



In partnership with:



Preston and South Ribble Flood Risk Management Scheme

Discharge of Planning Permission Condition 6 (Surface water outfalls) & 8 (Outfalls)

Both conditions relate to Lancashire County Council (LCC) and United Utilities (UU) infrastructure.

6. No development shall commence until detailed surface water drainage design plans showing all the outfalls into the River Ribble for the site have been submitted to and approved in writing by the County Planning Authority. Thereafter, the development shall be constructed in accordance with the approved details.

Reason: In the interests of flood risk management and to comply with Policy G17 of the South Ribble Local Plan and Policy EN9 of the Preston Local Plan.

8. No development shall commence (including any earthworks) until an assessment of impact of any raised river levels on existing outfalls (modelling, modelling report) has been submitted to and approved in writing by the County Planning Authority. The details shall include a survey of the affected outfalls and outline the potential impacts both during construction and post completion of the development and identify mitigation measures, including a timetable for implementation, to protect and prevent any detrimental impact to the outfalls and their operation both during construction and post completion of the development. Any mitigation measures shall be implemented in full prior to commencement of development in accordance with the approved details and timetable and shall be retained thereafter for the lifetime of the development.

Reason: In the interest of public health and to ensure protection of the water and wastewater infrastructure laid within the site and to comply with Policy G17 of the South Ribble Local Plan and Policy EN9 of the Preston Local Plan.

Discharge of conditions

Both of these conditions are focused on UU and LCC surface water flood risk and the associated outfall assets, and understanding where they are located and how they are impacted by the scheme.

The Environment Agency (EA) has an established working relationship with LCC and UU to protect, mitigate for damage, resolve damage, and resolve issues associated with surface water/assets located during construction works. Work by the EA is undertaken prior to construction to understand (model) and document all known 3rd party assets using data from partners and via our own surveys. The EA has undertaken hydraulic modelling to understand impacts of increased river levels on the catchment which include an understanding of climate change. Hydraulic modelling uses the latest climate change predictions and using this has modelled the catchment with and without the new flood defences. The Flood Risk Assessment (FRA) submitted as part of the planning application details the findings. Page 21 and 22 of the submitted FRA details the existing surface water flood risk.

Condition 6

Surface water drainage design plans were submitted as part of the planning application and were the detailed design drawings in the form of the General Arrangement (GA) drawings and an Outfall Data Review Report with all outfalls indicated. These were discussed post submission with LCC and the EA provided our interpretation of the Hydraulic Model in the form of a FRA. UU provided a full asset register.

Further work was carried out post planning submission on the outfalls as LCC highlighted they were concerned that no partner would be aware of all outfalls until work commenced on site as there are no complete or robust records. The EA has gathered all available data from partners including historic maps, asset registers and continued to liaise with LCC on their known outfalls. The EA, outside of the planning process, compiled the Outfall Data Review report for LCC to understand how their outfalls had been assessed and taken into account. This was shared with LCC between Q4 20/21 and Q1 21/22.

The EA have obtained and compiled all known data which comprises of the 1993 and 2008 LCC survey, an EA 2019 full River Ribble and Darwen drone survey, an EA 2020 desktop study, and the 2021 site survey. The findings have been collated into Appendix 1.

The collated evidence shows that over time (since 1993) outfalls have become hidden/silted up and are no longer functional. Appendix 1 details each outfall and whether it was found on each survey. There are already known surface water issues in the area which are the responsibility of LCC as the Risk Management Authority and the EA believes they have carried out some further investigation in Q2/Q3 2021 to update their internal information.

The work that the EA have collated will be used with LCC to address surface water issues but not as part of this scheme. LCC is entitled to apply for Flood Defence Grant in Aid (FDGiA) funding from the EA to carry out an Initial Assessment of the impacts of surface water flooding and also for funding for modelling and improvements. All operational and functional outfalls were located as part of the EA drone, desktop and site surveys between 2019 and 2021 and included in the revised GA drawings, appended as:

ENV0000009C-JAC-ZZ-41A-DR-C-0001

ENV0000009C-JAC-ZZ-41A-DR-C-0002

ENV0000009C-JAC-ZZ-41A-DR-C-0003

ENV0000009C-JAC-ZZ-41B-DR-C-0001

ENV0000009C-JAC-ZZ-41B-DR-C-0002

ENV0000009C-JAC-ZZ-41B-DR-C-0003

ENV0000009C-JAC-ZZ-41D-DR-C-0001

This new information will be provided to LCC to support their future projects. We will discuss with LCC that, if, during construction works, old/non-functioning/silted up outfalls are located that they will be contacted and will advise in a timely manner what solution is required. The EA contractor (VolkerStevin) will take photographic evidence of the outfall, notify the VolkerStevin Site Supervisor who will notify the LCC highways supervisor. It is likely that the EA will agree a service level agreement with LCC to minimise costs to the project. Damage as a result of the EA works to LCC assets is provided for under the Water Resources Act 1991.

Condition 8

Condition 8 requires a strategy be developed between the EA and UU to understand the impact of any raised river levels on UU outfalls within the Riversway, Broadgate, Riverside and Riverside Road areas of Preston (the scheme boundary). The EA and UU have shared modelling and data to create an understanding of outfall locations and the EA has determined no quantifiable detriment to UU outfalls as a result of the scheme.

The EA modelled and designed the required changes to sewers and manholes for the defence alignment which were approved at planning;

The scheme includes for new works to the sewer network, details of which can be found on Drawings ENV0000009C-JAC-ZZ-42B-DR-C-0013, ENV0000009C-JAC-ZZ-42B-DR-C-0014 and ENV0000009C-JAC-ZZ-42A-DR-C-0011. These detail in area 1: Riversway and Broadgate: a diversion of foul water sewer along Broadgate and Riverside including installing two new manholes;-Surface water gullies would be removed and replaced along the working area. The discharge location would change with the gullies discharging into the River Ribble rather than the combined sewer network as they currently do. In area 2: Penwortham: the raising of ground levels near to the entrance of Penwortham Methodist Church means the raising of a UU Combined Sewer manhole by ~300 mm; there will be a localised diversion of the 225mm diameter sewer at Riverside Road to avoid conflict with construction works.

These diversion works have been designed on a like for like basis to ensure that there are no adverse impacts on sewer performance. Since the sewer network does not discharge into the River Ribble, no impacts have been identified as a result of the predicted small increases in peak water levels within the channel. Therefore, the impacts on flood risk from sewers are considered to be negligible. It is noted that no potable water mains would need to be diverted and no impact from flooding associated with failed water mains is predicted.

Strategy

In the same way that the EA undertook its own study for LCC outfalls, we completed the same process for UU outfalls. The EA completed hydraulic modelling, published the FRA and completed the GA drawings as part of planning submission to incorporate UU assets. UU were able to provide the EA with a full asset register meaning no further surveys were required and that all assets were taken into account.

The EA hydraulic model concluded no quantifiable detriment to UU outfalls as a result of the of the new flood defences and no mitigation required as a result. River levels in these areas will increase over time due to climate change with or without the new flood defences. Some of the UU outfalls are also not currently flapped and there is unlikely to be enough storage in the UU system currently for future climate change predictions (increased water levels), therefore the scheme does not cause any further quantifiable detriment. The EA hydraulic model was given to UU during 2021 which they ran with their own asset data.

The EA and UU teams continue to meet on a frequent basis with both sets of modelling teams and will do so as any further queries arise. During September 2021 UU asked to re-run the model to include multi-peaked events (fluvial and tidal). They had identified 2 nodes (2 locations) within the scheme boundary which they want to investigate further. These are outfalls in the Avenham Park and Penwortham Holme areas. Both these areas are part of the existing flood plain and will remain so, there are no works in these areas. UU also want to investigate the impacts further upstream in areas 3-5. These are part of a future planning application (expected during 2022) and not part of the scheme boundary, discussions will however continue with UU in advance of this.

The EA have therefore located all UU outfalls and concluded that there is no quantifiable detriment to the UU outfalls as a result of scheme. The next steps are to go through the model outputs and resolve any further queries that UU have with regard to their own 'hotspots', this will continue be done through joint technical meetings. To support this, the EA also has a duty under the Water Resources Act 1991, (Schedule 22 of the Act) which contains special rules for undertaking flood risk management works which may affect the interests of a protected undertaking, such as UU. Both parties are covered by the Act.