



November 2017

E16/6518/ r01

Dear Sirs

Re planning application No 2016/91573

Cellars Clough Mill, Manchester Road, Marsden, Huddersfield HD7 3LY

Further to the responses from the consultations regarding the proposed development we have revised the FRA for the development and would respond to the comments made below.

Kirklees MDC – Drainage

The site will be drained with a SUDS scheme in the form that the surface water discharge from the site will be attenuated to 70% of the existing annual discharge rate. Storage of surface water will be provided within the adjacent open space in the form of a surface water detention basin. This could incorporate a small area of permanent water to provide some treatment of the run off but only if it is privately maintained or considered as public open space. Open water would not be acceptable to Yorkshire Water for adoption. If the 1 in 30 year storage requirement is provided in underground tanks then these would be adopted by Yorkshire water and they would be happy for the open basin storage to be maintained by a private company or the local Authority. This is obviously a point for further discussions but is achievable as seen from a Flood risk perspective. The siting of the basin and any underground tanks will need to be agreed and can be covered by a simple planning condition.

The upstream mill pond has been considered in two parts. We have reviewed the report prepared by Kirklees in 2014 and re-inspected the site. There is little change from that report or our previously Submitted FRA. The walls are still structurally stable but do require some minor works to prevent seepage through the wall and a simple cementitious grouting operation would effectively reseal and stabilise the walls. Whilst the walls have moved slightly they are not un-stable and the movement is symptomatic of dry wall construction. Part of the application includes for the infilling of the eastern section of the mill pond. This will make the culvert beneath the site redundant and allow its removal. There is also a draw down outlet from this area of the pond which would also become redundant but this would leave the western section of the pond without a draw down facility. The water levels in the western pond would be controlled, as it is now, with the small penstock alongside the overflow on the southern edge some 200m away from the site. The inflow is already controlled by a similar penstock at the upper end of the Goit that feeds the ponds. We would suggest that a new drawdown pipe is installed within the infilled pond area to keep this facility. It would discharge to the same point and only be used for draw down reasons. The western pond is privately owned and used as a fishing club who carry out regular maintenance of pond and its surroundings. It also ensures that any problems with pond are reported and addressed. The proposed development of the site would simplify the arrangements for the hydraulics of the ponds and remove the flows through the culvert beneath the site.



The infilling of the eastern section of the pond will reduce the lateral pressures on the walls and stabilise them.

The flood routing through the site is shown in the new FRA and effectively deals with any flows that would enter the site due to exceedance conditions or breeches of the dams to the ponds or Sparth reservoir. The arrangement of the main units means there is a direct route through the site from the ponds down to the open land to the east. The house floor levels are set some 450mm above the road levels allowing flood water to flow along the highway from west to east. This simple arrangement allows overland flows to pass through the site without risk to the buildings

After reviewing the River modelling data that the area of development is effectively protected by existing boundary walls albeit that the defences are private but are existing 350mm thick stone walls whose crest is only just below the 1 in 1000 year flood event. These protect the site but the flooding plans for planning purposes disregards these topographical feature because of possible breach scenarios and over topping. This leaves the site outside flood zones 2 and 3 with the benefit of these defences. We have proposed to reinforce these walls with a gabion edge earth bank that will prevent flooding even up to the 1 in 100 year event. These will fall in back gardens to new residences and the purchasers will be informed of the need to maintain these defences as riparian owners, or they could be included within the management company for the site and inspected and reported on a yearly basis.

We have carried out an initial estimation of the flood waters that could be displaced by this reinforcement, even though the 1 in 100 year event would not enter the site, and for the 1 in 1000year event, an extra 80 cubic meters of flood water would have to be catered for. This has been provided within the proposed surface water detention basin to the east of the site.

It should be noted that even during the major flood events in the nearby Calder valley in 2015 this site did not experience any flooding from the River Colne.

Environment Agency

The floor levels are all set a minimum of 600mm above the 1 in 100 year flood event and in may cases above the 1 in 1000year event. These have been shown with the amended FRA.

The existing wall to the southern boundary of the site has been shown to be a substantial stone wall approx. 350mm thick that would prevent the 1 in 100 year flood event waters entering the site from the river. As agreed verbally it is proposed to reinforce this wall with an earth and gabion banks to prevent even the 1 in 1000 year event flood waters entering the site. This affords protection above the current requirement for Flood Risk.

We have also provided compensatory flood volumes for the 1 in 1000year event as described above.



Canals and Rivers Trust.

We do not consider that there any implications on the operation of Sparth Reservoir by the development of this brownfield site. The FRA outlines the effects of a breach of Sparth reservoir holding dam and how the flows would be channelled along the canal by the existing walls that abut the canal and separate the canal from the site. Over the first 75m the pond retaining walls are over 2m high and approx. 2-3 m thick with a stone facing, when this is compared with a holding dam height of 3m the effects of a breach would not affect this wall. Further to the east a further 100m of old mill walls 350 -450mm thick form the boundary to the site. At this point the max depth of flow from such a breach would be below 1m in depth and the flood waters would flow out of the canal to the north of the canal that are at a lower level rather than into the site. There is no change in this scenario from what currently exists. The reservoir and holding dam are under the control of the Canal and Rivers Trust and must be inspected on a regular basis under the Reservoir Act. We consider the risk of a breach of the dam to be a very low risk and not of sufficient risk to prevent redevelopment of the site.

The other items relate to aspects outside the realm of the FRA but item 7 relates to a culvert that runs beneath the prosed site which is quoted as an essential run off for Sparth Reservoir. The only culvert noted as running beneath the development site is the main outlet from the ponds to the former mill. This only serves the mill ponds and has no connection to Sparth reservoir. There are no legal easement or wayleaves relating to this possible discharge. There is culvert that runs beneath the western mill pond that carries the flows from the watercourse on the northern side of the canal down to the River Colne on the south side but this is to remain as is and not be disturbed within these proposals .

The remaining issues relate to items outside the remit of the FRA as commissioned for this site and we believe we have approached and complied with the consultees comments. Wea rea available to discuss these matters further if so required.

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