

Design Note

Project Begbroke Innovation District
 Subject EA Responses to Flood Risk Comments
 Project no 052188
 Date 21 February 2024

Revision	Description	Issued by	Date	Approved (signature)
00	Initial Draft EA Response to Objection on the basis of Flood Risk	GJ	21/02/2024	

Item no.	Objection's/Comments	Responses and rectifications
1	Reasons for Objection	
1.1	We object to this application because it fails the second part of the flood risk exception test. We recommend that planning permission is refused on this basis.	<p>We would like to discuss this point in detail.</p> <p>The areas identified in pink on the attached plan (Parameter Plan 1 – Development Zones_P1.pdf) relate to the land identified for residential, commercial, social infrastructure and town centre uses in Policy PR8 of the Cherwell Local Plan. The PR8 Site allocation includes a range of uses, including at 1,950 homes and 14.7ha of employment uses. The land identified by the local plan is in Flood Zone 1 (based on the EA Flood Maps for Planning (Rivers and Sea)), which means that the sequential test would not be required. The exception test does not therefore apply to this development.</p> <p>This above definition of Flood Zones (considering the EA Flood Maps for Planning (Rivers and Sea)) is confirmed in the FRA and is consistent with the SFRA.</p>
1.2	The application site lies within Flood Zones 2 and 3 defined by the National Planning Policy Framework (NPPF) and associated Flood Risk and Coastal Change section of the Planning Policy Guidance (PPG) as having a medium and high probability of flooding.	As set out in the parameter plans, the parts of the application boundary that are located within Flood Zones 2 and 3 (considering the EA Flood Maps for Planning) relate to open space, ecological areas and the retained farmland. Open space, green infrastructure and agricultural uses are acceptable uses within those flood zones. This is also wholly

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		<p>consistent with the PR8 Site Allocation. In accordance with the NPPF, the sequential approach would not therefore apply to the development.</p> <p>Following guidance stated in the SFRA and given by the EA through pre-application enquiry, detailed hydraulic modelling was undertaken to support the Site-Specific FRA. This modelling shows the majority of the application site has a low probability of flooding. Some areas are shown to have higher probability along areas of the site adjacent to Rowel Brook, to the north of the site, a parcel of land immediately to the west of the Oxford Canal and a small area to the south of the site.</p>
1.3	<p>As shown in Table 2 of the PPG, development classified as 'more vulnerable' under Annex 3 of the National Planning Policy Framework (NPPF) is only appropriate in Flood Zone 3a if the exception test is passed alongside the sequential test.</p>	<p>No development is proposed within Flood Zone 2 or 3, when considering the EA 'Flood Map for Planning (Rivers and Sea)', which is consistent with the SFRA. In accordance with the NPPF, the sequential approach would not therefore apply to the development, and nor would the exception test.</p> <p>As agreed with the EA, detailed hydraulic modelling was undertaken which shows two areas within the development would be affected by the 1 in 100 + 41% climate change and 1 in 1,000 year flood extent. Following the mitigation measures proposed in the FRA, no part of the proposed development is in either medium or high flood risk areas.</p>
1.4	<p>The NPPF (paragraph 171) makes it clear that both elements of the exception test must be passed for development to be permitted. Part 2 of the test requires the applicant to demonstrate, via a site-specific flood risk assessment, that the development will be safe, without increasing flood risk elsewhere. Where possible, the development should reduce flood risk overall.</p>	<p>See above.</p>
1.5	<p>In this instance the developer's flood risk assessment (revision P04, dated 19 July 2023 and prepared by Buro Happold) fails to:</p> <ul style="list-style-type: none"> demonstrate the flood modelling used within the FRA is appropriate 	<p>The objection letter does not indicate full reasons about the hydraulic model not being appropriate. For reference, the EA were consulted before the application was submitted, where the approach to the FRA was discussed and agreed with the EA (See section 2.6 of the FRA, which notes that a Technical note setting out the approach to the hydraulic model was shared with the EA in November 2022, with feedback received during the meeting on the 16th November 2022). The hydraulic modelling has also been undertaken following best practice and EA guidance. The FRA produced in support of this Outline Planning Application demonstrates that both existing and future flood risk can be appropriately managed and mitigated.</p> <p>We are in the process of reviewing the hydraulic model review spreadsheet (LIT17617) and the flood estimation calculation review spreadsheet (LIT 66039) spreadsheets and we will provide a separate response on these items.</p>
1.6	<p>In this instance the developer's flood risk assessment (revision P04, dated 19 July 2023 and prepared by Buro Happold) fails to:</p>	<p>No part of the residential or commercial development is located within Flood Zones 2 or 3 (based on the EA Flood Maps for Planning). This is set out on the parameter plans. The development is therefore consistent with all relevant flood risk policy.</p>

	<ul style="list-style-type: none"> demonstrate the sequential approach has been applied and that the development is outside Flood Zones 2 and 3 in accordance with adopted Policy PR8 (Land East of the A44) in the Cherwell Local Plan 2011-2031 (Part 1) Partial Review - Oxfords Unmet Housing Need 	<p>Following the mitigation measures proposed in the FRA, no part of the proposed development is in either medium or high flood risk areas.</p>
1.7	<p>In this instance the developer's flood risk assessment (revision P04, dated 19 July 2023 and prepared by Buro Happold) fails to:</p> <ul style="list-style-type: none"> demonstrate the development will not increase flood risk elsewhere 	<p>The FRA demonstrates that the development will not increase flood risk elsewhere. The interventions to the north-west area of the site have been tested in the hydraulic model to ensure no offsite, third-party disbenefit occurs in terms of flood risk.</p> <p>The FRA demonstrates that all increases in flood extents and flood depths as a result of the re-grading of the school can be accommodated within the red line boundary through a flood storage area. It is recognised that the proposed updates to the storage area will need to be tested through hydraulic modelling to maintain the goal of achieving no increase in flood risk off site (page 39 of FRA). This approach was agreed to by the EA in their comment on item 7.11 of this document.</p>
1.8	<p>In this instance the developer's flood risk assessment (revision P04, dated 19 July 2023 and prepared by Buro Happold) fails to:</p> <ul style="list-style-type: none"> address the opportunities presented by this development for reducing flood risk 	<p>The FRA produced in support of this Outline Planning Application demonstrates that both existing and future flood risk can be appropriately managed and mitigated. Our designs are also designed to a higher climate change allowance than required in the NPPF and EA guidance, thus ensuring a conservative approach. The flood mitigation measure in the NW of the site acts to attenuates flows which would previously have entered the Rowel Brook unattenuated and also designs to an event higher than required by NPPF and EA guidance.</p>
1.9	<p>This proposal is therefore contrary to adopted policy ESD 6 in the Cherwell Local Plan 2011-2031 and adopted Policy PR8 (Land East of the A44) in the Cherwell Local Plan 2011-2031 (Part 1) Partial Review - Oxfords Unmet Housing Need.</p>	<p>No part of the residential or commercial development is located within Flood Zones 2 or 3 (based on the EA Flood Maps for Planning). This is set out on the parameter plans. The development is therefore consistent with all relevant flood risk policy.</p> <p>Following the mitigation measures proposed in the FRA, no part of the proposed development is in either medium or high flood risk areas.</p>
2	Flood Risk Information	
2.1	<p>We welcome that flood modelling has been undertaken. However, it has not been demonstrated whether the flood modelling provided by the applicant of the baseline and with-scheme scenarios is appropriate to use within an FRA for the proposed development in this location.</p>	<p>The EA were consulted in the pre-app, where the approach to the FRA was discussed and agreed with the EA, See section 2.6 of the FRA, which notes that a Technical note setting out the approach to the hydraulic model was shared with the EA in November 2022, with feedback received during the meeting on the 16th November 2022.</p> <p>It is noted that during the meeting it was requested that the technical note be updated to include strong justification for each assumption within the proposed methodology. These recommendations were captured in the updated methodology statement shared with the EA and LLFA 02/12/2022).</p> <p>The hydraulic modelling has also been undertaken following best practice and EA guidance. The FRA produced in support of this Outline Planning Application</p>

		<p>demonstrates that both existing and future flood risk can be appropriately managed and mitigated.</p> <p>The model provides an assessment of flood risk and provides mitigation measures to ensure a safe development.</p>
2.2	<p>The hydrology reporting needs to be improved. There are some sections of the hydrology report that say "to be updated later" which appear to have been forgotten. The report should be updated so that it is good enough for someone to be able to reproduce the calculations. Without this, we are unable to agree the applicant's hydrology.</p>	<p>An updated hydrology report will be provided as well as responses against the comments provided in flood estimation calculation review spreadsheet (LIT 66039) provided as part of the EA response.</p>
2.3	<p>Key issues with the hydraulic modelling include:</p> <ul style="list-style-type: none"> • Significant issues relating to 1D and 2D channel width representation throughout the model which could influence model results and needs to be addressed. 	<p>Responses will be provided against the comments provided in hydraulic model review spreadsheet (LIT17617) provided as part of the EA response.</p>
2.4	<p>Key issues with the hydraulic modelling include:</p> <ul style="list-style-type: none"> • The applicant has not provided a survey of the canal – please can this be provided for the next review so that we can assess the assumptions that have been made? 	<p>The available survey information of the Canal was provided as part of the Topographic survey information provided to the EA on 30/10/23 and again on 23/11/23.</p> <p>The survey data can be found in both files 220854 3D.dwg and 220854 3D Rev A.dwg with corresponding sections in 220854 Sections.dwg in the 'SurveyData' folder provided.</p> <p>The information within the hydraulic model is also supplemented by available information from CRT on the lock levels.</p>
2.5	<p>Key issues with the hydraulic modelling include:</p> <ul style="list-style-type: none"> • There is a lack of information as to where elevations have been taken from for the various modifications to the underlying topography e.g. 2d_zsh_TOP_BANK_v12-A_P.shp 	<p>Responses will be provided against the comments provided in hydraulic model review spreadsheet (LIT17617) provided as part of the EA response.</p>
2.6	<p>Key issues with the hydraulic modelling include:</p> <ul style="list-style-type: none"> • We have requested the model files associated with the model sensitivity tests for this review but they were not submitted in time for the first review. We welcome that sensitivity tests and site photos have now been submitted and we will review these in any future consultation on this planning application following the submission of further modelling information to overcome our other concerns. 	<p>Noted. The model files were provided originally on 30/10/23 and again on 23/11/23 with any additional files provided upon request. The sensitivity testing was provided to the EA on the 23/01/24 following almost 3 weeks of requesting a working upload link.</p>
2.7	<p>Please see the attached hydrology and hydraulics spreadsheets for more information on our concerns. If the applicant wishes to respond to feedback on their modelling from the Environment Agency, they should add their comments to, and provide updated copies of, their review documents:</p> <ul style="list-style-type: none"> • hydraulic model review spreadsheet (LIT17617) 	<p>Responses will be provided against the comments provided in hydraulic model review spreadsheet (LIT17617) and flood estimation calculation review spreadsheet (LIT 66039) provided as part of the EA response.</p>

	<ul style="list-style-type: none"> flood estimation calculation review spreadsheet (LIT 66039) 	
2.8	We have provided the following comments in relation to our other flood risk concerns. Please be aware that these comments may change should the applicant's modelling be revised to overcome our current concerns.	Noted.
3	Sequential Approach	
3.1	Part 23 of adopted Policy PR8 (Land East of the A44) in the Cherwell Local Plan 2011-2031 (Part 1) Partial Review - Oxfords Unmet Housing Need sets out that ' <i>Residential development must be located outside the modelled Flood Zone 2 and 3 envelope</i> '. Figure 14 of the submitted FRA shows the 0.1% AEP extent, which is used to define Flood Zone 2, in comparison to the proposed buildings. From this, it is clear that buildings are proposed in existing Flood Zone 2.	<p>No part of the residential or commercial development is located within Flood Zones 2 or 3 (based on the EA Flood Maps for Planning). This is set out on the parameter plans. The development is therefore consistent with all relevant flood risk policy.</p> <p>Following the mitigation measures proposed in the FRA, no part of the proposed development is in either medium or high flood risk areas.</p>
3.2	To overcome this, the applicant proposes a swale in the northwest of the site and land level changes in the south of the site for the proposed secondary school. This is not in the spirit of the sequential approach, which is ' <i>designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. This means avoiding, so far as possible, development in current and future medium and high flood risk areas</i> ' in accordance with the PPG.	<p>Both areas of the site are located in Flood Zone 1 (based on the EA Flood Maps for Planning).</p> <p>Considering the detailed hydraulic modelling, the flood extents shown across the NW Area of the site represent a flow path. The proposed flood risk mitigation measure in this location is simply to re-route the flood water along a designated corridor before overtopping and flowing north into Rowel Brook, as it would have before. The swale is there to transfer surface water flowing across the site towards Rowel Brook in a more defined route, with the flow route starting at the same place and ending up at the same place, within Rowel Brook.</p> <p>It is noted that the flow path does not represent an Ordinary Watercourse or a Main River.</p> <p>The Secondary School Site is located in Flood Zone 1 (based on the EA Flood Maps for Planning (Rivers and Sea)). The proposed infilling of the watercourse within the Secondary School Site is work proposed on an Ordinary Watercourse, rather than a Main River. No works are proposed to the stretch of Main River. It was noted in the FRA that the works would likely require approval from the LLFA for the infilling of the ditch on the Secondary School site, which is classified as an Ordinary Watercourse. Initial consultation with the LLFA has suggested that these works would be appropriate. The FRA makes it clear that the reprofiling work required for the school playing fields would also include a flood storage area that would mitigate flood risk offsite to third parties (see Figure 22 of the FRA).</p>
4	Flood Zone 3B	
4.1	Flood Zone 3b (functional floodplain) is where water has to flow or be stored in times of flood and should be safeguarded from development. In accordance with Figure 9 of the FRA, part of the application site is shown to lie within the 3.3% AEP flood outline as so is identified as within Flood Zone 3b (the	<p>As noted within Figure 17 of the FRA, there is no proposed development in the area shown as having a 1 in 30 year probability of flooding, as shown in Figure 9.</p> <p>The FRA demonstrates that all increases in flood extents and flood depths as a result of the re-grading of the school can be accommodated within the red line boundary</p>

	<p>functional floodplain). This area is in the south of the site near the proposed secondary school. More information is required on what is proposed within this flood extent as it appears in close proximity to land level changes and 'more vulnerable' development, which would be inappropriate in Flood Zone 3b.</p> <p>In addition, land reprofiling including near the proposed school would alter Flood Zone 3b as it includes infilling a main river and creating a new stretch of river. The proposed swale in the north of the site may also create new areas of Flood Zone 3b. Therefore mapping of the proposed Flood Zone 3b is required, and it should be demonstrated that any development in these areas is appropriate in accordance with Table 2 of the Flood Zone and flood risk tables of the PPG.</p>	<p>through a flood storage area. It is recognised that the proposed updated to the storage area will need to be tested through hydraulic modelling to maintain the goal of achieving no increase in flood risk off site (page 39 of FRA) and maintaining floodplain.</p> <p>The proposed infilling of the watercourse within the Secondary School Site is work proposed on an Ordinary Watercourse, rather than a Main River. No works are proposed to the Main River. It was noted in the FRA that the works would likely require approval from the LLFA for the infilling of the ditch on the Secondary School site, which is classified as an Ordinary Watercourse. Initial consultation with the LLFA has suggested that these works would be appropriate.</p>
5	Climate Change	
5.1	<p>We welcome that both the central and higher (26% and 41%) 2080's Gloucestershire and Vale climate change allowances are referenced within the submitted FRA. Section 2.2.3 of the FRA states the higher allowance '<i>has been considered for all development types</i>' which we support, for example as flood risk to 'essential infrastructure' such as the A44 could be impacted by the proposed development. We welcome that the FRA assesses impacts on flood risk elsewhere up to the 1% AEP plus 41% CC event.</p>	<p>Noted. To confirm, the 1% AEP with 41% CC allowance has been used as a basis for all mitigation measures on site.</p>
6	Finished Floor Levels	
6.1	<p>Section 4.1.4 of the FRA states '<i>FFLs and the access road will be set above the DFE flood level with an allowance of 300mm freeboard</i>'. Whilst we support this in theory, it is not clear from page 22 of the FRA whether the DFE (design flood event) is defined as the 1% AEP plus a 26% or 41% allowance for climate change. Please can the applicant confirm which flood level they are referring to and clearly state the flood level (or in this instance flood level's as this is a relatively large site) in mAOD.</p>	<p>The 1% AEP with 41% CC allowance has been used as a basis for all mitigation measures on site. Therefore, all proposed building levels are a minimum of 300mm above this level. Given the size of the site and the amount that the flood level varies across the site, flood levels were extracted at different points along the watercourses and the nearest point to an asset was used to ensure that the development levels were 300mm above the nearest flood level for the 1% AEP with 41% CC.</p>
7	Floodplain Storage	
7.1	<p>In accordance with Figure 17, built development is proposed within the 1% AEP plus a 41% allowance for climate change.</p>	<p>Correct.</p>
7.2	<p>This would lead to a loss of floodplain storage over the lifetime of the development.</p>	<p>The flood extents shown across the NW Area of the site represent a flow path. The proposed flood risk mitigation measure in this location is simply to re-route the flood water along a designated corridor before overtopping and flowing north into Rowel Brook, as it would have before.</p> <p>The area at which the water will overtop the swale and flow north into Rowel brook will act as a flood storage area which is an important aspect as it provides attenuation;</p>

		delaying the floodwater reaching the Rowel Brook. This design has been tested to ensure that the solution does not increase flood risk offsite.
	This includes areas of proposed 'more vulnerable' development in the northwest and south of the site. To mitigate for this, a swale and land reprofiling is proposed respectively.	Correct. It is noted that the swale has been designed to convey flows for the 1:100 year + 41% CC event with a 300mm allowance for freeboard. This design also has sufficient capacity to convey flows in the 1:1000 year event.
7.3	Section 4.1.1 states that a swale (plus a 300mm bund/ barrier) is proposed along Woodstock Road to 're-route the flood water' that currently crosses the northwest corner of the site where residential development is proposed.	Correct.
7.4	A swale may not provide level for level compensation, and instead is likely to move flood waters from one location to another. It is not clear when comparing Figures 18 and 20 where the floodwater would be relocated to in the proposed scenario with the swale in place, and the swale does not appear to be mapped in these figures.	The swale is there to transfer surface water flowing across the site towards Rowel Brook in a more defined route. It is correct that the swale is therefore designed to move flood waters from one location to another – as it does currently. The flood water will end up in the same destination of Rowel Brook and the design has been designed in a way so as to consider the timing of the floodwater joining the Rowel Brook which led to the overtopping solution outlined in the response given in item 7.2 of this document.
7.5	Therefore, we are not satisfied it has been demonstrated the works would not increase flood risk elsewhere.	We trust the responses given to the comments on items 7.1-7.4 of this document, as well as Section 4.1.1 of the FRA demonstrate that the design of the swale will not increase flood risk elsewhere.
7.6	We also have concerns with how this swale has been modelled – please see the attached spreadsheets for details.	Responses will be provided against the comments provided in hydraulic model review spreadsheet (LIT17617) provided as part of the EA response.
7.7	Please note our maps show a culverted ordinary watercourse passes under this corner of the site, so impacts of the proposed works on flood waters associated with this ordinary watercourse should be investigated in the FRA.	The hydraulic model picks up the ditch on the left hand side of the road from the topographic survey. The survey does not indicate a culverted ordinary watercourse passing under this corner of the site. Overland flow across the road is to be picked up by project proposals.
7.8	Section 4.1.2 includes details of proposed changes in land levels for the Secondary School site. Figure 22 shows that the proposed changes would increase flood risk outside the red line boundary. Further, the land level changes in the south of the site appear to introduce fluvial flood risk to proposed new dwellings in accordance with Figures 21 and 22 of the FRA. This is contrary to adopted Policy PR8 and would put new dwellings at risk of flooding. Therefore, the proposed development has been shown to increase flood risk elsewhere contrary to Local and National Policy. In principle, we do not support increasing flood risk to new properties and third-party land to reduce flood risk to school playing fields. We note section 2.5 of the FRA states OCC's position on Secondary school sites includes that ' <i>no part of a school site shall be located on Flood Zones 2 or 3</i> '. However, this should not be achieved by increasing flood risk to dwellings and/or third-party land.	The FRA demonstrates that all increases in flood extents and flood depths as a result of the re-grading of the school can be accommodated within the red line boundary through a flood storage area. This flood storage area in combination with land raising would act to remove any fluvial flood risk to the proposed new dwellings. It is recognised that the proposed updated to the storage area will need to be tested through hydraulic modelling to maintain the goal of achieving no increase in flood risk off site (page 39 of FRA). This approach was agreed to by the EA in their comment on line 35. The FRA makes it clear that the reprofiling work required for the school playing fields would also include a flood storage area that would mitigate flood risk offsite to third parties.

7.9	<p>The works include 'filling-in of an existing tributary reach of the southern drainage ditch across the southwest corner of the site' and a replacement channel. This would involve relocating a main river, therefore a thorough assessment on the impacts of flood risk is required.</p>	<p>The proposed infilling of the watercourse within the Secondary School Site is work proposed on an Ordinary Watercourse, rather than a Main River. No works are proposed to the stretch of EA Main River. It was noted in the FRA that the works would likely require approval from the LLFA for the infilling of the ditch on the Secondary School site, which is classified as an Ordinary Watercourse, although initial consultation with the LLFA has suggested that these works would be appropriate. The FRA makes it clear that the reprofiling work required for the school playing fields would also include a flood storage area that would mitigate flood risk offsite to third parties.</p>
7.10	<p>We have concerns with how the works have been modelled – please see the attached spreadsheets for details.</p>	<p>We are in the process of reviewing the hydraulic model review spreadsheet (LIT17617) and the flood estimation calculation review spreadsheet (LIT 66039) spreadsheets and we will provide a separate response on these items.</p>
7.11	<p>An area for compensation has been proposed, but no evidence has been provided that this will provide sufficient level for level compensation. We welcome that the applicant intends to include the compensation in their hydraulic model, however level for level compensation calculations are required at this Outline stage to demonstrate that a technically feasible option exists without increasing flood risk elsewhere.</p> <p>Level for level floodplain compensation is the matching of floodplain storage volumes lost with new floodplain storage volume gained through the reduction of ground levels. We recommend that level for level floodplain storage calculations are provided in a table that sets out the change in volumes across the site using 100mm or 200mm slices (dependent on site specific considerations), stating the losses and gains for each slice. It will need to be demonstrated that there would be no net loss in storage volume for any slice. The location of the changes in floodplain storage should also be clearly identified in a plan or drawing that demonstrates the scheme would be hydraulically connected for each slice</p>	<p>From the hydraulic modelling we know how much water has been displaced as a result of the land raising works on the Secondary School Site. The flood storage area has been developed to accommodate that volume to ensure that it does not pass downstream. Fig 22 within the FRA shows what would happen without the flood storage area in place, the flood storage area has been sized appropriately for this not to happen. As long as the attenuation basin is progressed on the basis of having no adverse impacts, the proposed hydraulic modelling will demonstrate that an appropriate level of compensation has been allowed for.</p> <p>It is proposed that the design of this flood storage area should store the water contributing to any observed increases in flood extent and flood depth for both the 1:100 year + 41%CC and the 1:1000 year event.</p>
7.12	<p>Excavation of the proposed floodplain compensation scheme should be completed prior to the construction of development to ensure floodplain capacity is maintained.</p>	<p>Noted and agree with this approach.</p>
8	<p>River Crossings</p>	
8.1	<p>Section 4.1.3 of the FRA states that Stratfield bridge (over the Oxford Canal) is not proposed as part of this outline planning application, however it is included in the planning application description. Please can the applicant confirm whether or not they intend the bridge to be part of any future Reserved Matters application or if a completely separate Full or Outline application would be required?</p>	<p>Oxford Canal is not within the planning application site boundary and a bridge over this canal could therefore not be granted planning permission pursuant to this application. A bridge over the Oxford Canal would require a separate planning application.</p>

8.2	If the bridge is part of this wider application, further details are required at this stage to ensure that a bridge over the Oxford Canal is theoretically possible without increasing flood risk elsewhere.	See above.
8.3	Please also state whether any other river crossings, including footbridges, are proposed as part of this outline application or a future reserved matters application.	No river crossings are proposed as part of the outline planning application.
9	Other works – Roads, paths, substation, landscaping	
9.1	We note various roads and paths are proposed that would pass through the floodplain. It is not clear whether these would be at existing ground levels or if there would be any landscaping within the floodplain. The impact of new roads, paths and landscaping on flood risk should be assessed, along with any required mitigation measures to prevent increases in flood risk elsewhere. Safe access and egress along these routes should also be assessed.	As part of this outline planning application, other than the two areas of the NW of the site and the Secondary School Site, based on the illustrative masterplan no further mitigation measures are required from a flood risk perspective. Any paths proposed within the flood zones would be at existing levels with more detail on proposals, design and safe access and egress being taken forward as part of Reserved Matters Applications.
9.2	A Primary substation is referenced in Table 1 of the FRA but no further details are provided. The applicant should assess flood risk from and to any proposed substation. We recommend this is located outside the 1% AEP with a 41% allowance for climate change to ensure it can remain operational in times of flood.	The Primary substation is located outside of the 1% AEP with 41% cc allowance. Clarification of this and the substation's location will be provided in the updated FRA.
10	Overcoming our Objection	
10.1	To overcome our objection, the applicant should submit a revised FRA which addresses the points highlighted above. If this cannot be achieved, we are likely to maintain our objection. Please re-consult us on any revised FRA submitted.	We are in the process of reviewing the hydraulic model review spreadsheet (LIT17617) and the flood estimation calculation review spreadsheet (LIT 66039) spreadsheets and we will provide a separate response on these items. An update to the FRA will be made to reflect these comments and will also be dependant on the outcome of the hydraulic model comments review.