Dear Dave,

Objection Response from Environment Agency
Holmes Mill, Greenacre Street, Clitheroe BB7 1EB

Following the objection letter from the Environment Agency dated 15th January 2016 (Ref: NO/2015/108428/01-L02) and your subsequent email, we summarise your reasons for objection in regard to the above planning submission, as follows:

- the FRA states that compensatory flood storage will be required to offset blocking up the wall but there is no indication of where this storage is going to be;
- there are no new modelled extents for blocking up the wall therefore we can’t assess the flood risk elsewhere that would be caused by blocking the wall up;
- the new bridge level has not been compared to the levels of culverts and bridges up and downstream and no blockage modelling/analysis has been done; and
- the ground floor usage of the proposed development has not been stated.

It is intended that this letter addendum investigates the validity of the reasons provided and provides a vehicle for presenting solutions, which may be considered acceptable both to the Environment Agency and Developer alike; and hence overcome any existing concerns in regard to flood risk and safety at the Holmes Mill site in Clitheroe.

In Summary

There are 2No over-arching issues highlighted which the EA has objections to; which revolve around a gap in the existing river wall; and the proposed bridge spanning the watercourse.
1. Gap in the River Wall

It is acknowledged that in the event that the existing opening within the river wall is blocked up; which is understood from the Architect to be necessary for Health & Safety reasons, then compensatory flood storage will be required; ideally at a location within close proximity to the Holmes Mill site.

Furthermore it is also acknowledged that in this instance the EA would require a detailed river modelling exercise to be undertaken, in order to provide suitable evidence that a) blocking the gap and b) compensatory flood storage provision does not impact negatively on flood levels within Mearley Brook.

In order to minimise additional works; and also to overcome any concerns that the EA may have in regard to this issue, we suggest that a possible compromise is considered which permits the ingress of water into the service yard area associated with Holmes Mill during flood conditions; however also provides a barrier to prevent people from falling into the watercourse.

An example is provided within Figure 1 below.

**Figure 1: Example Self-Closing Gate by IAE Fencing** ([www.iae.co.uk/fencing](http://www.iae.co.uk/fencing))

It is also considered that implementing a gate of similar nature to the one illustrated above will also minimise the possible increase in flood risk to properties and development downstream; and in the event of a flood event is easy to clean; which will assist in reducing the potential for blockage; caused by accumulations of floating debris.
Proposed Road Bridge

We acknowledge that the EA has an objection in regard to the proposed bridge structure across the watercourse; and this could potentially increase flood risk associated with flow impedance and blockage.

Figure 2: Bridges within the vicinity of the site

Figure 3: Upstream Bridge (1)
Figure 4: Upstream Bridge (2)

Figure 5: Downstream Bridge
We are aware that design standards for new bridges require that the soffit level is set at a minimum of 600mm above the 1 in 100 year plus climate change flood level; however owing to limited space; this is not considered to be viable.

As a compromise, and in an effort to minimise the increased flood risk at the site caused by impedance to flow; we have recommended within the report that the structure does not have solid walls; and water is permitted to flow across the deck during flood conditions; if required.

Following additional survey work it has been determined that the soffit level of the upstream bridge (1) is approximately 2.28m above the bed level with the downstream bridge (Greenacre Street Bridge) in contrast having a soffit level only 1.32m above bed level.

It is proposed the soffit level of the new bridge to the development site will be approximately 71.40mAOD which is somewhere between at approximately 1.67m above the bed level.

As such it is considered that the upstream bridge (1) has a bed to soffit level 0.55m greater than the proposed bridge and the downstream bridge has a bed to soffit level 0.29m lower than the proposed bridge.

It is noted that the watercourse at the location of the upstream bridge (1) and the downstream Greenacre Street Bridge is considered to be wider than the watercourse at the location of the proposed bridge. Upstream bridge (2) which travels under the highway known as Moor Lane B6478 (Figure 4) is an arch bridge with vegetation which is considered to have a similar width of watercourse as the proposed bridge.

It is considered that the upstream bridge (2) arch bridge located approximately 45m upstream of the development site (Figure 4) would be more likely to experience a blockage than the proposed bridge on site due to the existing vegetation immediately upstream and the structure of the bridge.

Furthermore the structure of the bridge i.e. arch bridge is more likely to experience blockage that the flat soffit road bridge with open sides of the proposed bridge. Therefore blockage at this location would be more likely to occur at this location rather than the new proposed bridge and the introduction of the bridge to the development would have little impact on the risk of flooding upstream and downstream.

The bridge downstream of the development site (Figure 5) has a bed to soffit level that is lower than the proposed bridge and as such it is considered that during times of flood debris within the watercourse would more likely to cause a blockage at the downstream bridge rather than the proposed bridge due to the higher soffit level.

**In summary:** Following detailed on-site observations, given the channel widths; bridge geometry and location of the site; it is considered that the proposed structure will not present any more of a flood risk due to blockage than any of the bridges either up or downstream of the site.

However, it is recommended that the soffit level of the proposed structure is raised as high above the watercourse bed level as is physically possible; to minimise any impact to the watercourse.

Furthermore, it is advised that the land owner/developer undertakes regular inspections and maintenance within the channel adjacent to the site; and in particular around the location of the proposed bridge; to ensure that any accumulations of debris, particularly following flood events; are removed and disposed of in an appropriate manner.
Proposals - Ground Floor

It is proposed the ground floor of the development site will be comprised of the following:

Spinning Block: bar, restaurant, kitchen and hotel reception
Spinning Mill: Engine Room
Weaving Shed: Leisure complex and retail units

Recent Flooding in Lancashire

Following a conversation with the Architect we have been advised that the Holme Mill site was not impacted during the recent (Winter 2015) flooding within the Lancashire area.

We trust that the above provides sufficient information to overcome any current objections that the Environment Agency may have in regard to flood risk at Holmes Mill in Clitheroe; however should you have any further queries, please do not hesitate to contact us.

Yours Sincerely,

David Emmott
For and on behalf of
Flood Risk Consultancy Limited

Cc
EA – Dave Hortin
LCC – Chris Dunderdale
LPA – John Macholc
Architect – Charles Stanton