANNUAL PROBABILITY EVENT THE OUTPUTS ARE BASED ON MODELING OF DIRECT INFLOWS WITH A 6.5MM ALLOWANCE FOR THE CAPACITY OF THE SEWER SYSTEM PLUS MANHOLE FLOODING FROM THE 1 IN 30 ANNUAL PROBABILITY EVENT. THIS ASSUMES THAT THE SEWERS ARE LARGELY AT CAPACITY AND THAT EXCESS INFLOW BECOMES SURFACE WATER RUNOFF.

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Legend
- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Leeds and Liverpool Canal
- Permanent Water Bodies
- Critical Drainage Areas

Notes
Critical Drainage Areas (CDAs) have been defined by identifying the catchment areas that contribute to flooding in those local flood risk zones that could result in locally significant surface water flooding, i.e. those in which more than 8 properties or 20 people may be impacted.

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Sefton Council
Sefton Level 2
Strategic Flood Risk Assessment

Figure 14-1
Critical Drainage Areas

Scale at A3
1:40,000
Date
25/10/2012
Drawn by
ER
Approved by
PR

Consultants
CAPITA SYMONDS
Capita Symonds
Chinio One, Queen Street, Sheffield, S1 2DQ

Drawing number
CS057949/Fig 14-1
Rev.
Figure 17-1
Groundwater Flood Risk
The SuDS suitability is based on a combination of the permeability of the overlying drift and the underlying geology. Areas identified as being susceptible to groundwater emergence have been identified as 'very low' regardless of the underlying drift or solid geology. It should also be noted that in areas with a better SuDS suitability classification there may also be shallow groundwater or potentially contamination that could restrict or entirely prevent the use of infiltration SuDS. Where infiltration SuDS are proposed it is strongly recommended that location-specific soakaway tests in line with BRE365 or similar are used to confirm the suitability of the ground conditions. This should be completed at the conceptual design stage to avoid post-planning consent issues arising.

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Figure 21-1
SuDS suitability

Notes

Sefton Council
Sefton Level 2
Strategic Flood Risk Assessment

Scale at A3
1:40,000
Date
25/10/2012
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FLOOD ZONE 3B IS SHOWN ONLY WHERE THERE IS INFORMATION AVAILABLE FOR THE 1 IN 25 ANNUAL PROBABILITY FLUVIAL FLOOD EVENT. THERE ARE NO AREAS INLAND FROM EXISTING SEA AND COASTAL DEFENCES THAT ARE SHOWN TO BE AT RISK FROM THE 1 IN 25 ANNUAL PROBABILITY EXTREME SEA LEVEL. THIS FLOOD EXTENT TAKES INTO ACCOUNT THE PRESENCE OF FLOOD DEFENCES.

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Sefton Level 2
Strategic Flood Risk Assessment

Figure 8-1
Flood Zone 3b

Scale at A3 1:40,000
Date 21/11/2012
Drawn by ER
Approved by PR

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Legend
- Borough Administrative Boundary
- Main River
- Ordinary Watercourse
- Leeds and Liverpool Canal
- Permanent Water Bodies
- Defended fluvial model flood outlines
- Flood Zone 3b
This drawing may be used only for the purpose intended.

Legend
- Borough Administrative Boundary
- Main River
- Leeds and Liverpool Canal
- Defences
- Flood Depth (1 in 100 Annual Probability plus Climate Change)
  - < 0.1m
  - 0.1m to 0.3m
  - 0.3m to 0.6m
  - 0.6m to 1m
  - 1m to 1.5m
  - > 1.5m

Notes
- The information presented has been obtained from available hydraulic models that show the potential depth of fluvial flooding within Sefton in a 1 in 100 Annual Probability event, with an allowance for climate change.
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Sefton Level 2
Strategic Flood Risk Assessment

Figure 9-1
Fluvial Flood Depths with Defences
(1 in 100 annual probability plus climate change)

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Scale at A3
1:40,000
Figure 16-1

Historical Surface Water and Sewer Flooding Incidents

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Sefton Council

Sefton Level 2
Strategic Flood Risk Assessment

Scale at A3
1:40,000

Date
25/10/2012

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Approved by

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CS057949/4-1 -
TIDAL FLOOD ZONE 3 IS EQUIVALENT TO THE UNDEFENDED 1 IN 200 ANNUAL PROBABILITY FLOOD EVENT AND TIDAL FLOOD ZONE 2 IS EQUIVALENT TO THE UNDEFENDED 1 IN 1000 ANNUAL PROBABILITY FLOOD EVENT.

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