Hampton Court
Meeting notes
13th August 2019, 11am

Present:	Rachel Rae, Environment Agency (Planning Advisor)	RR
	Veronica James, Environment Agency (Planning Specialist)	VJ
	Neil Landricombe, Environment Agency (Technical Specialist)	NL
	[redacted], Elmbridge Borough Council (Case Officer)	JM
	[redacted], JLL (Planner)	JO
	[redacted], Waterman (Internal Project Manager)	RS
	[redacted], Waterman (Flood Risk Engineer)	BM
	[redacted], Waterman (Flood Risk Engineer)	CT

Action

1.0 Introductions

1.1 Each member present at the meeting provided a brief introduction to who they are and what their involvement has been in the Hampton Court scheme.

1.2 It was noted that NL was not responsible for the technical review, as part of the formal statutory consultation, of the Flood Risk Assessment (FRA) which was undertaken by a colleague. It was acknowledged however that he has been involved and is up to speed on the responses received and the reasons behind them.

2.0 Planning Background

2.1 RS provided a brief background into the schemes progression from that which was submitted in 2009 and has an implemented planning consent. It was noted that in this extant scheme, floodplain compensation up to the 1 in 100 flood as required at the time, was provided in an underground tank and it is considered that the new proposals to use the upper car park for flood compensation are a significant improvement over this.

2.2 RS indicated that the aim of this meeting was to discuss the objection points that the EA have raised and hopefully to come away with a clear understanding of the way forward to overcome these objections. It was also indicated that once a way forward has been agreed, an updated FRA would be produced which incorporates the agreed changes so that all documentation is in one report. VJ agreed that this is a sensible approach and reiterated the need for one, comprehensive document **CT**

3.0 Reasons for Objection

3.1 BM tabled the EA objection letter and summarised the reasons for objections as follows:

- The FRA fails to demonstrate that the loss of floodplain storage caused by the development can be mitigated.
- Whether the proposed floodable void (upper car park) is an appropriate means of mitigating for the loss of floodplain storage.

3.2 BM highlighted that discussions regarding the development had previously been held with Jack Moeran (from the Environment Agency) in August 2018, under a cost recovery agreement, and again in May 2019. The design was progressed based on these discussions, in particular the use of the upper car park as flood compensation storage and that the increase in flood depth by 5.8mm to the areas to the west of the Site were acceptable on the basis that there is an improvement over the consented scheme. It was therefore a surprise to Watermans that an objection had been received from the EA.

3.3 VJ acknowledged the extant permission and previous advice provided by Jack Moeran but explained that the increase in flood risk needs to be addressed. On this basis, VJ indicated that the development proposals should be revisited with the aim of removing the offsite impact.

3.4 JM explained that she would have difficulty in explaining an increase in flood risk to her Members on the Planning Committee.

4.0 Flood Mechanism / Flow Paths

4.1 BM tabled the flood extents for a number of events and explained that the initial flow route was from the Thames to the east across Cigarette Island Park and that there was a secondary flow path from the Thames to the west approaching from Hampton Court Way. CT also provided a visualisation of the flow routes. It was explained that the increased offsite flood risk is as a result of the western flow route and a damming effect caused by the Hampton Court Way Building (HCWB) to the south west of the Site.

4.2 It was agreed that the flood extents for several events would be appended to the updated FRA. **CT**

4.3 With regards to the discharge of flood water from the Site during recession of any flooding, RS indicated that the majority of the flood water would discharge naturally to the surrounding watercourses. It would only be the areas which are lower than the surrounding ground levels that would discharge via gravity to the surface water drainage system. RS stated that this essentially creates a sump which would contain any debris/silt that might be brought on to the site by flood waters which would then be managed separately as part of the post flood clean up.

5.0 Flood Compensation / Increased Flood Risk

5.1 BM indicated that a number of options had been reviewed by Watermans prior to the meeting to assess whether the slight increased flooding off site could be removed, namely the lowering of surrounding carriageway levels, lowering of sections of HCWB and the lowering of the adjacent platform to the west of HCWB. It was highlighted however that there are significant constraints in each of these and that the primary reason for the increased 5.8mm of flooding was due to the damming effect caused by HCWB.

5.2 Based on the flow mechanisms, NL queried whether consideration had been given to raising the HCWB to provide a void beneath the ground floor to allow flows through to the wooded area. It was noted by NL that the level of the underside of the slab could be set with no freeboard above the 1 in 100 year plus 35% climate change flood level (i.e. 8.84m AOD).

5.3 BM indicated that there are a number of issues with this approach, predominantly regarding the level at which the ground floor levels would need to be raised and the implications this would have on access and the lack of space there is in the footway to provide ramps etc. Furthermore, JM indicated that the proposals are very constrained in terms of building heights and the option to raise the HCWB is unlikely to be feasible or be acceptable to the planning authority. Waterman's explained that they consider the offsite detriment to be a result of changes in conveyance resulting in restricted flood flows, rather than changes in flood storage.

5.4 BM and RS presented an alternative option which had been considered prior to the meeting but had not been modelled at this stage. This option was to provide a flow route from the station forecourt to the north of HCWB to the railway tracks by providing an open grating or kerb inlet gullies in the carriageway connecting to a box culvert which would outfall beneath the station platform. NL raised concerns with this approach based on potential blockages and maintenance in the future.

RS confirmed that it would be possible to include maintenance obligations within the section 106 agreement.

5.5 JM confirmed that the planning authority had accepted a similar maintenance undertaking in a S106 agreement for the consented scheme and that, if required, a similar agreement should be acceptable for this application.

5.6 RS provided another option in which the FFLs of the HCWB were retained as per the current design, but ground lowered beneath the building to allow the conveyance of flood waters to the wooded area to the south. NL indicated that this is not the ideal scenario as although it would provide conveyance it would still be lacking in volume storage. NL stated that the potential for vertical openings to the below ground void should be explored wherever possible, RD indicated that this is likely to be difficult to achieve however this would be assessed and if necessary, confirmed within the updated FRA. It was agreed that Watermans would prepare sketches of the proposals for the EA's consideration prior to undertaking any hydraulic modelling. NL also explained that if security is a concern with void openings then security bars could be installed at 100mm spacing. **CT**

Post Meeting Note: Since the meeting, an additional solution in which additional sections of the HCWB are lowered to allow flows through the building have been considered. Some detail of this option has been sent to the EA for comment.

5.7 BM tabled a receptor assessment which had been undertaken in which a comparison had been made between the baseline depth of flooding, the proposed depth of flooding and the building thresholds within the area of increased offsite flooding. BM explained that based on this assessment, there would be a negligible impact to the receptors within the area of increased flood depth. This assessment had been carried out using map/photographic information from Google. A detailed threshold analysis based on a survey had not been carried out. VJ and NL acknowledged that this was a useful initial assessment but confirmed that removing the increased offsite impact remains their preference.

5.8 CT tabled drawings showing the internal dimensions of the upper car parking level as requested by the EA in their letter. CT also provided a section drawing with dimensions of the void openings provided and clarified that there in are in fact two void openings on the eastern face into the upper parking level rather than just the vehicle access/egress opening as the EA believed. NL agreed this was positive and took these drawings along with the additional mole modelling and flood extents for consideration, it was agreed that these would be included in the updated FRA. NL raised that void openings should be made clear on the plans, preferably with void soffit levels shown on the plan.

6.0 River Mole Modelling

6.1 BM informed the EA members that the River Mole model had been obtained and run for the 1 in 100 year, 1 in 100 year plus 35% climate change and 1 in 100 year plus 70% climate change scenarios. BM tabled the results of these scenarios indicating that the only area within the site boundary shown to flood was the wooded area to the south of the HCWB. NL accepted that the current EA modelling showed this.

It was agreed that the River Mole model results would be summarised and appended to the updated FRA. **CT**

7.0 Buffer Zones

7.1 RS presented drawings indicating the offsets provided on the main site, these drawings show that the development does not encroach within the 8m buffer zone that was agreed as part of the consented scheme. The EA members agreed this buffer was acceptable.

7.2 BM queried the requirement for a 16m offset from flood defences and indicated that this tends to be a requirement for environmental permitting at tidal defences **RR**

rather than all flood defences. CT noted that the 16m environmental permit requirements is explicitly stated in the EA's response to the Hampton Court Temporary Car Park Application. RR stated that this would be discussed and confirmed with the appropriate team within the EA.

7.3 RS presented a drawing with an 8m offset overlain on the temporary car park proposals and indicated that this would result in the loss of 6 car parking spaces. He furthermore indicated that this area in the existing scenario is an open parkland and that wildlife is more likely to prefer the sheltered and wooded areas directly adjacent to the bank to the south. On this basis and given that the proposals are temporary Watermans do not consider that the proposals would have a detrimental effect on wildlife corridors. RR indicated that she would discuss and confirm this element with the appropriate EA team. **RR**

7.4 Additionally, it was highlighted that adequate access for maintenance would be provided given the proposed use as a car park. NL indicated that he was of the opinion this would likely be acceptable but noted that it should be confirmed by the Asset Performance Team at the EA. **RR**

8.0 Any Other Business

8.1 None. No date was set for further meetings