Runnymede 2030 Local Plan Examination

Responses to the Inspector’s Matters and Questions for the Stage 2 hearings (matter 9)
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Appendices

Appendix 3: Amended Level 2 SFRA (January 2019) and response from the Environment Agency
9.1 Together with the expectations for Longcross Garden Village in Policy SD10, do Policies IE1-IE3 provide a justified, positive and deliverable framework to meet the anticipated needs for employment development in the Borough up to 2030? Is the Plan sufficiently flexible to help meet the priorities of the economic development strategy as set out in paragraph 8.6?

9.1 The Council consider that Policies IE1-3 along with the expectations for the Longcross Garden Village as set out in Policy SD10, provide a justified, positive and deliverable framework to meet the anticipated needs for employment development in the Borough up to 2030 that is sufficiently flexible to help meet the priorities of the Economic Development Strategy.

9.2 In line with the requirements of the NPPF (2012) the Council is proposing to safeguard key strategic employment areas under Policy IE2 which have opportunities for redevelopment and intensification over the Plan period alongside the allocation of additional appropriate land through policy IE1 and SD10 to accommodate identified needs for employment land/floorspace in the Borough up until 2030. The Council has provided further information and justification for its proposed Strategic Employment Area designations in its response to question 9.3.

9.3 The further development of Royal Holloway, University of London including the proposed development of a cyber security and big data innovation centre supported by the EM3 LEP1 will also assist in attracting high tech industries to the local area and provide incubation space for start-ups in this sector.

9.4 Overall therefore, it is considered that there is sufficient employment land of the right quantity and quality to enable businesses to relocate, expand and invest in the Borough without the long term protection of sites which have no reasonable prospect of coming forward for employment use in line with the NPPF and priority 1 of the Council’s Economic Development Strategy.

9.5 Only three employment sites have remained vacant for some time in the Borough. These include: the former gas holder site on the Causeway which has been decontaminated in the last few years and now has planning permission for a new headquarters building for British Gas/Centrica; the Opus site on the Causeway which has planning permission and is located adjacent to Gartner’s new headquarters

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building; and the Enterprise Zone at Longcross. The later provides one of the largest strategic employment sites in the sub-region and is the closest Enterprise Zone to Heathrow. Since the site was designated as an Enterprise Zone, it has attracted public sector investment to improve the power supply and assist in landscaping in the vicinity of the proposed Discovery Building due to be completed this year. This building provides a focal point for the Northern site at Longcross, providing a retail outlet and two floors of office accommodation. In addition, reserved matters consent RU.17/1307 has been granted at the site for the development of 2 four storey office buildings to create 16,765sqm of B1 office floorspace. This will form the first phase of the consented office park and interest in the site from the market is growing.

9.6 Policy IE3 supports the redevelopment of employment space, retention and provision of incubator and small units and encourages a range of business space to be provided including in rural areas through appropriate conversion in order to support the economy throughout the Borough, especially SME’s and start-up which will be increasingly important in driving the economy.
9.2 In regard to Policy IE1 (Byfleet Road, New Haw), is the requirement for a minimum net addition of 20,000 sq m of floorspace likely to be compatible with measures that are yet to be defined to mitigate flood risk? Also, does the proposed modification (CD_001A) to the site boundary have any implications for the delivery of the allocation?

9.7 There have been ongoing discussions between the Council, site promoter and Environment Agency both through the Examination in Public process for the Local Plan and also during on going pre application discussions which are taking place in relation to the Byfleet Road site.

9.8 The Environment Agency’s most recent comments on the amended level 2 Strategic Flood Risk Assessment for the site (both the January 2019 amended Level 2 SFRA and comments from the Environment Agency on this document dated 23rd January 2019 can be viewed at Appendix 3), as well as the latest pre application drawings which have been submitted through the pre application process at the site (also contained in the level 2 SFRA) have been carefully considered by the Council. On this basis, the Council is of the opinion that to ensure sufficient flexibility to accommodate the various constraints which exist on the site, including those relating to flood risk, that criteria a and c of policy IE1 are amended as follows:

a) provide a minimum in the region of 20,000 net additional sqm of B1c/B8 floorspace

b) Within the 20,000 net additional sqm total employment floorspace to be provided at the site, a limited (up to a maximum 10%) amount of B2 floorspace may be considered acceptable where it would not have a negative impact on neighbouring residential amenity;

9.9 The Council is of the opinion that these proposed modifications will provide the necessary flexibility to ensure that any required flood risk mitigation can be accommodated as part of the development at the site as agreed through the planning application process.

9.10 In relation to the second part of the Inspector’s question, the Council is of the opinion that the proposed modification to the site boundary does not have any implications for the delivery of the site.
Other matters

9.11 Whilst not directly relevant to either part of the Inspector’s question, the Council felt that it may be helpful to respond to a number of the comments made by the Environment Agency in their recent response to the Council’s amended Level 2 SFRA dated 23rd January 2019 relating to safe means of escape and surface water drainage matters. The Council’s response in this regard can be found in appendix 3.

9.12 The Council has also made a number of minor alterations to the amended level 2 SFRA to address other points made in the Environment Agency’s email of 23rd January 2019. These are shown as tracked changes in the level 2 SFRA as contained at appendix 3.

9.13 In addition, on Friday 25th January 2019, the Environment Agency verbally made the Council aware that it may have residual concerns about the whether the Council had correctly applied and considered the results of the Strategic Sequential Test in determining that the Byfleet Road site in New Haw was the most suitable site for allocation to meet the Borough’s employment needs when considered against the alternatives. Whilst this is not an outstanding matter as set out in the agreed Statement of Common Ground with the Environment Agency, nevertheless, the Council has the following comments to make:

9.14 The 2012 NPPF states in paragraphs 101 and 102 that, ‘The aim of the Sequential Test is to steer new development to areas with the lowest probability of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding... If, following application of the Sequential Test, it is not possible, consistent with wider sustainability objectives, for the development to be located in zones with a lower probability of flooding, the Exception Test can be applied if appropriate’.

9.15 The Environment Agency raised concern about certain aspects of the Council’s Strategic Sequential Test in response to the Council’s first consultation on the draft Local Plan in January 2018. The Council subsequently amended its Strategic Sequential Test and republished the relevant documentation (SD_003L-N). No further comments were made on the Strategic Sequential Test by the Environment Agency
during the second round of public consultation which occurred on the draft Local Plan during May 2018. As such, the Council was reassured that the Environment Agency’s previous concerns had been satisfactorily addressed.

9.16 The Council’s April 2018 Strategic Sequential Test considers the suitability of all promoted sites for allocation, solely on flood risk grounds. This concluded that out of the 33 sites promoted for employment (in many cases alongside a range of other uses) (and as listed in appendix 2 of the SSMA), there were a number of other possible sites which were preferential to site 51 (Byfleet Road) on flood risk grounds alone.

9.17 However whilst this may be the case, it must be remembered that in determining which sites across the Borough were most suitable for allocation in the Runnymede 2030 Local Plan, a range of constraints and factors had to be considered and carefully balanced. A more holistic process of assessment was carried out through the Council’s Site Selection Methodology and Assessment process (SD_012B). This assessment considered the achievability of sustainable patterns of development in the round factoring in a wide range of constraints, Green Belt factors and accessibility criteria. Through this comprehensive process, the Byfleet Road site was considered to be the most preferable site for allocation for employment uses. Other potential employment sites considered were sifted out of the process at various stages due to concerns regarding accessibility, Green Belt performance and other matters which would render them unsuitable locations for allocation. The Council is of the opinion that its approach to site allocation is robust and consistent with the need to consider wider sustainability objectives in the round.
9.3 Is the designation of the Strategic Employment Areas and the provisions for their protection as such in Policy IE2 justified, positively prepared, consistent with national planning policy, and likely to be effective?

9.18 The Council considers that the designation of the Boroughs’ five strategic Employment Areas is justified, positively prepared, consistent with national planning policy and effective. The NPPF (2012) requires local planning authorities in drawing up Local Plans to set criteria, or identify strategic sites, for local and inward investment to match their strategy and to meet anticipated needs over the plan period. Policy IE2 identifies five Strategic Employment Areas. These sites account for just over half the total employment floorspace available in the Borough and with the exception of the allocated site at Byfleet Road, contain all of the major undeveloped employment sites in the Borough. The evidence for the designation of these sites is contained in the Council’s 2016 Employment Land Review (ELR) (SD_002B-F). These employment sites need to be retained for employment uses (a mix of B Class uses which incorporate offices, light industrial, general industrial and storage and distribution uses) to ensure that sufficient employment land is retained to maintain the economic role of Runnymede in the wider area and sustain economic growth and competitiveness by protecting the most valued employment sites and supporting development of the Borough’s Enterprise Zone at Longcross Park. The Council has identified and proposed the protection of those sites with good connectivity that are capable of enabling the development of clusters and which are attractive to high technology and digital industries.

9.19 The high demand for residential use in the Borough coupled with the heavily constrained nature of large areas of flood risk and Green Belt designation in particular, mean that finding alternative employment land is extremely challenging if existing sites are lost.

9.20 All of the SEA’s with the exception of Thorpe Industrial Estate (SEA4) and two parts of Weybridge and Bourne Business Park (East and West) (SEA5) are identified in the ELR as good quality sites capable of attracting both local and inward investment. The ability of these areas to attract investment can be evidenced by the number of companies that have located into the areas or expanded during the last three to four years such as Astellas Pharma in SEA1, VM Ware, UKAS, Ingram Micro, Mallinckrodt Pharmaceutical, Gartner and Hitachi in SEA3, and Mundays, Orica and the
establishment of the Devonshire Business Centre in SEA5.

9.21 Despite being ranked as an average quality site in the ELR, Thorpe Industrial Estate is designated as an SEA as it provides the majority of industrial space in the Borough. Since the ELR was produced the estate has experienced significant investment with the redevelopment of Egham Business Park and refurbishment of a number of other buildings and has attracted new occupiers including the post office and Sytner amongst others. Both Weybridge and Bourne Business Park (east and west) are included in SEA5 despite also having an average quality rating as they form an integral part of this employment area. Parts of SEA5 have undergone significant investment/redevelopment over the last few years to provide Grade A accommodation. This has impacted the vacancy rate but the quality of this employment area is good and a number of new lettings have recently been secured.

9.22 The scale of the SEAs supports existing business sectors and emerging ones and also enables the promotion and expansion of clusters as required by paragraph 21 of the NPPF. This is being witnessed in SEA3 which has seen a concentration of IT business locating in the area.

9.23 The SEAs thus provide the majority of good quality employment space in the Borough. The other employment sites ranked as good quality in the ELR are smaller sites mainly spread throughout the three main town centres. Given the size and dispersed nature of these sites it was not considered appropriate to designate them as Strategic Employment Areas.

9.24 The Council also considers that the provisions for the protection of SEAs designated in Policy IE2 are justified, consistent with national planning policy, and effective. Policy IE2 seeks to resist changes of use to non-employment uses and proposes the introduction of Article 4 Directions to remove permitted development rights to protect the SEAs.

9.25 Permitted development rights currently exist in the SEAs to allow landowners to change offices, small scale light industrial uses and storage and distribution centres to residential without the need to apply for planning permission. This could lead to the significant loss of B use employment floorspace within these proposed employment designations, which in turn could affect overall economic growth and limit job
opportunities contrary to the objectives of the Local Plan and the Council’s Economic Development Strategy.

9.26 Since the introduction of permitted development rights for conversion of offices to residential in 2013, the Council has received over 70 applications for prior approval. These have mainly affected secondary office space outside the SEAs, however in the last quarter of 2018 the Council received prior approvals for the change of use of two relatively large modern office blocks, one in SEA1 and the other in SEA3. Whilst the current number of conversions approved under permitted development within the SEAs is relatively small, the Council has concerns that in the future more applications and/or applications for larger conversions could come forward on these strategic sites which could impact the supply of quality office floorspace in the Borough. In addition, if the change of use from B1c and B8 is made permanent then the Borough could also start to witness a loss of industrial space. Furthermore, residential development at these sites could impact negatively upon their ability to attract future employment related investment. It could also result in pressure from the new occupiers of these homes for the reallocation of surrounding employment land and buildings to residential or mixed uses due to potential conflicts between certain employment uses and their residential neighbours. This would compromise the Council’s ability to retain its main employment sites in an employment designation in the long term and could undermine the overall spatial strategy contained in the Runnymede 2030 Local Plan. The Council is currently preparing the necessary background work to support the implementation of non-immediate Article 4 Directions across the Borough’s SEAs.
9.4 Do Policies IE3 and IE4 provide clear, robust guidance for employment development elsewhere in the Borough and for the visitor economy?

9.27 The Council considers that policies IE3 and IE4 provide clear and robust guidance for employment development outside of the proposed Strategic Employment Areas (SEA) listed in Policy IE2.

9.28 In particular, policy IE3 is considered to provide clear, robust guidance in relation to the types of employment development that are most needed in supporting sustainable economic growth as required by paragraphs 18 and 19 of the NPPF. This is based on the Council’s evidence in the 2016 ELR (SD_002B-F) which specifically identified the supply of industrial start-up units to be low and also identified that small scale office stock in the Borough had been lost through permitted development. As such, policy IE3 seeks to specially address such findings.

9.29 In relation to the rural economy, policy IE3 is considered to be in conformity with the NPPF. However, the Council proposes a minor modification to the wording of the 5th bullet point in order to provide clarification on the policy intention. This suggested modification is shown as follows:

“Support small scale rural offices or other small scale rural employment development, through conversion or redevelopment of existing buildings to provide well-designed new buildings business premises, provided they accord with the Council’s Green Belt policies.”

9.30 In relation to the visitor economy, Local Plan policy IE4 is considered to provide clear and robust guidance, which is in conformity with national planning policy.

9.31 Specifically, the requirement for an impact assessment is in conformity with Paragraph 26 of the NPPF, wherein any leisure proposal greater than 2,500sqm in size is required to be supported by an impact assessment.

9.32 The policy also provides clear guidance on proposals which propose the loss of leisure and entertainment uses in the Borough.
9.5 Overall, does the Plan set out a clear, justified and deliverable strategy for promoting the long term vitality and viability of the Borough’s network of town and local centres? In particular:

a) Are the measures for locating and managing town centre uses as set out in Policies IE5 and IE6 justified and likely to be effective?

Do Policies IE12 and IE13 provide a sound planning framework for local centres and individual shops and parades in the Borough?

9.33 Chapter 2 of the 2012 NPPF entitled ‘Ensuring the vitality of town centres’ sets out how authorities are expected to ensure the future vitality of town centres within their area. The Council considers that the approach set out in Local Plan policies IE5 and IE6 comply with the contents of Paragraphs 23 to 27 of the NPPF (and indeed paragraphs 85-90 of the 2018 NPPF) and is justified in that the policies have been based on robust local evidence contained in the Council’s Town and Local Centres Study (TLCS) 2017 (SD_010C), Centre Hierarchy paper (SD_010D) and Town and Local Centres Boundaries Review (SD_010E). The Council believes that the approach set out in the two policies will be effective in ensuring the continued vitality and viability of the Borough’s town and local centres.

9.34 This is particularly the case when IE5 and IE6 are read in the context of the wider spatial strategy contained in the Local Plan which seeks to direct proportionate amounts of development over the Plan period to the Borough’s Town and Local Centres and their suburbs in the pursuit of sustainable development, and also policies IE7-11 which set out a positive approach to town centre regeneration on key sites. All of these policies combined will help ensure that the concentrations of shops, services and sustainable transport choices in the Borough’s town and local centres remain viable and vital in the long term, even in more challenging economic climates.

9.35 Policy IE6 requires a minimum of 65% of all units in the Primary Shopping Frontages to remain in A1 use and 30% in the Secondary Shopping Frontages. The justification for using these figures can be found in paragraph 13.24 of the TLCS, which states that:

“It is recommended that supporting policy for PSFs should apply a threshold that requires a minimum of 65% total units within a defined PSF is in A1 use. This threshold still allows for flexibility for other non retail uses while maintaining the critical
mass of retail to attract shoppers. Policy could also restrict the number of consecutive units in non A1 uses to ensure an even mix of A1 and non A1 uses across a defined frontage. For secondary areas, the Council may wish to consider a minimum threshold ranging from 30% to 50% for units/ floorspace in A1 use.”

9.36 The Council has used the recommended minimum figure of 65% in Policy IE6 and not a higher percentage, recognising that a higher figure could restrict the vitality and viability of the Borough’s Town Centres.

9.37 The Council has also used the minimum threshold figure of 30% for secondary retail frontages, rather than the higher range of up to 50% of all units. This is to ensure that the vitality and viability of the Borough’s Town Centres is maintained through the retention of a proportion of A1 units in the secondary frontages, whilst also allowing for a greater degree of flexibility for other uses in secondary areas.

9.38 The Council is however of the opinion that in relation to residential uses within secondary shopping frontages, a minor modification to policy IE6 would be helpful as follows:

“Development proposals for use classes A2 to A5 and other town centre uses within the secondary shopping frontages, will only be permitted where a minimum of 30% of the total units are retained in A1 use. Residential uses will only be permitted on the ground floor within the Secondary Shopping Frontages in exceptional circumstances, where the use would not harm the vitality or viability of the centre.”

9.39 The Council is also of the opinion that Policies IE12 and IE13 provide a sound planning framework for local centres and individual shops. These policies draw on robust local evidence contained in the Council’s Centre Hierarchy Report (CHR) (SD_010D), Town and Local Centres Study (TLCS) (SD_010C) and Town and Local Centres Boundaries Review (SD_010E).

9.40 Policy IE12 is clear in terms of what uses will be supported within the primary and secondary shopping frontages.

9.41 Paragraph 70 of the NPPF is supportive of the Council’s approach to the retention of valued community facilities and services through local plan policies (in particular the second and third bullet points under Paragraph 70). Policy IE13 is clear in its wording
that if a shop fulfils a function or benefit to the local community, evidence must be provided of at least six months’ worth of marketing for retail use before alternative uses are considered. Conversely, the Council recognise in the third paragraph of IE13 that where a shop now longer fulfils a function/benefit for the local community, marketing evidence would no longer be required.

9.42 Overall, policy IE13 is considered to recognise the important role that individual shops and parades in the Borough play in allowing access to day to day facilities for local people (including those that are less mobile) without requiring additional trips by car. As such IE13 is considered to set out a sound and justified planning framework to manage development proposals in such areas.
9.5 b) Are Policies IE7-IE10 based on robust evidence of retail and other town centre needs and are they likely to be delivered within the timings indicated in the policies?

What is the practical distinction between these allocation policies and the development opportunities identified in Policy IE11?

What is the basis for the timings set out in this policy?

9.43 Paragraph 23, Bullet Point 6 of the NPPF states that to ensure the vitality of town centres, Councils should:

“Allocate a range of suitable sites to meet the scale and type of retail, leisure, commercial, office, tourism, cultural, community and residential development needed in town centres. It is important that needs for retail, leisure, office and other main town centre uses are met in full and are not compromised by limited site availability. Local planning authorities should therefore undertake an assessment of the need to expand town centres to ensure a sufficient supply of suitable sites”

9.44 The Council considers that the allocations contained in policies IE7 – IE10 are consistent with this part of the NPPF. The policies have taken account of the future needs of the three main town centres from the TCLS, both in regards to retail and leisure floorspace requirements, as recognised in Paragraph 8.55 of the Local Plan. These needs have been taken into consideration when preparing the longer term growth opportunity areas contained in policy IE11.

9.45 The Council considers that the allocations set out in Policies IE7-IE10 can be delivered within the timings indicated in the policies for the following reasons:

-Whilst the land within allocation IE7 (Addlestone East allocation) is privately owned, a development proposal for 75 units and flexible A1/A2 and A3 retail use on the majority of the allocation (excluding 157 Station Road) has recently been granted planning permission under RU.18/0743 and development on the site has commenced. As such, completion of the development between 2020 and 2023 is considered to be realistic.

-The land within allocation IE8 (Addlestone West allocation) is all in public ownership (NHS, Surrey County Council and Runnymede Borough Council). Advanced discussions around land assembly and regeneration opportunities have taken place between these partners and the Council remains confident that delivery of the
regeneration scheme at the site between 2022 and 2024 remains realistic.
- All of the land contained within the allocation at Egham Gateway East (policy IE9) is under the sole ownership of the Council. The Council remains confident that delivery of a regeneration scheme on the site between 2022 and 2024 remains realistic.
- All land assembly matters associated with the redevelopment of the Egham Gateway West allocation (IE10) have been completed and pre-application discussions for the site are in their final stages. The submission of a planning application is expected in March 2019 with construction starting within the 2019/20 financial year. As such, delivery of the regeneration scheme set out in policy IE10 between 2020 and 2022 is considered realistic.

9.46 The distinction between the policies contained in IE7 to IE10 and those found in IE11 is that barring the Strodes College Lane Opportunity Area in Egham which has had recent activity in terms of submission of planning applications, the remaining 3 sites are longer-term prospects which will require additional work between the Council (who own all of the land at Egham Library and the Sainsbury’s Centre and part of the land within the High Street North opportunity area), other landowners and tenants before development proposals could be developed with sufficient certainty for the sites to be formally allocated in the Local Plan. Conversely, the four allocations found in Policy IE7 to IE10 are expected to come forward within five years of adoption of the Local Plan and have far greater certainty. The Council is committed to advancing the development of potential regeneration proposals in the opportunity area sites over the coming years with the expectation that at the first review of the Local Plan there would be sufficient certainty to allocate these sites with greater precision in terms of the types and amounts of development that the sites would be expected to accommodate and in terms of the provision of a more definite timescale for their delivery.

9.47 The Council considers that its approach to the identification of opportunity areas is in conformity with bullet point 3 of paragraph 47 of the NPPF which states that:

“To boost significantly the supply of housing, local planning authorities should:

- Identify a supply of specific, developable sites or broad locations for growth, for years 6-10 and, where possible, for years 11-15.
Site 51 - Byfleet Road, New Haw

Site Number: 51
Site Location: KT15 3LE
Grid Reference: TQ 05611 62339

Location Plan

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<tr>
<td>Red line boundary</td>
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<tr>
<td>Main River</td>
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<tr>
<td>Canals</td>
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<td>*Other Rivers</td>
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<td>*Where other indicates: Drains, culverts, streams, brooks etc.</td>
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Description:
This site is located in New Haw. The Wey Navigation forms the western boundary of the site and the Rive Ditch the southern boundary. The A318 Byfleet Road lies to the west and Fairwater Drive is to the north. The Rive Ditch is a designated main river. There are a number of pylons within the site together with overhead cables.
There are no formal raised defences that would protect this site.

The site is shown to lie within Flood Zones 1, 2 and 3 according to the recent Rive Ditch modelling.

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<td>5.10 ha</td>
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<tr>
<td>Flood Zone 2</td>
<td>0.93 ha</td>
<td>12.1%</td>
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<tr>
<td>Flood Zone 3</td>
<td>1.67 ha</td>
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The site lies alongside the Rive Ditch, which is a main river. It also lies between the Addlestone Bourne and the River Wey. The detailed modelling of the latter two rivers shows that neither of these rivers floods the site. Detailed modelling of the Rive Ditch has been undertaken. This modelling is holistic, taking all sources of flooding into account. The fluvial flood extents extracted from this model have yet to be approved by the Environment Agency. However, they have accepted that the holistic model output may be used to assess this site’s flood risk.
Fluvial - 1 in 20 Year (5% AEP) Functional Floodplain Extent

1 in 20 year Flood Extent
The drawing shows the holistic flood outline for the 1 in 100 year plus 25% Climate Change. At present the model output for fluvial flooding alone is not available. It can be assumed that the large areas of flooding on the southern and eastern sides of the site constitute fluvial flooding and the small isolated areas of flooding to the north and west of the site constitute pluvial flooding. As the site is to be a commercial development, the 15% and 25% climate change allowances apply. Only output for the 25% flood is currently available so presents a worst case scenario.
The analysis of the flood risk of the site is based on the modelling of the Rive Ditch undertaken by Surrey County Council and the Environment Agency. As stated in the commentary above, the model is a holistic model which takes into consideration all sources of flooding (fluvial and pluvial). From this model output, fluvial flood outlines for the 1 in 20 year (5% AEP) functional floodplain flood, the 1 in 100 year (1% AEP) flood and the 1 in 100 year (0.1% AEP) flood have been provided to the LPA by the Environment Agency. The LPA has also received is holistic output for the 25%, 35% and 70% climate change scenarios. Commercial development is assumed to have a design life of 50 years and the impact of climate change on less vulnerable commercial development in Flood Zone 3a is assessed using the central and higher central allowances. For the River Thames, considering the allowances for the ‘2050s’, the central allowance is 15% and the higher central allowance is 25%. As the site is to be a commercial development, from the available climate change scenarios, only the 25% climate change scenario is relevant to this assessment.

The Rive Ditch modelling shows that the site is subject to both fluvial and pluvial flooding. This flooding is spread across much of the site with the southern part of the site being more affected than the northern part. The site is comparatively flat. However, there is scope to undertake a level for level floodplain compensation scheme. As the site is to be developed for commercial use, under the NPPF it is designated as a less vulnerable development. Development in Flood Zone 3b, the functional floodplain, is not permitted. However development in Flood Zones 3a and 2 is considered to be appropriate development for less vulnerable development.

A pre-application site layout has been provided to the LPA (included later in this document with the agreement of the applicant) which shows that most of the development proposed would lie outside of Flood Zone 3b. The areas within Flood Zone 3b along the bank of the Rive Ditch and adjacent to the M25 motorway lie outside the area of formal site development. Within the area of formal site development there is a concentrated area within the extent of Units 7 and 8 as well as smaller areas along the eastern site boundary that also lie within Flood Zone 3b. This is the area for which floodplain compensation needs to be considered. The total area of the flooding within the formal development is 0.24ha with an average depth of 0.11m and a total volume of 246m³. The layout plan shows that to front of the commercial units within the development there would be substantial parking areas. These, together with the access road have an area of 1.74 ha. At present this area, which is higher than the area where the commercial units on the eastern side of the site (Units 1 – 8) are to be located, can be designed as a floodable area. On average, the ground levels of the “floodable” area are 0.28m higher than the flooded area within Flood Zone 3b. Thus, by landscaping the site, lowering the floodable area and raising the area of the site in Flood Zone 3b, it will be possible to ensure that all of the development lies outside of Flood Zone 3b. However, as the mechanism of flooding on this part of the site is for flood water to flow into the site from the gardens of properties on Byfleet Road to the east, So that these flood flows are not impeded, it will be necessary to provide adequate hydraulic connectivity between these gardens and the “floodable” area. The developer’s pre-application layout drawings show gaps between some of the units. These could be used to form channels to act as flood flow paths to provide this continuity. It may be necessary to increase the width of these gaps slightly to ensure they provide adequate flow capacity.

With regard to the flooding of the site, from the 1 in 100 year and the 1 in 100 year plus climate change events, there are two approaches that could be taken. Firstly, the same approach as for the flooding of Flood Zone 3b can be taken. I.e. level for level floodplain compensation can be undertaken to utilise the storage of the “floodable” parking areas and access road. This floodable area is adequate to provide floodplain storage up to the 1 in 100 year (5%AEP) flood plus 25% climate change allowance. As the development will be commercial with a design life of 50 years, it will not be necessary to consider an allowance greater than 25% (higher central for the ‘2050s’). The alternative approach would be to provide the additional floodplain storage at the 1 in 100 year and 1 in 100 year plus climate change levels by building the commercial units with voided ground floors.
The Environment Agency has stated that the 1 in 100 plus 35% climate change flood should be used in the assessment of floodplain storage, as opposed to the 1 in 100 plus 25% climate change. This requirement may result in the need for additional floodplain storage or an increase in height of voids. The overhead cables may limit the scope to do the latter. Comparison of the extent of the 1 in 100 plus 35% climate change flood extent with the 1 in 100 plus 25% climate change flood extent show that there is not a significant difference between the two scenarios.
1 in 20 (5% AEP) Flood Extent within Site

1 in 20 yr Flood Extent

Potential Floodable Area

Total Flood Zone 3b flood area within the development site

Area of Flood Zone 3b that needs floodplain compensation within ‘floodable area’.
Floodplain Compensation (cont.)

1 in 100 (1% AEP) Flood Extent within site

Potential Floodable Area

Total Flood Zone 3a flood area within the development site

Area of Flood Zone 3a that needs floodplain compensation within 'floodable area.'
Floodplain Compensation (cont.)

1 in 100 +25% Climate Change Allowance
Flood Extent within site - From holistic model

1 in 100 yr + 25% cc
Fluvial Flood Extent

1 in 100 yr + 25% cc
Pluvial Flood Extent

Potential Floodable Area
Detailed analysis for the level for level floodplain compensation will need to be undertaken for the site development. However, the indications are that the car parks and access road can be used as a floodable area to compensate for the removal of the flood storage areas under the proposed new buildings.

Although the site is at risk from pluvial flooding as well as fluvial flooding, on the basis that the ‘floodable’ car park area is able to accommodate the holistic 1 in 100 year plus 25% climate change flood, it is not necessary to look at pluvial flooding as a separate exercise.

Below is analysis of the areas and depths of flooding to the site:

### Areas, Volumes, Level and Depth of Flooding

<table>
<thead>
<tr>
<th>Flood Event Probability</th>
<th>Total Area of Flooding ha</th>
<th>Total Volume of Flooding m³</th>
<th>Ground Level m AOD</th>
<th>Flood Level m AOD</th>
<th>Depth of Flooding m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>5% AEP</td>
<td>2433.78</td>
<td>242.73</td>
<td>15.72</td>
<td>15.49</td>
<td>15.91</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15.84</td>
<td>15.76</td>
<td>15.97</td>
</tr>
<tr>
<td>1% AEP</td>
<td>8727.19</td>
<td>1005.47</td>
<td>15.87</td>
<td>15.49</td>
<td>16.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15.98</td>
<td>15.83</td>
<td>16.20</td>
</tr>
<tr>
<td>1% AEP + 25%cc</td>
<td>11672.36</td>
<td>1213.32</td>
<td>15.95 16.05 15.860</td>
<td>16.7871 16.0545.95</td>
<td>15.6086 16.7178</td>
</tr>
</tbody>
</table>

**Area and Levels of ‘Floodable’ Car Park**

<table>
<thead>
<tr>
<th>Area m³</th>
<th>Average m AOD</th>
<th>Minimum m AOD</th>
<th>Maximum m AOD</th>
<th>Standard Deviation m</th>
</tr>
</thead>
<tbody>
<tr>
<td>17390</td>
<td>16.13</td>
<td>15.71</td>
<td>17.67</td>
<td>0.18</td>
</tr>
</tbody>
</table>
It will be seen from the above table that, even for the holistic 1 in 100 year plus 25% climate change flood, the ‘floodable’ area exceeds the that of the flood.

‘Floodable’ area = 17390 m$^3$
Holistic 25% cc Flood = 11672 m$^3$

Thus the available storage area is 48% larger than the actual flood.

The minimum ground levels in the areas shown to flood range between 15.49m AOD and 15.86 m AOD. The lowest level of the ‘floodable’ area is 15.71m AOD. Obviously, if most of the ‘floodable’ area is at this minimum level it reduces the potential to provide level for level flood storage. However, the average level of the ‘floodable’ area is 16.13m AOD. Further, it can be deduced from the standard deviation of the levels in the ‘floodable’ area that it is probable that less than 1.14% or 209m$^2$ of the floodable area lies below a level of 15.94m AOD. From the normal probability curve, 1.138% of a sample lies outside of 1.0 standard deviation from the mean.

1.0 standard deviation = 0.18m and the mean is 16.12m AOD. This gives a level of 16.12 – 0.18 = 15.94m AOD,

Visual inspection of the topography of the ‘floodable’ area also indicates that most of this area is at or above 16.0m AOD.

If, as a worst case, a minimum ground level in the areas shown to flood of 15.86m AOD is taken with a minimum ground level of 15.94m AOD in the ‘floodable’ area, this gives a minimum flood depth that can be accommodated of 15.94 – 15.86 = 0.08m. Across the ‘floodable’ area this represents an available storage volume of 17390 x 0.08 = 13991m$^3$. This volume is greater than the holistic 25%cc volume of 1213m$^3$.

Thus, even as a worst case the ‘floodable’ area is able to provide the necessary compensation storage.

This does not demonstrate that this storage can be provided on a level for level basis. However, it can be seen that the average flood depths are only about 0.1m and the ground levels in the areas shown to flood vary, with some levels below the assumed worst case of 15.86m AOD. Further, the average ground level of 16.13m AOD in the ‘floodable’ area is between 0.41 (5% AEP flood) and 0.08 (25% cc flood) above the average ground levels in the areas shown to flood. Given the total area of the ‘floodable’ area, it can be reasonably assumed that it is feasible to provide level for level floodplain compensation for the development within the ‘floodable’ area. It should further be considered that there is an area on the north of the site, which lies both outside the floodplain and the part of the site to be developed that could be used for floodplain storage as well.
The site is subject to both fluvial and pluvial flooding across the site. The level for level floodplain compensation will however concentrate the flooding to the ‘floodable’ area. The levels of the site and the volume of flood water to be stored indicate that the flood depth in this area will not exceed 0.25m and thus the flood water will not present a hazard greater than “Caution – Very Low Hazard”. Further, it is likely that there is scope to provide dry escape paths from the buildings. Thus, within the site the flooding should not present an unacceptable hazard.

Consideration also has to be given to safe escape from the site for the lifetime of the development. The drawing shows that proceeding south down Byfleet Road there are isolated area of flooding rated as “Caution – Very Low Hazard”. The area south of the railway line is defended by the railway line from flooding. Thus safe escape can be achieved by proceeding south along Byfleet Road.
<table>
<thead>
<tr>
<th>Artificial Sources</th>
<th>The site lies adjacent to the Wey Navigation. The risk of flooding due to its structural failure is considered very low. The site lies outside of the area predicted to be at risk from flooding from a reservoir breach.</th>
</tr>
</thead>
</table>
| **Summary of flood risk From all Sources of flooding** | - Flooding from Fluvial sources – The site is divided between areas that lie in Flood Zones 1, 2 and 3 (all related to the Rive Ditch). The site is not at risk from flooding from the Addlestone Bourne or the River Wey.  
- The Modelling output from the Rive Ditch hydraulic model shows that the site is at risk of flooding from both fluvial and pluvial flooding. In the 1 in 100 year (1% AEP) fluvial event, 1.67ha (21.7%) of the site floods, meaning that from a flood risk perspective 6.03ha (78.3%) of the site lies either in Flood Zones 2 or 1 where development is deemed to be appropriate for More Vulnerable and Less Vulnerable development.  
- Climate Change: the Holistic Modelling output shows that, at the 1 in 100 year plus 25% allowance for climate change level, a total of 2.05ha (27%) of the site is at risk of flooding from both fluvial and pluvial flooding. However, the average depth of this flooding is no greater than 0.15m.  
- Flood Hazard: The flood hazard mapping shows that, with the exception of small areas along the bank of the Rive Ditch, the flood hazard does from the 1 in 100 year plus 25% allowance for climate change flood does not exceed “Caution – Very Low Hazard”. This allows safe escape from the site. The floodplain compensation will allow a dry safe escape route from the site to be created.  
- Level for Level Floodplain Compensation: It should be possible to re-landscape the site to apply level for level floodplain compensation to control the areas of the site that flood and thus optimise those areas that can be developed.  
- Flooding from Artificial Sources – The site lies by the Wey Navigation which presents a very low risk of flooding to the site. No risk of flooding from a reservoir breach has been identified. |
### Flood Management Recommendations

- The site is 100% Greenfield.
- The British Geological Survey in its SuDS mapping indicates area that the ground water table is high. However, they have identified that there are opportunities for bespoke infiltration SuDS. Where infiltration is possible it should be utilised.
- Any runoff from the development will need to be attenuated to greenfield runoff rates.
- In accordance with the SuDS Hierarchy, if infiltration is not practicable for all or some of the surface water runoff from the site then discharge to a watercourse or other water body. The Rive Ditch to the south of the site should be used to receive any discharge that is required from the site.
- The surface water drainage system should be designed to ensure that no flooding occurs up to the 1 in 30 year pluvial event and that ensure that no on site property flooding or increased off site flood risk occurs for events up to the 1 in 100 year event, including allowance for climate change.
- The site is divided between all three Flood Zones. The development should be undertaken sequentially with the development taking place principally within Flood Zone 1 followed by Flood Zone 2. Where appropriate, level for level floodplain compensation will be considered in in order to rationalise the area of development. This may be particularly relevant given the overhead electricity cables over the site. These cables will create areas where development cannot take place to comply with the need to maintain a minimum clearance between the cables and any structures.
- Byfleet Road is shown to flood, both at its northern and southern ends. It appears that the hazard associated with this flooding is in the main no greater than “Caution – Very Low Hazard” for the 25% climate change event. The floodplain compensation within the site should ensure that there is a safe escape route out of the site. Further, there is an escape route from the site along Byfleet Road for which the hazard is nowhere greater than “Caution – Very Low Hazard”. The Flood Evacuation plan should identify the safe escape route.

### Reasonable prospect of compliance within the Exception Test?

- 78.3% of the site lies in Flood Zones 1 and 2 (outside of the 1 in 100 year / 1% AEP floodplain). Thus, for the majority of the site both More Vulnerable and Less Vulnerable development is deemed appropriate.
- More Vulnerable development should not take place in Flood Zone 3.

### Flood Risk Suitability Score

<table>
<thead>
<tr>
<th>Risk Management</th>
<th>Guidance will be provided in the following section to inform policy development</th>
</tr>
</thead>
<tbody>
<tr>
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- More Vulnerable development should not take place in Flood Zone 3.
Dear Georgina,

Thank you for being so, so patient with us. Please see below for our response. If you have any questions please don’t hesitate to contact me. I haven’t had time to review your other email yet as I have a big deadline today but I will be looking at it and tomorrow.

**Response:**

We have reviewed the amended Level 2 SFRA for the Byfleet Road site in New Haw, attached to Georgina’s email dated 10 January 2019. We have the following comments:

In response to the inspector’s questions:

1. ‘In regard to Policy IE1 (Byfleet Road, New Haw), is the requirement for a minimum net addition of 20,000 sq m of floorspace likely to be compatible with measures that are yet to be defined to mitigate flood risk?
2. ‘Also, does the proposed modification (CD_001A) to the site boundary have any implications for the delivery of the allocation?’

**Response to question 1:**

The flood modelling that has been undertaken confirms there are areas on the site within the 1:20 flood, defined by the Council’s Level 1 Strategic Flood Risk Assessment (SFRA) as the Functional Flood Plain (Flood Zone 3b).

The proposed illustrative site layout plan show units 7 and 8 within Flood Zone 3b. Unit 2 appears to also be shown within Flood Zone 3b. Table 3: Flood risk vulnerability and flood zone ‘compatibility’ of the National Planning Practice Guidance (NPPG) to the National Planning Policy Framework (NPPF) sets out that ‘less vulnerable’ development is not compatible with Flood Zone 3b.

The amended Level 2 SFRA states: ‘it will be possible to ensure that all of the development lies outside of Flood Zone 3b. However, as the mechanism of flooding on this part of the site is for flood water to flow into the site from the gardens of properties on Byfleet Road to the east, it will be necessary to provide adequate hydraulic connectivity between these gardens and the “floodable” area.’

The amended Level 2 SFRA proposes that it is possible to re-align the 1:20 flood plain in order for the buildings not to be shown in Flood Zone 3b. As set out in the amended Level 2 SFRA, this would
require hydraulic connectivity between the compensation area shown to be in the middle of the site and the flood plain.

Pages 10-12 in the flood plain compensation section show maps that cut the flood extent to the red line boundary. These maps fail to represent the mechanism of flooding from the east. We are concerned that if buildings are lined up on the eastern boundary in the way shown on the illustrate site layout then there is the potential for impedance of flood flows and disconnect between the flood storage area and the flood plain.

The majority of proposed built development on the illustrative layout is shown to be sited to the east and south within areas shown to be at risk of flooding. Sequentially, one would expect to see buildings located to the north where the majority of Flood Zone 1 lies. However, the Level 2 SFRA has outlined there are constraints with overhead and underground cables.

The flood plain compensation section sets out two approaches to manage flooding up to the 1:100 flood with an allowance for climate change. Firstly, a flood plain compensation scheme to directly compensate for losses of flood plain storage and secondly, if this is not possible, to raise the buildings up with a floodable void.

The document states: ‘As the development will be commercial with a design life of 50 years, it will not be necessary to consider an allowance greater than 25% (higher central for the ‘2050s’). This is correct for consideration of access & egress and flood resilience. At detailed design we normally expect to see developments provide flood compensation assessed to the 1:100 flood plus a 35% allowance for climate change and this level also applied to setting of void heights. This is because the losses of flood plain storage has no relation to vulnerability. We acknowledge for the purpose of the Level 2 SFRA the 25% allowance can be used to assess the development but there should be acknowledgement within the document that there may be a need to provide additional flood storage or the need to raise the building higher at detailed design. This may prove difficult with the constraints on the site and the quantum of development.

Regarding raising buildings on voids, there are a few buildings shown on the illustrative site layout that are in the same location as overhead cables. There is no information setting out how high the overhead cables are and whether buildings could be raised in those locations relative to the flood design levels.

We note that the table named ‘Areas, Volumes, Level and Depth of Flooding’ in the flood plain compensation section shows that the depth of flooding for the 1:100 plus climate change allowance is lower than the 1:20 and 1:100 floods? This should not be the case.

The safe access section states: ‘the flood depth in this area will not exceed 0.25m and thus the flood water will not present a hazard greater than “Caution – Very Low Hazard.”’ However, this is not reflected in the section on flood plain compensation, which sets out a higher depth of flooding once the flood plain compensation has been undertaken. When considering maximum depths for each return period following implementation of the compensation scheme (1:20 to 1:100 plus climate change), they are all showing more than 250mm depth, which is not considered a very low hazard. This would be either a danger for some or a danger for most people according to Defra’s flood risk to people calculator FD2320.

The document states ‘the British Geological Survey in its SuDS mapping indicates area that the ground water table is high.’ If infiltration is not possible due to ground conditions not being suitable then any applicant will need to consider providing space for attenuation to store surface water
volumes before discharging to the watercourse (or sewer). The illustrative site layout does not provide provision for surface water features. We are concerned that the proposed quantum of built development and the constraints from the flood plain and underground cables, may cause complexities adding attention ponds or swale type features for surface water management. If these features are located in the flood plain there are potential issues with volumes being taken up during combined flood events (fluvial and pluvial), which could then lead to an increase in flood risk.

Based on the information submitted we are concerned the quantum of the development is too high for this site. We feel the site allocation could be taken forward providing there is modification. The illustrative site layout plan has been undertaken in the Level 2 SFRA to provide confidence that the quantum of development can be delivered in terms of viability and able to pass the Exception Test at detailed design (not increase flood risk and be safe). Based on the illustrate layout plan, we have concerns that there is insufficient space for demonstrating buildings will not be in the functional flood plain, that adequate flood plain compensation and surface water management features can be provided for.

We would recommend that the council considers reducing the quantum of development and the adjusting the layout in order to demonstrate the following:

- Sufficient space for buildings to be sited outside of the 1:20 flood (Flood Zone 3b) if flood plain compensation is not possible;
- Flood plain compensation should be considered in an area that is not impeded by buildings and it is hydraulically connected to the flood plain;
- If the fall back position is to raise the buildings on voids then there should be information setting out they can either be positioned away from overhead cables or there is sufficient space for them under these cables relative to flood design levels;
- Set out where surface water attenuation could be provided on site; and
- If access routes need to be lowered due to flood plain compensation and the access is not a low hazard can this be overcome with a flood evacuation plan or alternative?

Response to question 2:

We do not consider the proposed modification (CD_001A) to the site boundary will have any implications for the delivery of the allocation. There is now an additional access on the eastern boundary. Whilst this access point is shown to be within the flood plain, the access to the north east remains. There site has reduced slightly in the north east. However, the majority of this area is within the flood plain.

Additional comments:

We would recommend the following amendments:

1. Under the flood plain compensation section it states: ‘For the River Thames, considering the allowances for the ‘2050….’ We believe this should read ‘for the Thames region, considering the allowances for the 2050…’
2. The flood plain compensation section states: ‘this floodable area is adequate to provide floodplain storage up to the 1 in 100 year (5%AEP) flood plus 25% climate change allowance.’ The 1:100 flood is 1%AEP and should be updated with this value.
3. The Level 2 SFRA sets out that the site is greenfield. The document states 'any runoff from the development will need to be attenuated to greenfield runoff rates.' This should also be limited to greenfield volumes.

4. The buffer zone distance from the top of the bank of the Rive Ditch from the proposed buildings has not been clarified.

Kind regards,

Rachel Rae.

Rachel Rae  
Planning Advisor  |  Sustainable Places  |  Thames Area

Environment Agency  |  Red Kite House, Howbery Park, Benson Lane, Crowmarsh, OX10 8BD  
Telephone: 020 771 40594
Runnymede Borough Council response to comments made in the Environment Agency’s email of 23rd January 2019

In their response, in relation to safe escape, the Environment Agency has interpreted that the depth of flood water across the site is greater than 0.25m. The Council’s response to this point is that the maximum flood depths are seen to be greater than 0.25m deep. However, these maximum depths occur adjacent to the bank of the Rive Ditch. The flood hazard mapping is based on the output from the hydraulic model. This shows that the flood hazard across the site away from the river bank is no greater than “Very Low Hazard, Caution”. On the basis of level for level floodplain storage, the average flood depth in the “Floodable Area” should not exceed 0.11m. Further, on the basis that floodplain storage is implemented, it should be possible to create a dry escape route outside of the “Floodable Area”. As such, the Council is of the opinion that this is not an issue that will affect the deliverability of this site.

In relation to surface water drainage, the Environment Agency has raised concern that if fluvial and pluvial flood events occur simultaneously this will increase the flood risk from the site. The Council however is of the view that it is not usual to consider the case of the extreme pluvial event occurring at the same time as the extreme fluvial event. The storm durations and intensities are different. However, on the assumption that they do occur simultaneously, the probability of a 1 in 100 year fluvial event together with a 1 in 100 year pluvial event will have a return period of 1 in 10,000 year (0.0001% AEP). Even two 1 in 10 year events occurring simultaneously will have a combined return period of 1 in 100 year. Overall, across the catchment, should fluvial and pluvial flooding occur simultaneously, it can be considered that those areas affected by fluvial flooding are 100% impermeable any localised rainfall will further increase the flood risk. However, it is difficult to see how the impact of this development can be individually assessed against the impact from the wider catchment.

The Environment Agency has commented that given the constraints on the site in the form of underground cables in particular (in combination with the quantum of development proposed), it would not be possible for the site to accommodate swales and attenuation ponds as part of the package of mitigation. The Council accepts that this is likely to be the case. However, there is adequate space within the site to accommodate shallow cellular attenuation storage as an alternative method of mitigation.