MONDAY 24-02-2020 Lynne Jones …Planning Application Ref 7/2020/2039 Proposals for a Premier Inn Development on the Old Ravensfield Site

Objections and concerns submitted by Keswick Flood Action Group

TUESDAY 25-02-2020. Please see attached KFAG objections to the Planning Application 7/2020/2039 for a Premier Inn on the old Ravensfield site. Please will you pass this email on to the EA department which deals with planning applications and request that they consider in their response to the Planning Board if the site should, because plans are still "live" for an additional culvert here, actually be Flood Zone 3b: Functional Flood Plain. To quote the planning application Flood Zone 3b: "This zone comprises land where water must flow or stored in times of flood. Strategic Flood Risk Assessments should identify this zone. " We would be interested in your colleagues' response.

We have not proposed the use of permeable surfaces as the application already stated (page 19) : "As stated previously, infiltration to the ground may be a feasible means for disposal of surface water but it is considered inappropriate to rely on soakaway features in an area liable to flooding."

KFAG object to the development on the following grounds:

1. Developments on the flood plain should be avoided
2. Construction at this location would make the cost of possible future flood risk reduction measures for the community prohibitively expensive.
3. It has the potential to increase flood risk to adjacent properties
4. The safety of guests and staff is misunderstood
5. Increased risks of combined sewer discharge

1 Development on a Flood Plain: The area is recorded as in Flood Zone 3a. It seems inexplicable for permission to be given for a significant construction to be allowed on a flood plain in the heart of the Lake District. If this location, in part of a National Park which also enjoys World Heritage status, does not offer a clear way to prevent development on Flood Zone 3, in the light of rainfall forecasts and given concerns over future climate change risks, then there is very little chance of any community, anywhere, being able to have a chance of a common-sense approach.
Whilst it is accepted that the floor areas are designed to be above (currently) anticipated flood levels, the necessary impacts and pollution that a flood will cause on the environment - more vehicles likely to be abandoned in the flood zone, the general impacts of the additional landfill needed from water damaged items and the need for energy consuming dehumidifiers should not be ignored or underplayed. All of this is detrimental to the direction in which we should all be going, as a climate aware community, to protect the planet and our futures.
2 Construction at this location would make the cost of possible future flood risk reduction measures for the community prohibitively expensive. After the 2005 floods, discussions over flood risk reduction in Keswick have always included proposals for the provision of an additional culvert at High Hill. Following the floods of 2015, the EA commissioned the Kendal Appraisal Package FRM Summary Appraisal Report, August 2018. The report considered a long-list of options, some of which were discounted but, the proposal to create an additional culvert has remained as one of the short-list of options alongside upstream storage, replacement of Greta Bridge and improving the standard of protection of the river defences. Table 3-4 (page 55) of that report provides a summary of the options short-list and the potential standard of protection that these options could provide.

Whilst KFAG recognise that upstream storage, and, in particular, the management of Thirlmere reservoir for storm storage, is the best opportunity to reduce flood risk for the whole Keswick

community, climate change and rainfall forecasts mean that a combination of measures will be needed to manage flows locally alongside an upper catchment approach. A culvert is, therefore, a real, and still potentially viable, option which the EA thinks could help solve current - and future - problems. Whilst this option has not, so far, been realised, to lose the opportunity to install an additional culvert here, given the forecasts for increased rainfall which the planning application acknowledges (page 9 an allowance of between 35% and 70% peak river flow), would be to have a complete disregard for the flooding and devastation of the recent past and the predictions for the coming decades.

It takes a considerable length of time for flood defence schemes to become realised. Whilst there have been, and remain, serious funding issues for any short-list option to be taken forward the political climate may change. The funding mechanism has been widely criticised for, in particular, its penalising smaller communities. We are hopeful that this situation will soon be addressed so any proposals on the short-list are far too valuable to the community to be discounted at this time. Given that plans for an additional culvert are still under consideration by the EA, if construction were to go ahead on this site then the cost of installing such a culvert at some stage in the future could become prohibitive.

The costs of construction listed in the Appraisal Report are calculated in table 3.5 (page 58). The PV costs of constructing a new culvert are £2,413k and damages £26,054K as opposed to Greta Bridge replacement of costs £9,912k & PV Damages £21,459k. Should the development go ahead we would dispute that only 3 properties might be saved by the culvert making it more financially viable, as the modelled flow paths showing the initial flows going to the rear of the site fig 2-7 (page 33) are likely to be altered.

It is recognised that Greta Bridge acts as an obstruction to the flows and that water levels upstream of the bridge are higher than those downstream. Many bridges in Cumbria have failed in recent storms, an additional culvert could reduce pressure on the bridge and delay the timing of overspill. The site is at a point of early inundation due to the lower river defences where the glass panels reduce and finish. It is in both the developer's and the community's interests that the provision of an additional culvert should be given serious consideration before the development goes ahead and the opportunity is lost/the costs become prohibitive. It could be that the developer could construct an additional culvert far more cheaply than the EA. Perhaps this should be considered as a planning contribution helping the community deal with a very real flooding problem, part of a Section 106 agreement etc. ?

3 The potential to Increase flood risk to adjacent properties. Whilst the planning application emphasises a design which ensures safety of flood for the building, the frontage may deflect the water towards homes on High Hill rather than flowing harmlessly to the flood plain behind, putting more properties at risk and thus the altering the cost benefit analysis in the AECOM document as above. It is of further concern that the design includes plans "so surface water is conveyed away from the proposed buildings using raised kerbs and channels". Any actions which raise this area will force surface water towards other properties since it is a low point and the flood plain is obstructed to the rear by the river defences.

It is accepted that some measures of water storage are included to address the impermeability of the site. In view of the location closer to the road, and thus the riverside, with an extremely wide frontage it seems reasonable that modelling should be undertaken to investigate any increased funnelling of floodwater overtopping from the river defences towards residents further along High Hill. The site is the low point in the natural gradient of the land so there will be ponding present in the aftermath of a flood event.

4 Safety: This flood situation has been exacerbated at this location since the construction of the river defences in 2012. Whilst it is recognised that Storm Desmond was of greater magnitude than the river defence design, the weak point where overtopping first occurs is now at the point where the glass panels are reduced and finish, immediately opposite the site where early overtopping had never been known to occur as far as we are aware. We refer to the Section 19 Report for Storm Desmond, 5th/6th December 2015. Photograph 25 on page 46 of

this report clearly shows the point of overspill and the photographs on the next page are stark evidence of the force, nature and depth of that flood event at that location.
https://www.cumbria.gov.uk/elibrary/Content/Internet/544/3887/6729/6730/4271394526.pdf?timestamp=43757182142
Further evidence that the full force of the river was exercised at that point was obvious in the vast amount of debris, from whole trees to small branches and general wreckage, which formed a huge pile in this area after Storm Desmond, initially blocking the entire road.
Since the risks at this point were identified during the flooding of Storm Desmond the EA have not done any works to remediate areas where the defences are not to design standard and there is no work planned - or funding identified - for any parts of the flood defences that needed improvements as a result of that flood event. Thus, a repeat of this scenario is likely next time. We are all only protected to the level of the weakest point.
The flood defence scheme from 2012 was supposed to provide a 1.33% AEP. An assessment of the Keswick scheme performance was commissioned by the EA in late 2016. Key findings of this draft report are as follows:
Re-assessment of hydrology post 2015 on the Greta/Derwent following the December 2015 flood event resulted in a 22% and 11% increase in peak 1.33% (1 in 75 year) flows at Ouse Bridge and Low Briery, respectively.

· Estimated water levels through Keswick were re-assessed using updated modelling and hydrology resulting in significant increases in predicted water levels, with up to 400mm increase in level noted upstream of Greta Bridge for the 1.3% AEP (1 in 75 year) event. During the December 2015 event levels may also have been affected by blockage of structures and gravel accumulation.

· Several river crossings within Keswick have a strong influence on water levels, with significant afflux associated with Greta Bridge and Forge Bridge identified by modelling. Afflux will increase upstream water levels increasing flood risk.

· Using updated hydrology post 2015 and an enhanced hydraulic model, the scheme flood defences were re-assessed and found to generally maintain a 1.33% AEP standard of protection in most areas. However, several sections of defences were assessed as lying below the target 1.33% AEP SoP including the section of wall opposite the former site of the Ravensfield residential home. Again, there is currently no allocation of funding to increase the SoP at this point.

The planning applications states 2.2 Wherever possible, ensure that dry access is provided (above flood level) to enable the safe evacuation of residents and/or employees in case of flooding. It seems likely that the developer has completely misunderstood and underestimated the flood risk at this location where flooding is not easily forecast. The Greta is a rapid response river. When the river overtops it does not do so in a calm manner, it neither gently ponds or trickles. It overflows in a noisy, thunderous, raging, life-threatening torrent. The situation in a wide area changes rapidly to one of extreme danger. The force of the water is such that it can sweep someone away when only a few centimetres deep but it has been far deeper than a few centimetres in this area during the last three storm events (5 January 2005, 19 November 2009 & 5 December 2015).

Those considering the proposal must also be aware that, during Storm Desmond, the river defences overtopped at the rear of the site also. The force of the water powering over the embankment behind the bungalows at the rear of La Rosa Roja was such that a hole was eroded into the ground sufficient to put an upturned small car into it. All that flow went across the site and to the west.
Ensuring a Safe Escape Route: The proposed location is, effectively nearly at the centre of any flood event, at a point of probably the highest risk due to the force of the flood water and a wide area of flood zone all the way around. This part of Keswick very quickly becomes part of a vast moving body of water which stretches from where the land rises at Vicarage Hill and the

old railway embankment all the way to the higher ground at Portinscale and on to the end of Bassenthwaite. The route for guests to return after having a meal or drinks in town is over Greta Bridge which would be closed for safety reasons in a potential flood situation. Visitors unaware of the danger might try to cross or make their way around by foot via Fitz Park or by car via the A66, both routes local people would be alert to the dangers of the consequences of flooding in the area but those unfamiliar with Keswick might put themselves at risk. Locals are also aware of the depth flood water on the Howrah's footpath can reach for those tempted to walk back from Portinscale.

Dry Evacuation: There are fairly frequent Flood Alerts for the River Greta. If the business has a high staff turnover then the ability to assess the complex nature of flood risk here and make appropriate decisions is compromised. These events are often very immediate and something that cannot be done with a long-term plan when alternative arrangements can be easily made. The flood risk from both directions would need to be considered as the peak flows could be coming from Derwentwater and the rear of the site. Actions would certainly need to be well in advance of the River Greta overtopping because the Inn would be in the centre of a wide flood area. The risk is too many false alarms – or perhaps profit-led decisions leaving it too late.

How would the staff get hold of their guests (who were booked in but had subsequently gone out) to warn them to return and collect their vehicle/not to return (if the situation was severe)? For those actually in the building a public address system should be considered. A failure of the electricity supply in the earlier stages of a flood event would need to be factored in. Arrangements for disabled guests must be well thought out and implemented at an early stage. We can foresee occasions where visitors might choose not to heed such warnings and then put themselves and the emergency services at risk.

Would guests be routinely warned of the location of the evacuation centre and procedures in the same way that fire risk and actions are openly displayed?

Keswick's evacuation centre for flood events would be put under enormous pressure as putting up nearly 150 extra people (given full double room occupancy and staff) would more or less triple the numbers who might need accommodation given that most local people choose to go to friends and families in the area for emergency shelter.

Flood Alert/Warnings, staff would need to be properly trained, familiar with the risks and evacuation procedures. Regular ongoing training, given the possible transient nature of staff, would be essential.

5 Increased risks of combined sewer discharge: In the past the sewage system for Ravensfield Care Home had to only cope with waste from only 30 residents. A total of 71 en-suite rooms, probably the majority of which will be occupied by two people (or in some cases family rooms), is the equivalent of a reasonably sized housing development. Furthermore, there are likely to be periods of peak usage in the morning and again early evening. This may put the current sewage system from the site at an unacceptable risk unless considerable investment is done to upgrade the entire system to ensure that properties along the total route to the sewage works are not at greater risk of foul water flooding or unpleasant odours.

If the developer intends to connect to the sewage pipes in the field behind the site we will need assurances that the system can cope. The new sewage system which United Utilities developed in 2012 (after the closure of the Ravensfield Care Home) was designed to (then anticipated) 1:30 year storm events as that was all that was required by the regulations. At the time KFAG questioned the wisdom of having so little freeboard in the system, given climate change forecasts and future developments in town. We were told that, in weather events more extreme than this, raw sewage is pumped at high pressure over Greta Bridge and would discharge from the bifurcation chamber in the field behind this site - but that this would not be a problem in those circumstances as the river would already be flooding the area diluting the effluent. The planning application acknowledges that "through discussions with landowners of adjacent properties, it has become apparent that the sewer to the south of the development has been prone to surcharging". The right hand river bank of the Greta

downstream of Greta Bridge has been raised and closely planted so the river may not overtop as promptly as was first envisaged by UU. Hardly an acceptable arrangement. KFAG are unwilling to support any additional pressure on what we have always considered to be a not entirely adequate system. It is a health hazard and at the very least backflow valves should be considered for flood events.

In Conclusion

The Flood Group does not support any development on the flood plain. It is of utmost concern to the community that the opportunity to install further flood mitigation measures by the construction of an additional culvert should not be lost. Through the comments above we do not feel that it passes the Exception Test to fully "take into account the vulnerability of its users, without increasing flood risk elsewhere". Aside from concerns over its effect on the neighbouring properties, the acknowledged depth, speed and extent of flooding at this location could put staff, guests - and the emergency services - at risk. The developers should be warned that unless - or until - an effective flood risk management scheme is implemented by United Utilities with regard to the operation of Thirlmere reservoir such a building will be an additional burden on the insurance industry - or potentially uninsurable as some businesses in Keswick's flood risk zone already are.

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