

Sequential & Exception Tests

Site address	16 Selbourne Avenue Havant PO9 4PX
Site coordinates	470550,108125
Report prepared for	Mr Leonard Sturgess 1 Astra Close Bosham Chichester West Sussex PO18 8QU
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1. Executive summary

According to a site-specific Flood Risk Assessment (FRA) (ref: 72330R1, GeoSmart, 2019), the Site is located within Flood Zone 3. A new residential development is proposed at the Site and the Sequential and Exception Tests are therefore required in line with the National Planning Policy Framework (NPPF) (2019) and Table 3 of the associated guidance (2014). The tests are required to ensure there are no other alternative Sites which could be developed at lower flood risk within Leigh Park, within the Havant Borough Council area and that any proposed development would be safe for its lifetime, whilst providing additional sustainability benefits to the Site and surrounding area.

A review of the designated search area, with regard to the selected Site parameters outlined within Section 5 of this report, indicates that there are no potential alternative development locations at a lower Flood Risk than the subject Site. **Therefore, the Site and proposed development is considered to have passed the Sequential Test but requires application of the Exception Test in line with Table 3 of the NPPF guidance (2014).**

The Exception Test is comprised of two components; demonstrating that flood risk can be managed for the lifetime of the development and consideration of the wider sustainability benefits to the community that outweigh flood risk.

The flood risk identified within the site-specific FRA (ref: 72330R1) could be managed through the recommended mitigation measures such as raising of Finished Floor Levels (FFLs) and awareness of the need for a Flood Warning and Evacuation Plan, so occupants remain safe over the lifetime of the proposed development. Consultation with the Environment Agency (HA/2020/121943/01-L01) recommends planning permission is granted, subject to condition of raising FFL's to the level recommended within the FRA.

In addition, the proposed development would reduce the housing shortfall, boost supply, improve choice and affordability, it would create a significant number of jobs, both directly and indirectly and would include features which reduce flood risk locally such as SuDS drainage measures. There are many local facilities and services nearby due to the Sites proximity to Havant Town Centre there are many benefits of the development to the wider area, as well as opportunities for future occupants of the Site. As such, it is considered the wider sustainability benefits outweigh the level of flood risk at the Site, which could be managed to a safe level over the lifetime of the proposed development.

Thus, the proposed development is considered to pass both the first and second parts of the Exception Test.

2. Background, scope and Limitations

Report Background

The National Planning Policy Framework (NPPF, 2019) and National Planning Practice Guide (NPPG) (2014) set out national policy and guidance and underpin the requirement for the Sequential & Exception Tests.

The NPPF and NPPG are supported directly by guidance from the Environment Agency (EA) and Department for Environment and Rural Affairs (DEFRA) entitled “Flood Risk Assessment: The Sequential Test for Applicants”, as well as local guidance documents and policies; which aim to strengthen the national policy and guidance relating to how the Sequential Test must be undertaken.

The NPPG published in March 2014 clarifies the role of the Sequential Test:

The overall aim should be to steer new development to Flood Zone 1. Where there are no reasonably available sites in Flood Zone 1, local planning authorities allocating land in local plans or determining planning applications for development at any particular location should take into account the flood risk vulnerability of land uses (see table 2) and consider reasonably available sites in Flood Zone 2, applying the Exception Test if required (see table 3). Only where there are no reasonably available sites in Flood Zones 1 or 2 should the suitability of sites in Flood Zone 3 be considered, taking into account the flood risk vulnerability of land uses and applying the Exception Test if required.

This report has been prepared with reference to the NPPF (2019) and NPPG (2014) which promote a sequential, risk based approach to the location of development:

“This general approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high risk flood areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible” (NPPG, 2014).

When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only considers development which is appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:

- *within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and*
- *development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems.*

The aim of a Sequential Test is to steer new development towards areas with the lowest probability of flooding (NPPF, 2019). Reasonably available sites located in an EA Flood Zone 1 should be considered before those in Flood Zone 2 and only when there are no reasonably available sites in Flood Zones 1 and 2 should development in Flood Zone 3 be considered. As the Site is partially located within Flood Zone 3, this report has been prepared to confirm the Sequential approach has been applied and the Exception Test has also been applied, where there are no alternative Sites identified.

Report scope

Information obtained from the site-specific FRA (ref: 72330R1 (GeoSmart, 2019)) and a review of the Havant Borough Council Local Plan documents including; the Strategic Housing Land Availability Assessment (SHLAA) 2019, Havant Borough Local Plan (Allocations) Adopted Version (2014) and Havant Borough Council Strategic Flood Risk Assessment (Local Plan Sites) (2018), are used to ascertain local flooding issues and, where appropriate, identify information to support a Sequential and/or Exception test required as part of the National Planning Policy Framework (NPPF, 2019).

This assessment has been undertaken by firstly compiling information concerning the Site and the surrounding area. The information which is gathered is then used to construct a 'conceptual site model', including an understanding of the appropriateness of the development as defined in the NPPF (2019) and the source(s) of any flood risk present.

Report limitations

It is noted that the findings presented in this report are based on a desk study of information supplied by third parties. Whilst we assume that all information is representative of past and present conditions, we can offer no guarantee as to its validity and a proportionate program of site investigations would be required to fully verify these findings.

This report excludes consideration of potential hazards arising from any activities at the Site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities.

3. Site analysis

Site information

The Site is located in Havant in a setting of residential land use at National Grid Reference SU 70550 08125. (Figure 1). Site plans and drawings are provided in Appendix A. It is noted that to the north land rises to c. 17.06 m above Ordnance Datum (AOD). To the west land rises to c. 14.7 mAOD, to the east land rises to c. 14.5 mAOD and to the south, the land falls to c. 11.3 m at Hermitage Stream, before rising again to 14.10 mAOD.

According to the EA's LiDAR ground elevation data, the general level of the Site is between 11.58 and 12.22 mAOD with the Site falling gradually in a southerly direction. This is based on EA elevation data obtained for the Site to a 1 m resolution with a vertical accuracy of ± 150 mm.

Figure 1: Aerial Site Location Map



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Development

The Site is currently used within a residential capacity. Development proposals comprise the construction of a new 3 bedroom detached dwelling in the east of the Site to the east of the existing dwellings (Appendix A). The effect of the overall development will result in an increase in number of occupants and/or users of the Site through an increase in the number of units from one to two, but will not result in the change of use, nature or times of occupation. The estimated lifespan of the development is 100 years.

Hydrological features

Hermitage Stream is located approximately 150 m south of the Site. The Flood Defence Map provided by the EA shows there is a culvert adjacent to the north west of the Site, this has been displayed on the map below as a dashed line. The full extent of the culvert is unknown.

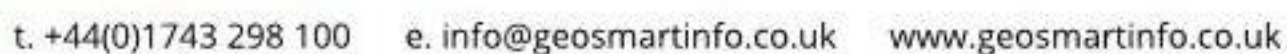
Figure 2 Surface water features



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FloodSmart Sequential Test

Ref: 72330.01R2



The EA's Risk of Flooding from Rivers and Sea (RoFRS) mapping (Figure 4) confirms there is a Medium level of flood risk associated with the Site, given the modelled flood levels and presence, type and condition of flood defences within the vicinity of the Site.

Figure 4 EA Risk of Flooding from Rivers and Sea



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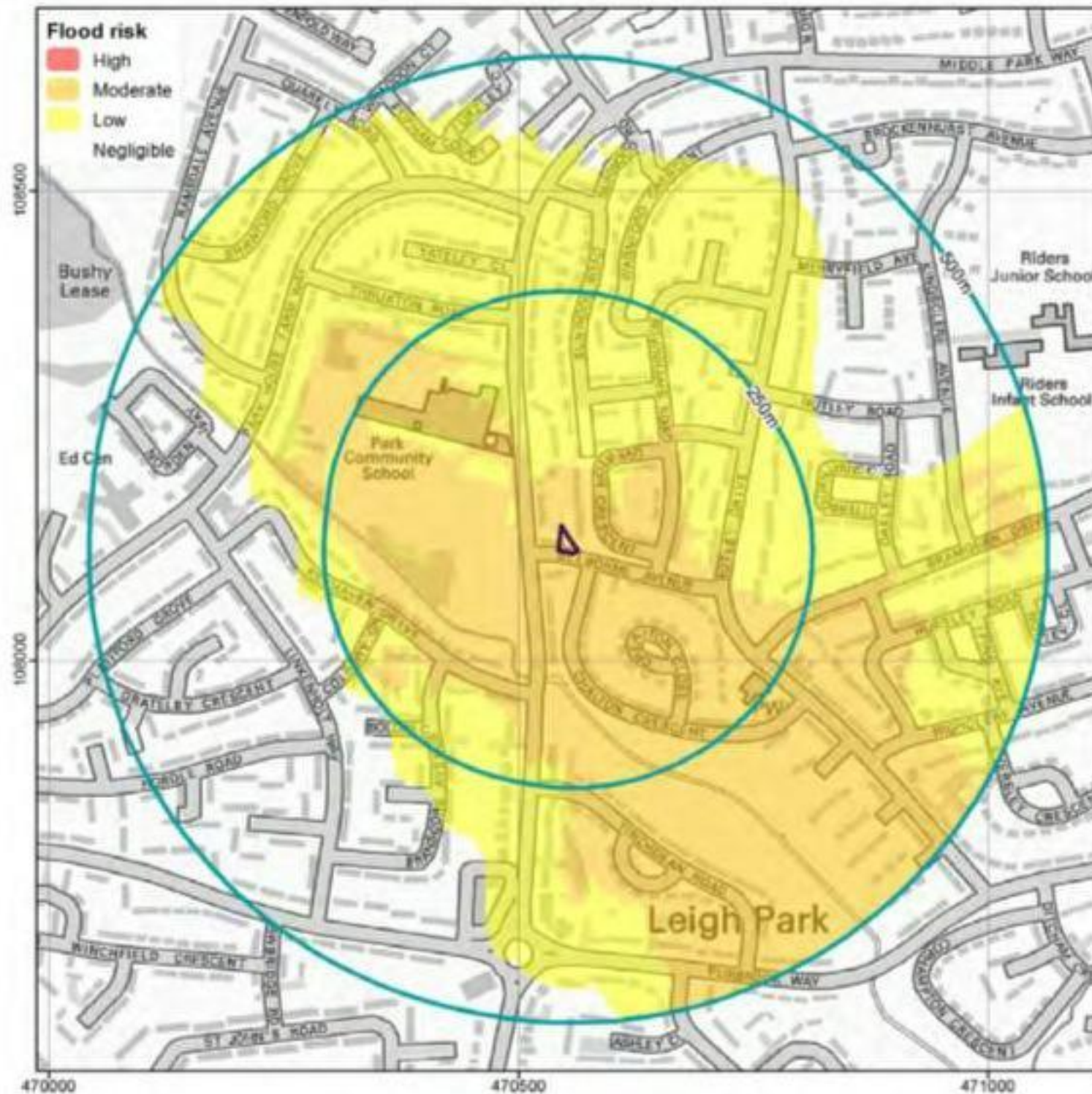
According to the EA's Risk of Flooding from Surface Water (pluvial) mapping, there is a Very Low risk of flooding from pluvial sources. Figure 5 confirms the extent and depth of flooding during a 1% annual probability (1 in 100 year – medium risk) pluvial event. The Site lies immediately adjacent to areas at Medium risk where flood depths range between 0.15 m and 0.3 m, however flooding is likely to be contained within the highway of Selbourne Avenue so is unlikely to affect the Site. The flood depths associated with a 1 in 100 year event within Selbourne Avenue are likely to be relatively shallow but should be considered when confirming routes of safe access and egress and also to ensure there is no displacement of flood water as a result of the development.

Figure 5 EA 1 in 100 year surface water pluvial flood event



Based on GeoSmart's Groundwater Flood Risk (GW5) Map (Figure 6) the Site is considered to be at Moderate risk of groundwater flooding. The risk map below confirms the risk of groundwater emergence at the surface during a 1% annual probability (1 in 100 year) event.

Figure 6 GeoSmart (GW5) Groundwater Flood Risk



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The flood risk identified within the FRA (ref: 72330R1) could be managed through raising of FFL's and the inclusion of a Flood Warning and Evacuation Plan, to ensure the proposed development and its occupants would be safe for its lifetime.

As defined in the NPPF (2019):

Ignoring the presence of any defences, land located in a Flood Zone 3 is considered to have a high probability of flooding with a 1 in 100 year or greater annual probability of fluvial flooding or a 1 in 200 or greater annual probability of coastal flooding in any one year.

Development of "Water-Compatible" and "Less Vulnerable" land uses are suitable for this zone with "More Vulnerable" and "Essential Infrastructure" requiring an Exception test to be passed prior to development taking place (see glossary for terminology).

4. Local policy

The planning department at Havant Borough Council were contacted to confirm their policies and required approach to the Sequential Test and Exception Test, however they stated that there is no specific local guidance directing how a Sequential Test should be approached within their area and the only guidance makes reference to the National Planning Policy Framework (2019). The policies relating to future development within Havant and local flood risk documentation have been reviewed and are outlined below:

Strategic Housing Land Availability Assessment (SHLAA) (Havant Borough Council, 2019)

For the purpose of the SHLAA study, some sites have not been assessed in any detail as they fall below the study threshold (less than 5 dwellings likely to be achievable). This threshold is consistent with the guidance in the relevant PPG and allows for efficient use of council resources in assessing housing land availability. They have not been assessed due to their size and are therefore discounted.

Partnership for Urban South Hampshire Strategic Flood Risk Assessment 2016 Update (Eastern Solent Coastal Partnership, 2016)

If development is required within an area identified within zone 3 or 2 of the Flood Map for Planning (from Rivers and the Sea) it should also be sequentially allocated within each Flood Zone to steer new development to areas with the lowest probability and/or hazard.

Strategic Flood Risk Assessment (Local Plan Sites) (Havant Borough Council, 2018)

The National Planning Policy Framework (NPPF) states that Local Plans should apply a sequential, risk-based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change (Paragraph 100, NPPF).

While some of the sites which have not been recommended for inclusion in the draft plan have a lower risk of flooding than some that have been recommended for inclusion, there were overriding reasons for these sites not to be included. For this reason, the Council had to consider some sites which were partially in flood zones 2 and/or 3. Out of the sites which have been recommended for inclusion in the draft plan, the majority are not situated in flood zones 2 and/or 3. However, there are some sites which are partially in flood zone 2 and/or 3. In these instances the sites have been assessed as having a “negative effect” and recommendations regarding site design and layout have been made to avoid development in the flood zones. In conjunction with the requirements of proposed policies E12 and E13, it is considered that flood risk can be mitigated on these sites.’ The latter point includes a requirement for account to be taken to the future risk from climate change over the lifetime of the development.

Sequential Approach at Site Level

In the first instance the review of individual sites focused on establishing whether it was possible to avoid flood risk by taking the sequential approach within the site. On this basis,

the extent of the area affected by flood risk for each site was mapped, making it possible to establish those sites which only had very small areas affected by flood risk now and in the future. These sites are considered appropriate to be taken forward in the Local Plan, with appropriate policy safeguards in the allocation policies.

Alternatively, where a greater part of the site was affected, it was considered whether a site area remained which would make a viable allocation, taking into account the proposed use, site size, access points etc. These sites are also considered appropriate to be taken forward in the Local Plan, with appropriate policy safeguards in the allocation policies. In some cases, this involved allocating for a lower site yield than initially anticipated.

The Exception Test

Taking this sequential approach within each site was not possible in all cases. Where flood risk could not be avoided in this way, further evidence (FRAs from past planning applications, and Site-specific FRA information from site promoters) was sought to understand whether other methods could be employed to make the site safe for development. Where supported by evidence, sites with a reasonable prospect of delivering safe development were considered appropriate for inclusion in the Local Plan. Where no or insufficient evidence was available, these sites have not been further considered for inclusion in the Local Plan, unless the council considered there to be an overriding sustainability reason for their inclusion.

Havant Borough Council Specialist Housing Analysis (2019)

According to waiting list data, the combined total need for affordable homes is 2,735 dwellings within the Borough. There is a significant need for affordable dwellings, and the supply of affordable homes should be maximised accordingly.

There is a clear need to plan for suitable housing for the ageing population in Havant with about a third of the population of the Borough likely to be an older person by 2036 when based on the 2021 projection.

There is a relatively significant deficit in 4-bedroom dwellings in Leigh Park.

Havant Borough Local Plan (2014)

The Local Plan (Allocations) identifies sites for specific uses including, housing, employment, retail, recreation and green infrastructure up to 2026.

Only development which conforms to the distribution strategy of the adopted Core Strategy is considered in the Allocations Plan.

In particular, the LP2 Leigh Park Housing Allocations (garage courts and parking areas) are identified within the SHLAA, but not in any detail. Therefore, a review of the Local Plan has further identified these potential alternative Sites.

There are a large number of parking/garage courts in Leigh Park that can be redeveloped to provide new homes. Many of these sites are rarely used for parking with garages boarded up, and the areas left vulnerable to crime and anti-social behaviour. These underused areas present a suitable opportunity to make better use of the land in order to accommodate the need for new homes. In addition, Portsmouth City Council (as landowner) will seek to improve

other parking/garage courts. The sites have been considered together as one allocation to provide approximately 60 dwellings.

Windfall/Unidentified Housing Development Analysis and Justification Background Paper (Havant Borough Council, August 2017)

Unidentified developments (more commonly termed as windfall developments) are those typically not allocated and which have previously been unidentified or are unexpected. Historically, they have formed a significant part of the overall supply of past residential development in Havant Borough. The extent, type and potential continuation of this varies from area to area. This Site is defined as a 'Windfall' development, comprised of development within a residential garden area.

Due to the relatively suburban nature of the borough, residential garden land continues to make an important contribution toward housing supply. The proposals put forward for the Havant Borough Local Plan 2036 support the principle of making best use of land within the urban area and this can include private residential garden land. Over the plan period garden land development is expected to provide a substantial amount of new dwellings based on the principle being acceptable in policy terms and past trend analysis.

Based on the trend analysis included in the report, future windfall calculations have been carried out using the most reliable sources of continued supply. This includes residential garden development, residential redevelopment and redevelopment of redundant/commercial/leisure uses (minus the Proctor and Gamble Factory Site completions). By doing this, the calculations provide what is considered a realistic and justified windfall/unidentified allowance for Leigh Park. Residential Garden Land average net gain 1.82 dwellings per annum Residential Redevelopment average net gain 5.09 dwellings per annum Redevelopment of Redundant/Commercial/Leisure Use average net gain 5.45 dwellings per annum $([335 - 275]/11)$

From the above, this produces a total of 12.36 dwellings per annum.

A 10% reduction has been applied to ensure the estimate is realistic rather than optimistic $(12.36 - 1.236 = 11.124)$. By rounding to the nearest whole number therefore, this produces a total of 11 dwellings per annum.

As such, a potential windfall/unidentified supply of residential development for Leigh Park has been calculated as 132 dwellings over the remainder of the plan period (up to 2036). This has been calculated by multiplying the calculated 12 dwellings per annum over the 12 year period (2024/25 to 2035/36). It is assumed that based on this analysis, the number of windfall Sites coming forward in the Leigh Park area will require a contribution from the proposed development.

Consideration of the Strategic Housing Land Availability Assessment (SHLAA)

Since 2007, the Council's SHLAA has been clear that it is unrealistic to have listed potential sites under 5 dwellings. Therefore, continued unidentified supply from this source (Windfall developments) is highly likely.

In accordance with the NPPF, many potential sites have been discounted from the SHLAA process due to their presence in flood zones 2 and 3. Nevertheless, through specific negotiation with the Environment Agency (through the inclusion of acceptable flood risk adaptation/mitigation), they may reach an acceptable conclusion through the Development Management/planning application process. With large areas of the borough affected by potential flood risk, a currently unidentifiable supply may arise from this source.

It is in this instance, the nature of the proposed 'Windfall' development is located within Flood Zone 3 and requires suitable flood mitigation measures outlined within the Flood Risk Assessment



(ref: 72330R1) to minimise the risks of fluvial and groundwater flood risks identified at the Site. In addition to this the EA's Flood Zones are comprised of JFLOW data which doesn't consider the capacity and condition of the existing culverted watercourse. Therefore, in the absence of detailed modelling and where mitigation measures are adopted within the proposed development design, a pragmatic approach from the Council is requested.

5. Sequential Test approach

The Sequential Test should be applied to demonstrate there are no reasonably available sites in areas with a lower probability of flooding that would be appropriate to the type of development or land use proposed.

Guidance

The definition of 'reasonably available sites' has been extracted and interpreted from both the National Planning Policy Framework (Annex 2) (2019) and "Demonstrating the Flood Risk Sequential Test for Planning Applications" document (2014) prepared by the Environment Agency, which defines reasonably available as sites that are suitable, developable & deliverable.

Deliverable – sites that are available, suitable, & achievable as shown on Local Planning Authority's SHLAA (Strategic Housing Land Availability Assessments) or other appropriate guidance or documentation.

Developable – sites should be in a suitable location for development and there should be a reasonable prospect that the site is available and could be viably developed at the point envisaged.

A Sequential Test (ST) is required to demonstrate there are no sequentially preferable "reasonably available" sites at a lower flood risk (i.e. in Flood Zone 1 in this case) within a defined area. With regard to the extent of a defined area the PPG (Paragraph: 033 Reference ID: 7-033-20140306) states that this should be defined by local circumstances, and when determining if a ST has been passed the PPG (Paragraph: 034 Reference ID: 7-034-20140306) states that this should take into account the "particular circumstances in any given case". Local Authorities are also advised (Paragraph: 033 Reference ID: 7-033-20140306), "When applying the Sequential Test, a pragmatic approach on the availability of alternatives should be taken."

A development proposal will only fail to pass the Sequential Test if alternative sites are identified within the search area that are at lower risk of flooding, would be appropriate for the proposed development and are 'reasonably available' for development. A site is only considered to be reasonably available if it is both 'deliverable' and 'developable' as defined by Annex 2 of the NPPF (2019):

- To be considered deliverable, sites should be available now, offer a suitable location for development now, and be achievable with a realistic prospect that housing will be delivered on the site within five years and in particular that development of the Site is viable. In accordance with Annex 2 of the NPPF (2019) sites with planning permission should be considered deliverable until permission expires.
- Sites with planning permission should be considered deliverable until permission expires, unless there is clear evidence that schemes will not be implemented within five years, for example they will not be viable, there is no longer a demand for the type of units or sites have long term phasing plans.

- To be considered developable, sites should be in a suitable location for housing development and there should be a reasonable prospect that the site is available and could be viably developed at the point envisaged.

These sites will usually be drawn from the evidence base / background documents which have been produced to inform the emerging Local Plan. For example, an important source of information for housing sites and development land will be provided by the SHLAA. In the absence of such, 'reasonably available' sites would include any sites that are known to the LPA and that meet the functional requirements of the application in question.

To identify potential reasonably available sites the following council documents were assessed:

- Havant Borough Council Strategic Flood Risk Assessment (Local Plan Sites) (2018);
- Strategic Housing Land Availability Assessment (SHLAA) (2019);
- Havant Borough Local Plan (2014) and
- An online commercial land search.

These are the most current evidence-based documents pertaining to land availability for housing development the Leigh Park area. The conditions and documents set out above have been used to identify sites and determine whether they are reasonably available and suitable alternatives for the proposed development to pass the Sequential Test.

Sequential Test Criteria

In this instance, the Sequential Test seeks to identify reasonably available sites which have a capacity to accommodate the proposed detached residential dwelling. In order to conduct a search for alternative Sites which could be more feasible than the current Site, a number of criteria have been set:

- All Sites within the Leigh Park area of the SHLAA.
- A maximum and minimum size of land for consideration to compare against the Site was set, based upon the Site plans provided using a nominal allowance. These maximum and minimum values were calculated as follows:
 - Size of Site: (292.4 m² / 0.0292 ha)
 - Maximum: 350.4 m² (0.0350 ha) - Site area plus 20%.
 - Minimum: 233.6 m² (0.0233 ha) - Site area minus 20%.
- Rented land was not considered within the search.
- The proposed development comprises of 1 new 3 bed detached dwelling with generous outdoor space and ancillary storage. Sites which cannot support development of a similar scale and of comparable value have been discounted.
- **Site Yield:** Sites with an existing planning permission for a greater number of dwellings than those proposed for the subject Site (1) have not been classed as viable alternatives. Using these Sites with permission for higher yields would reduce the available land for development in the Leigh Park area of Havant Borough Council and would be counteractive to local policy and housing aims.

6. Site-specific Sequential Test

The Site-specific Sequential Test has been undertaken in three parts.

1. Using the Havant Borough Council Strategic Flood Risk Assessment (Local Plan Sites) (2018) to identify potentially available residential sites, specifically:
 - a. Sites within the LE1 area of HBC included within the Site Review Summary Table.
2. Using the Strategic Housing Land Availability Assessment (SHLAA) (2019) to compare available residential Sites, specifically:
 - a. Annex 4, however these are Sites which have been assessed and all have a higher Site yield than what is proposed so have been discounted.
 - b. Annex 4.3, contains Sites which have fallen below the study threshold (less than 5 dwellings).
 - c. Appendix 2, contains discounted Sites where uncertainty still remains as the Sites suitability for residential development.
3. Using the Havant Borough Local Plan (Allocations) (2014), to review a number of small garage sites in Leigh Park (LP2), which have been allocated for residential development and are identified within the SHLAA, but not in any detail.
4. Undertaking a commercial land and property search for alternative and available Sites, using online sources.

Havant Borough Council Strategic Flood Risk Assessment (Local Plan Sites) (2018)

This site list provides details of the sites within the Leigh Park area that have been identified through the 2018 SFRA as being sites that are existing or emerging site allocations for housing or mixed-use development.

Table 1: Identification of comparable Sites within Leigh Park from the SFRA (2018)

Address	Site Size (ha)	Site Yield	Flood Zone	Other comments
Sites which are outside of the search parameters				
Strouden Court	2.2	75	1	This site has a much higher yield than the proposed development
Land at Riders Lane	1.94	c. 65		This site has a much higher yield than the proposed development
Land at Dunsbury Way	0.36	15	1	This site has a much higher yield

				than the proposed development
Scottish and Southern Energy Offices	1.7	80	1	This site has a much higher yield than the proposed development
Cabbagefield Row	7.4	155	1	This site has a much higher yield than the proposed development
Colt Site	3.1	90	1	This site has a much higher yield than the proposed development
Land east of A3(M) at Hulbert Road	No data	No data	1	This site appears to have been discounted for residential development within the SHLAA

Summary of Table 1 – Search of Sites from the SHLAA 2019

In summary, the allocation Sites within the Havant Borough Council Strategic Flood Risk Assessment, in the Leigh Park area of Havant, identified in Table 1, are all likely to be much larger Sites than the maximum site size criteria. It is therefore also assumed that the Site yield will be greater than what is proposed.

Strategic Housing Land Availability Assessment (SHLAA) (2019)

The sites in the table below are considered by Havant Borough Council to be likely to be below the study threshold (i.e. they are likely to deliver less than five dwellings). These sites have therefore not been assessed in any detail by Havant Borough Council and many may have constraints that would render them undevelopable.

These sites are not mapped and are without any specific Site boundary or details regarding specific site yields or Site sizes to compare directly with the proposed development Site. Therefore, in the absence of this information the following Sites have been discounted from the Sequential Test.

Table 2: Identification of Sites from the SHLAA below the study threshold within Leigh Park (2019)

Address
Sites which are outside of the search parameters
Garages at Dockenfield Close
Parking area off Sparsholt Close
Land at Solridge Close
Parking area at Malwood Close
Parking area at St Albans Road
Garages, Winterslow Drive
Open land adj to Winterslow Drive
Garage court at Bondfield Crescent
Garage court, Malwood Close
Open land, Broxhead Road
Open land, Longstock Road
Garage court, Warbrook Court
Parking area, Rotherwick Close
Garage Court, Wonston Court
Woolmer Court
Parking area off Awbridge Road
Garage court at Ernest Road
Garage Court off Sunwood Road
Parking area off Longstock Road
Parking area off Marldell Road
Parking area off Whitsbury Road
Parking area off Forestside Road (A)
Parking area off Fair Oak Drive
Garage court off Beaulieu Avenue

Parking area off Beaulieu Avenue
Garage Court, Priorsdean Crescent
Land at Oxenwood Green
Land at Plumley Walk
Land at Southfield Walk
Land at Larkwhistle Walk
Vacant shops off Sharps Road
Land at Inkpen Walk
Land at Rushmere Walk
Land at Frogham Green
Parking area, Nutley Road
Garage court, Middle Park Way
Open land, Whitsbury Road
Parking area off Forestside Road (B)
Garage court, Redlynch Close
Garage court off Horsebridge Road
Garage court, St Alban's Road
Holybourne Open Space
Garage court, Abbotstone Avenue
Garage court of Liam Close
Dunsbury Way Open Land
Wheatsheaf PH
Garage court, Soberton Road
Parking area off Millbrook Drive
Parking area off High Lawn Way
Parking area off Kingsclere Avenue
Parking area off Kimbridge Crescent

Parking off Forestside Avenue
Garage court off Rownhams Road
Garage court off Grateley Crescent
Garage court off Brockenhurst Avenue
Garage court, Sunwood Road
Garage court, Merryfield Avenue
Parking area, Upton Close
Green space, Sandleford Road
Garage court, Soberton Road
Open land between Priorsdean Crescent and Barncroft Way
Open land off Priorsdean Crescent, Leigh Park
Garage court, Rhinefield Close

Havant Borough Local Plan (Allocations) (2014)

The sites allocated under Policy LP2 consist of parking areas and garage courts. They are largely laid to hardstanding and vary in size. Many contain garages and some include both formal and informal rear access points from neighbouring properties.

Table 3: Identification of Sites from Policy LP2 in The Local Plan (2014)

Address	Site Size (ha)	Flood Zone	Other comments
Sites which are in the same Flood Zone (not at lower risk)			
Garage Court off Rownhams Road	0.11 ha	3	Site is also outside (larger) the Site search parameters.
Garage Court off Sunwood Road	0.09 ha	3	Site is also outside (larger) the Site search parameters
Sites which are outside of the search parameters			
Parking Area off Rhinefield Close	0.07 ha	1	
Garage Court off Awbridge Road	0.09 ha	1	
Garage Court off Ernest Road	0.09 ha	1	
Parking Area off Longstock Road	0.07 ha	1	

Parking Area off Marldell Close	0.09 ha	1	
Garage Court off Whitsbury Road	0.11 ha	1	
Garage Court off Forestside Avenue	0.09 ha	1	
Garage Court off Fair Oak Drive	0.14 ha	1	Main culvert on southern boundary of Site
Garage Court off Beaulieu Avenue	0.06 ha	1	
Parking Area off Beaulieu Avenue	0.04 ha	1	
Garage Court off Millbrook Drive	0.07 ha	1	
Parking Area off High Lawn Way	0.09 ha	1	
Garage Court off Kingsclere Avenue	0.13 ha	1	
Garage Court off Kimbridge Crescent	0.08 ha	1	
Garage Court off Grateley Crescent	0.06 ha	1	
Garage Court off Brockenhurst Avenue	0.07 ha	1	
Potential alternative Site			
Parking area off Forestside Avenue (L146)	0.03 ha		

Summary of Table 3 – Search of Sites from The Local Plan (2014)

In summary, out of 19 allocation Sites within the Havant Borough Local Plan (Allocations) 18 of these are either within the same Flood Zone 3 or are larger than the maximum Site size criteria, where it has been assumed that the Site yield will be greater than what is proposed.

The only Site, which is within the search parameters and could be a suitable alternative is the parking area off Forestside Avenue. However, further investigation into this Site, suggests that it would be not a more suitable alternative due to the following reasons:

- There is not a lot of parking provision in the area, so people living in Bartons Road and Forestside Avenue are reliant on this car park.
- Forestside Avenue is quite a tight road and there is not much room for parking along it, which means there may not be adequate parking for any future development of this car park.

- Any development at this Site would be overlooked from surrounding neighbours on all sides.

Commercial land and property search

A commercial land and property search was undertaken on the 14th and 25th of November 2019 within Leigh Park. This involved a search across multiple on-line national estate agencies including, www.rightmove.com, www.primelocation.com and www.zoopla.com, as well as local estate agencies including, Chapplins, to assess property and land which could be considered 'freely available within Leigh Park. There was however no available land or commercial property available when the commercial search was undertaken.

Overall Summary

There were no available Sites identified within either the commercial land and property search or local planning documents. Therefore, in line with paragraph 102 of the NPPF (2019) the Exception Test is required and is undertaken within the next section of this report.

7. Exception Test

In line with paragraph 157, bullet (a) of the NPPF (2019), if following the application of the Sequential Test, it is not possible for the development to be located in Flood Zones with a lower probability of flooding, the Exception Test can be applied. For the Exception Test to be passed the following criteria must be met:

1. It must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and
2. A site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall

1. Sustainability benefits that outweigh flood risk

The NPPG (2014) confirms the guidance associated with this part of the Exception Test within Paragraph: 024 (Reference ID: 7-024-20140306), which states:

".....Evidence of wider sustainability benefits to the community should be provided, for instance, through the sustainability appraisal. If a potential site allocation fails to score positively against the aims and objectives of the sustainability appraisal, or is not otherwise capable of demonstrating sustainability benefits, the local planning authority should consider whether the use of planning conditions and/or planning obligations could make it do so. Where this is not possible the Exception Test has not been satisfied and the allocation should not be made....."

The development will benefit the local area and borough on a number of levels - socially, environmentally and economically:

- Reduce the housing shortfall, boost supply, improve choice and affordability.
- Sustain local schools and colleges; given the size and scale of the development these are likely to be family homes.
- Many local facilities and services (including a supermarket, station, library and hospital) are within walking distances from the site meaning that there is potential to reduce car travel.
- Create a significant number of jobs, both directly and indirectly. The development will generate employment during the construction period and thereby provide some protection to the local economy. It may also support those who provide services to homes (e.g. window cleaners and maintenance tradesmen).
- Provide additional Council income for spending on local communities through increased Council Tax revenue.
- Inclusion of Sustainable Drainage Scheme (SuDS) within the proposed development to intercept surface water runoff from the Site and reduce flood risk within the wider area.

It should also be noted that the new proposed dwelling will be constructed to much higher environmental performance standards than much of the adjacent housing in the area.

2. Development will be safe for its lifetime

Although the Site is located within a Flood Zone 3 and not in an area benefitting from defences according to the EA's Flood Map for Planning, it is likely to benefit from the presence of flood defences along Hermitage Stream, designed to protect the Site in all events up to and including the 1 in 40 year and 1 in 100 year events. The Site is therefore considered to be at Medium flood risk according to the EA's RoFRS map.

Mitigation measures to reduce the risk of flooding to the development, including the raising of FFL's and providing a defined safe access and egress route, would ensure the development and its occupants would be safe over the lifetime of the proposed development.

The Environment Agency (EA) has been consulted on the Flood Risk Assessment (GeoSmart Report ref: 72330R1) undertaken for the proposed development (Ref: HA/2020/121943/01-L01, 2020). No objections were raised and it was recommended planning permission is granted with the following condition attached:

'Finished floor levels shall be set no lower than 12.80 metres above Ordnance Datum (AOD) (as specified on page 3, and section 7 Table 10, of the submitted FRA).'

Exception Test concluding remarks

The proposed development would provide wider sustainability benefits to the local area through the provision of jobs.

According to the EA's RoFRS map, there is a Medium risk at the Site and where mitigation measures set out within the recommendations of the Site-specific FRA are adopted, in line with the EA's condition, these would provide suitable mitigation to reduce the impacts of flooding and the level of flood risk to Low over the lifetime of the proposed development.

Thus, where the recommended mitigation measures are adopted within the design of the proposed development, these are considered to pass both the first and second parts of the Exception Test.

8. Conclusions

A review of the designated search area, with regard to the selected Site parameters outlined within Section 5 of this report, indicate that there are no potential alternative development locations at a lower Flood Risk than the subject Site. **Therefore, the Site and proposed development is considered to have passed the Sequential Test, but requires application of the Exception Test.**

The Exception Test is comprised of two components; demonstrating that flood risk can be managed for the lifetime of the development and consideration of the wider sustainability benefits to the community that outweigh flood risk.

The flood risk identified within the flood risk assessment (ref: 72330R1) could be managed through raising of FFL's, so that occupants remain safe over the lifetime of the proposed development.

The proposed development would reduce the housing shortfall, boost supply, improve choice and affordability, it would create a significant number of jobs, both directly and indirectly and would include features which reduce flood risk locally such as SuDS drainage measures. There are many local facilities and services nearby due to the Sites proximity with the Leigh Park area of Havant. As such, it is considered the wider sustainability benefits outweigh the level of flood risk at the Site, which could be managed to a safe level over the lifetime of the proposed development.

Thus, the proposed development is considered to pass both the first and second parts of the Exception Test.

The proposed development has passed the Sequential and Exception Tests and there are therefore no tenable grounds for refusal on flood risk grounds. It is recommended that the site-specific Flood Risk Assessment and Sequential Test for 16 Selbourne Avenue should be submitted as part of a formal planning application to Havant Borough Council.

9. References and glossary

Department for Communities and Local Government (2019). National Planning Policy Framework (NPPF). Accessed from: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> on 14/11/19.

Defra/Environment Agency (2005). Flood Risk Assessment Guidance for New Development. *Phase 2 Framework and Guidance for Assessing and Managing Flood Risk for New Development – Fill Documentation and Tools*. R & D Technical Report FD232-/TR2.

East Solent Coastal Partnership (2016). Partnership Urban South Hampshire (PUSH) Strategic Flood Risk Assessment. Accessed from: <https://www.portsmouth.gov.uk/ext/development-and-planning/planning-policy/strategic-flood-risk-assessment> on 14/11/19.

Havant Borough Council Strategic Flood Risk Assessment (Local Plan Sites) (2018). Accessed from: <https://www.havant.gov.uk/strategic-housing-land-availability-assessment> on 14/11/2019.

Havant Borough Council (2019). Strategic Housing Land Availability Assessment (SHLAA). Accessed from: <https://www.havant.gov.uk/strategic-housing-land-availability-assessment> on 14/11/2019.

Ministry of Housing, Communities & Local Government (2014). National Planning Practice Guidance. Flood Risk and Coastal Change. Accessed from: <http://planningguidance.planningportal.gov.uk/blog/guidance/flood-risk-and-coastal-change/> on 14/11/19.

Glossary

General terms

BGS	British Geological Survey
EA	Environment Agency
GeoSmart groundwater flood risk model	GeoSmart's national groundwater flood risk model takes advantage of all the available data and provides a preliminary indication of groundwater flood risk on a 50m grid covering England and Wales. The model indicates the risk of the water table coming within 1 m of the ground surface for an indicative 1 in 200 year return period scenario.
Dry-Island	An area considered at low risk of flooding (eg. In a Flood Zone 1) that is entirely surrounded by areas at higher risk of flooding (eg. Flood Zone 2 and 3)
Flood resilience	Flood resilience of wet-proofing accepts that water will enter the building, but through careful design will minimise damage and allow the re-occupancy of the building quickly. Mitigation measures that reduce the damage to a property caused by flooding can include water entry strategies, raising electrical sockets off the floor, hard flooring.
Flood resistance	Flood resistance, or dry-proofing, stops water entering a building. Mitigation measures that prevent or reduce the likelihood of water entering a property can include raising flood levels or installation of sandbags.
Flood Zone 1	This zone has less than a 0.1% annual probability of river flooding
Flood Zone 2	This zone has between 0.1 and 1% annual probability of river flooding and between 0.1% and 0.5 % annual probability sea flooding
Flood Zone 3	This zone has more than a 1% annual probability of river flooding and 0.5% annual probability of sea flooding
Functional Flood Plain	An area of land where water has to flow or be stored in times of flood.
Hydrologic model	A computer model that simulates surface run-off or fluvial flow. The typical accuracy of hydrologic models such as this is $\pm 0.25\text{m}$ for estimating flood levels at particular locations.
OS	Ordnance Survey
Residual Flood Risk	The flood risk remaining after taking mitigating actions.
SFRA	Strategic Flood Risk Assessment. This is a brief flood risk assessment provided by the local council
SuDS	A Sustainable drainage system (SuDS) is designed to replicate, as closely as possible, the natural drainage from the Site (before development) to ensure that the flood risk downstream of the Site does not increase as a result of the land being developed. SuDS also significantly improve the quality of water leaving the Site and can also improve the amenity and biodiversity that a site has to offer. There are a range of SuDS options available to provide effective surface water management that intercept and store excess run-off. Sites over 1 Ha will usually require a sustainable drainage assessment if planning permission is required. The current

proposal is that from April 2014 for more than a single dwelling the drainage system will require approval from the SuDS Approval Board (SABs).

NPPF (2019) terms

Exception test

Applied once the sequential test has been passed. For the Exception Test to be passed it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk and a site-specific FRA must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

Sequential test

Aims to steer new development to areas with the lowest probability of flooding.

Essential infrastructure

Essential infrastructure includes essential transport infrastructure, essential utility infrastructure and wind turbines.

Water compatible

Water compatible land uses include flood control infrastructure, water-based recreation and lifeguard/coastal stations.

Less vulnerable

Less vulnerable land uses include police/ambulance/fire stations which are not required to be operational during flooding and buildings used for shops/financial/professional/other services.

More vulnerable

More vulnerable land uses include hospitals, residential institutions, buildings used for dwelling houses/student halls/drinking establishments/hotels and sites used for holiday or short-let caravans and camping.

Highly vulnerable

Highly vulnerable land uses include police/ambulance/fire stations which are required to be operational during flooding, basement dwellings and caravans/mobile homes/park homes intended for permanent residential use.

10. Appendices

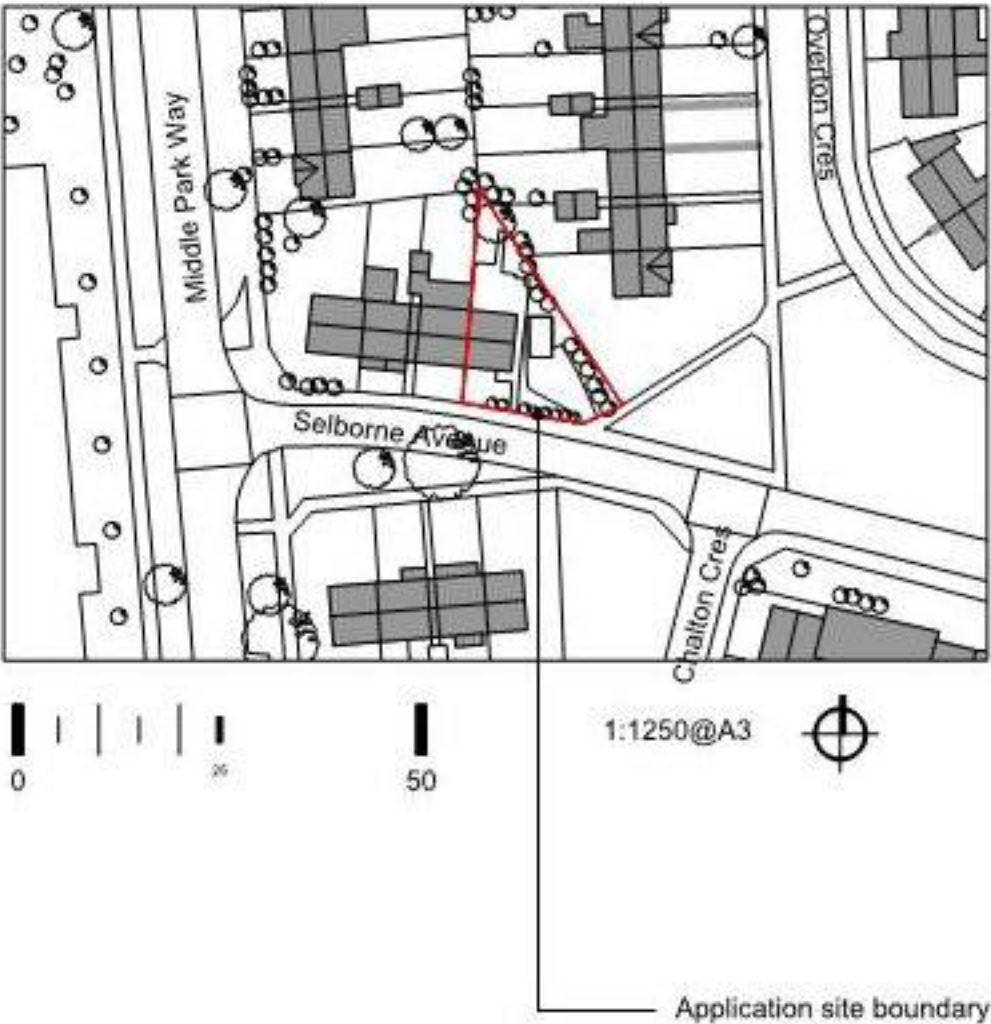
Appendix A

Site development plans

Existing Site Plan



Location Plan



- 16 Selborne Avenue
- Footprint of original garage
- Application site boundary

Proposed Site Plan



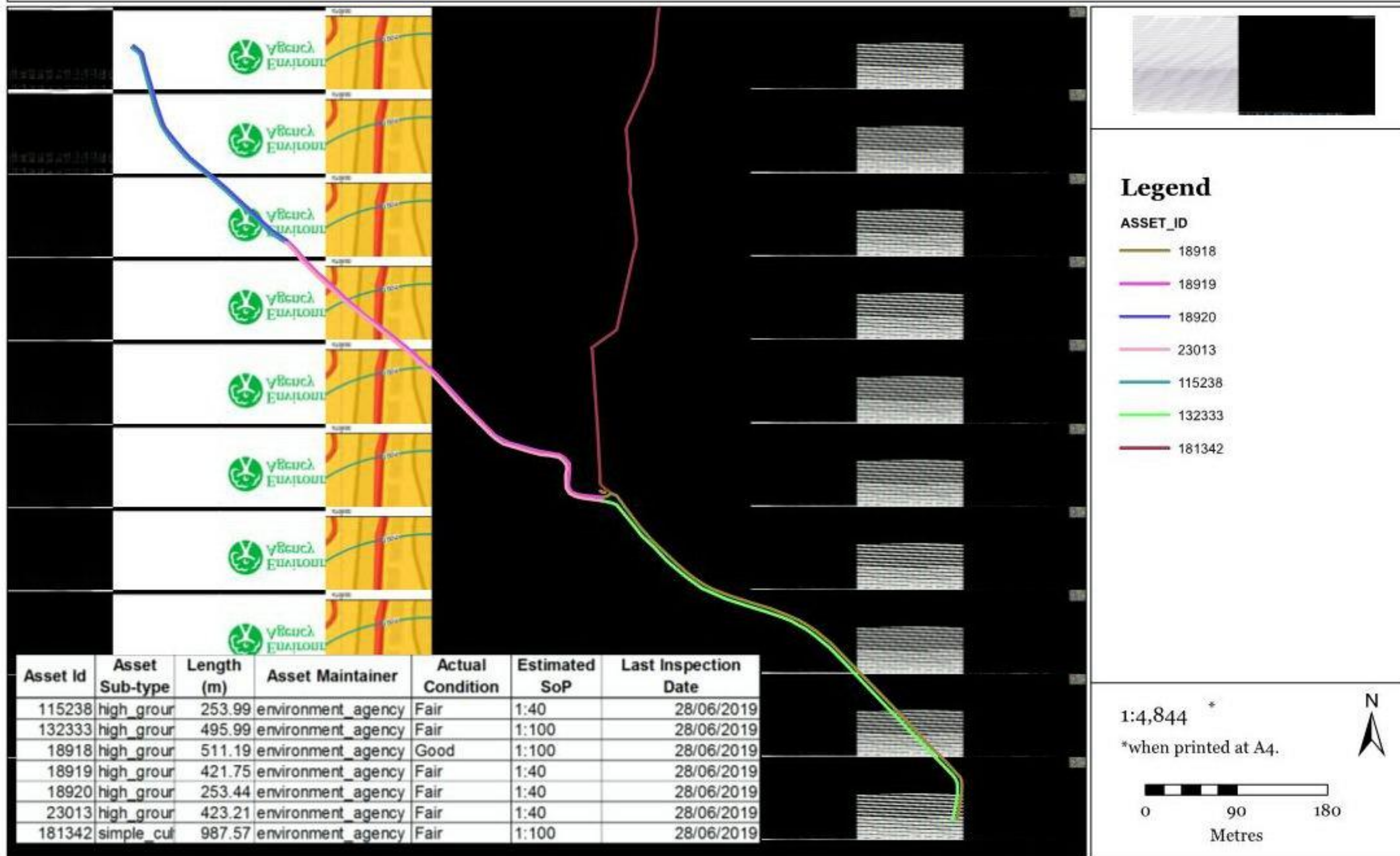
Proposed Ground Floor Plan



Appendix B

Environment Agency correspondence

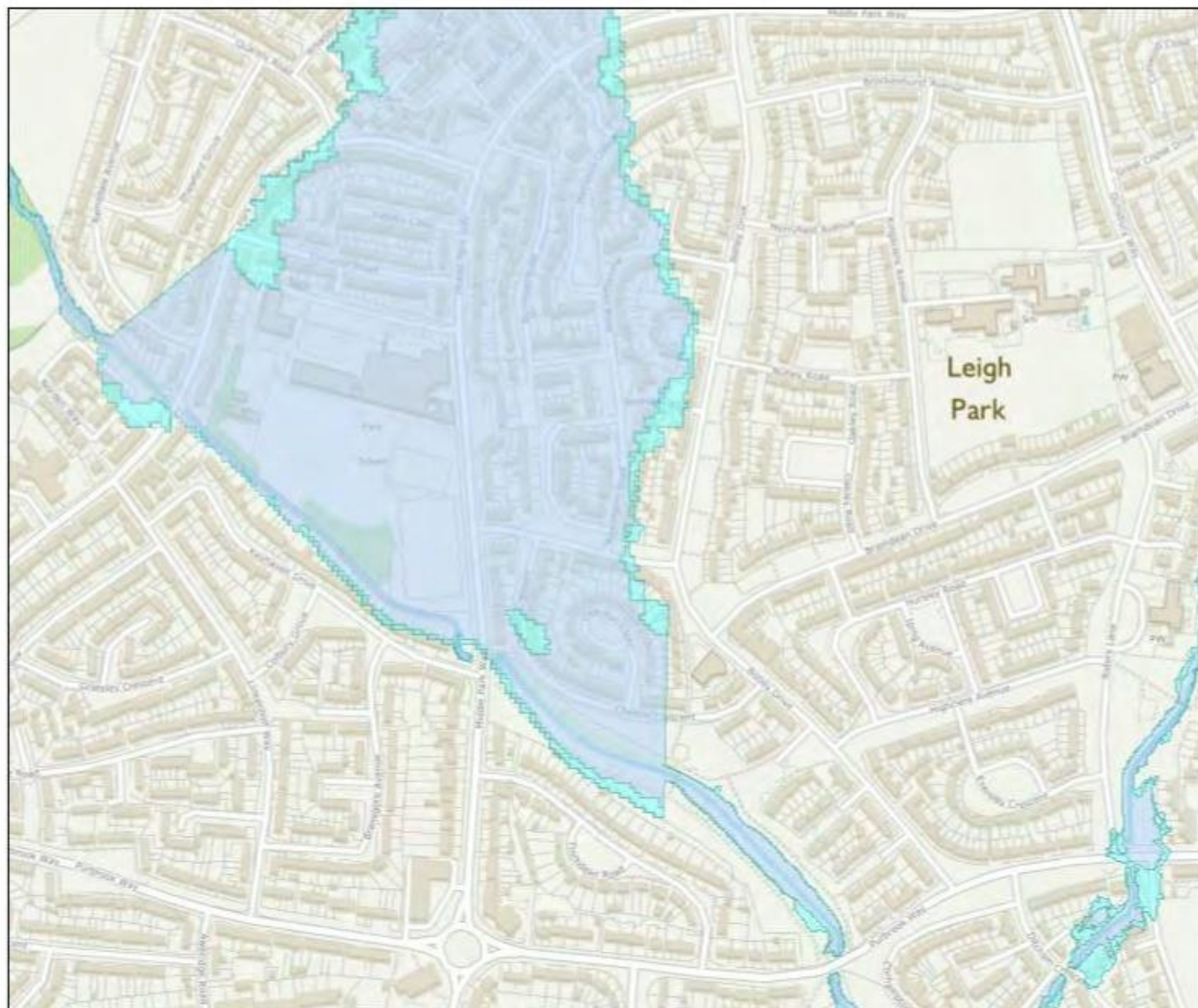
Defences Centred on Selborne Avenue - Created 18 October 2019



Environment Agency copyright and / or database rights 2019. All rights reserved. C Crown Copyright and database right. All rights reserved. Environment Agency, 100026380, 2019.

Contact Us: National Customer Contact Centre, PO BOX 544, Rotherham, S60 1BY. Tel: 08708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Flood Map for Planning (Rivers and Sea) Centred on Selborne Avenue - Created 17 Oct 2019



Scale 1: 6,250



Flood Map for Planning (Rivers & Sea)

- Defences
- Flood Storage Areas
- ▣ Areas benefiting from flood defences
- Flood Zone 3
- Flood Zone 2

Flood Map Areas (assuming no defences)

Flood Zone 3 shows the area that could be affected by flooding:

- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

JFLOW - Appendix

- Our work to produce Flood Zones followed a 10 year programme which delivered more detailed mapping for 821 locations. However, in order to complete Flood Zones we needed national coverage, hence a generalised approach was used to provide this national coverage within the time available, to fill the gaps between the 821 locations where we had more detailed information. The Flood Zones are therefore not as accurate as we would normally specify for river modelling, but they do provide an adequate indication of the extent of flood risk such that developers can consider flooding as part of their proposals to ensure they are not unknowingly putting additional lives at risk. This is the purpose for which the Flood Zones were produced.
- Neither water depths nor water levels were outputs that were specified when we commissioned this generalised modelling for Flood Zones. Whilst the modelling process does provide some information on depth of water, it would have been possible to produce the flood extents without storing the water depth values, since water depth is only a 'by-product' of the calculation process. As the JFLOW modelling method was developed, tested and reviewed for production of the Flood Zone extents only, we currently have no information on the accuracy of the water depth data.
- The models were run using a Digital Terrain Model (DTM) with a 5m x 5m grid. However the DTM grids were generalised to between 5m and 100m (depending on the type of model and location, for reasons such as processing speed). Fluvial modelling produced depth data which can be processed using the DTM to provide water level data. However the differing grid sizes means that there is a significant potential for inaccuracy in producing level data, because of the DTM generalisation.
- Therefore because of the nature of the model and the DTM, in many cases it will not be possible to confidently assess whether or not a site is above the resulting water level. This is because there are further inherent uncertainties in the depth calculation and within the DTM itself
- Depth or level outputs from the National Generalised Modelling (JFLOW) are only suitable to be used for decision making at a broad catchment or Shoreline Management Plan coastal cell scale (or larger).
- **They are not suitable for use in site specific Flood Risk Assessments or Strategic Flood Risk Assessments and must not normally be used for these studies. However, where in exceptional circumstances Nationalised Generalised Modelling outputs are requested to be used for anything other than at a broad catchment or Shoreline Management Plan coastal cell scale further verification must be undertaken. As part of this verification the outputs must be proven to be suitable and appropriate bearing in mind the conclusions the user wishes to draw from them and this use must be agreed in writing by the local Environment Agency staff.**
- If any agreement is given by the Environment Agency in pursuance of the above, the User accepts and agrees that such agreement by the Environment Agency that that National Generalised Modelling outputs are suitable for a particular use does not imply agreement that the proposals are appropriate or that the Environment Agency has no further comment on flood risk, rather that following verification the User has proven that the outputs are suitable to help assess the flood risk in the particular circumstances.
- Any assessment of Flood Risk undertaken must be appropriate for the decisions that need to be based upon it, consider the risks and also take into account any limitations of the data used
- Please read the enclosed Notice and be aware that the Environment Agency does not guarantee that this data is suitable for your purposes.
- **The consultants employed to deliver JFLOW Flood Zones to the Environment Agency were Jeremy Benn Associates (JBA). I should make you aware that JBA will not release information that either is owned by the Environment Agency or based upon Environment Agency information as they are not licensed to do so. You will need to request any information you require from the Environment Agency.**
- Information provided relates solely to flood risk issues and is based on the best available information to date in the Environment Agency. If further information becomes available to the Environment Agency (on flood risk issues or on other environmental issues which affect a FRA) or policy changes, we reserve the right to comment further or to supply further information or to amend information sent.
- If this information is supplied in connection with a flood risk assessment of development proposals and any material amendments made thereto at any stage prior to the submission of a planning application, the User should be aware of the need to consult the Environment Agency further

JFLOW Levels Centred on Selborne Avenue - Created 23 October 2019

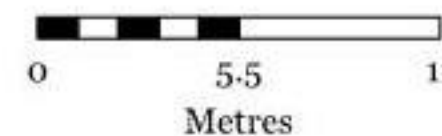


Legend

- + Location Points
- Flood Zone 3
- Flood Zone 2

1:275

*when printed at A4.



Water Depths & Levels for 16 Selborne Avenue

Point	Water Depth (Metres)		Water Surface Level (mAOD*)		Ground Level
	1% Annual Probability/1 in 100 Year (Flood Zone 3)	0.1% Annual Probability/1 in 1000 Year (Flood Zone 2)	1% Annual Probability/1 in 100 Year (Flood Zone 3)	0.1% Annual Probability/1 in 1000 Year (Flood Zone 2)	
1	0.23	0.24	11.29	11.30	11.06
2	0.13	0.28	11.16	11.31	11.03
3	0.12	0.28	11.15	11.31	11.03
4	0.14	0.30	11.14	11.30	11.00
5	0.14	0.30	11.14	11.30	11.00
6	0.14	0.30	11.14	11.30	11.00
7	0.15	0.32	11.14	11.31	10.99
8	0.15	0.16	11.14	11.15	10.99
9	0.16	0.17	11.12	11.13	10.96
10	0.17	0.18	11.13	11.14	10.96
11	0.13	0.14	11.13	11.14	11.00
12	0.19	0.20	11.13	11.14	10.94
13	0.17	0.18	11.13	11.14	10.96
14	0.19	0.20	11.13	11.14	10.94

* Levels in metres above Ordnance Datum Newlyn

Risk of flooding from Surface Water Centred on Selborne Avenue - Created 17 Oct 2019



Scale 1:6,250



Likelihood of flooding from Surface Water

- High ($\geq 3.3\%$)
- Medium (3.3% - 1%)
- Low (1% - 0.1%)
- Very Low

Likelihood of flooding from Surface Water

- | | |
|-----------|---|
| High: | Greater than or equal to 3.3% (1 in 30) chance in any given year |
| Medium: | Less than 3.3% (1 in 30) but greater than or equal to 1% (1 in 100) chance in any given year |
| Low: | Less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance in any given year |
| Very Low: | Less than 0.1% (1 in 1,000) chance in any given year |

This information is shown on the Risk of Flooding from Surface Water map on our website.

Havant Borough Council
Development Control
Civic Offices
Civic Centre Road
Havant
Hampshire
PO9 2AX

Our ref: HA/2020/121943/01-L01
Your ref: APP/19/01254
Date: 27 January 2020

Dear Sir or Madam,

ERECTION OF 1NO. 3BEDROOM DETACHED DWELLING (REVISED).

6 SELBORNE AVENUE, HAVANT, PO9 4PX.

Thank you for the consulting the Environment Agency on the above application.

We have reviewed the information as submitted and set out our position and comments below.

Environment Agency position

We request that the following condition be attached to any planning permission granted, and that the details in relation to the condition be submitted and approved by the Local Planning Authority.

Condition

The development shall be carried out in accordance with the submitted Flood Risk Assessment (FRA) (ref 72330R1, dated 7 November 2019, by GeoSmart Information Ltd) and the following mitigation measures it details:

- **Finished floor levels shall be set no lower than 12.80 metres above Ordnance Datum (AOD) (as specified on page 3, and section 7 Table 10, of the submitted FRA).**

These mitigation measures shall be fully implemented prior to occupation and subsequently in accordance with the scheme's timing/phasing arrangements.

The measures detailed above shall be retained and maintained thereafter throughout the lifetime of the development.

Reasons

To reduce the risk of flooding to the proposed development and future occupants.

The condition is in line with the Planning Practice Guidance (PPG) to the National Planning Policy Framework (NPPF) for Flood Risk and Coastal Change.

Please do not hesitate to contact me using the contact details shown below should you have any queries regarding the above information.

Yours faithfully,

Miss Anna Rabone
Sustainable Places Advisor

Direct dial: 02077 140525

Email: anna.rabone@environment-agency.gov.uk

Appendix C

Havant Borough Council correspondence

Strategic Flood Risk Assessment (Local Plan Sites)

November 2018



Havant Borough Local Plan 2036

Document ref:

Strategic Flood Risk Assessment (Local Plan Sites)

Purpose of this paper	To provide the evidence to show that flood risk has been fully taken into account in selecting sites for allocation in the Havant Borough Local Plan 2036 (HBLP2036)
Why?	During the Regulation 18 Consultation on the draft Local Plan, the Environment Agency (EA) raised concern that the supporting information did not adequately demonstrate that the Council had taken a sequential approach to site selection, and as such risked the plan being found unsound.
Objectives	▪ To set out the approach the Council has taken to flood risk in making decisions on site allocations in the HBLP2036 ▪ To review flood risk in detail for proposed allocation sites ▪ To demonstrate that there is a reasonable prospect of development on proposed allocation sites being safe from flooding during their lifetime

Any queries about the report should be sent to:

Email policy.design@havant.gov.uk

Telephone 023 9244 6539

Address: Havant Borough Council
Public Service Plaza
Civic Centre Way
Havant
PO9 2AX

Contents

Page

Table of Contents

1. INTRODUCTION	1
Local Plans and Flood Risk	1
What is a Strategic Flood Risk Assessment	2
Previous SFRA work	3
2. SFRA SITE REVIEW PROCESS.....	5
Stage A: Site Screening.....	5
Stage B: Site Review.....	6
Site Review Table	7
3. FINDINGS.....	21
Summary	21
Implications for HBLP2036.....	21
Future Planning Applications	22
APPENDIX A: SEQUENTIALLY PREFERABLE SITES.....	23
APPENDIX B: FZ1 SITES IN EMSWORTH AND ON HAYLING ISLAND	24
APPENDIX C: DETAILED SITE REVIEWS.....	26

1. Introduction

- 1.1 This document sets out the approach Havant Borough Council has taken in to site selection in the light of flood risk in putting forward site allocations in the Havant Borough Local Plan 2036 (HBLP2036). It has been prepared to support the Regulation 19 Pre-submission Plan.

Local Plans and Flood Risk

- 1.2 The National Planning Policy Framework (NPPF)¹ and associated Planning Practice Guidance on Flood Risk and Coastal Change (PPG)² emphasise the active role Local Planning Authorities should take in ensuring that flood risk is understood and managed effectively and sustainably throughout all stages of the planning process. The NPPF outlines that Local Plans should be supported by a Strategic Flood Risk Assessment (SFRA).
- 1.3 The overall approach of the NPPF to flood risk in local plans is set out in paragraphs 155-161.

Figure 1
Paragraphs 155-161 of the National Planning Policy Framework

Planning and flood risk

155. Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.

156. Strategic policies should be informed by a strategic flood risk assessment, and should manage flood risk from all sources. They should consider cumulative impacts in, or affecting, local areas susceptible to flooding, and take account of advice from the Environment Agency and other relevant flood risk management authorities, such as lead local flood authorities and internal drainage boards.

157. All plans should apply a sequential, risk-based approach to the location of development – taking into account the current and future impacts of climate change – so as to avoid, where possible, flood risk to people and property. They should do this, and manage any residual risk, by:

- a) applying the sequential test and then, if necessary, the exception test as set out below;
- b) safeguarding land from development that is required, or likely to be required, for current or future flood management;

¹ National Planning Policy Framework (2018) www.gov.uk/guidance/national-planning-policy-framework--2

² National Planning Policy Guidance on Flood Risk (2014) www.gov.uk/guidance/flood-risk-and-coastal-change

c) using opportunities provided by new development to reduce the causes and impacts of flooding (where appropriate through the use of natural flood management techniques); and

d) where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to relocate development, including housing, to more sustainable locations

158. The aim of the sequential test is to steer new development to areas with the lowest risk 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 risk of flooding. The strategic flood risk assessment will provide the basis for applying this test. The sequential approach should be used in areas known to be at risk now or in the future from any form of flooding.

159. If it is not possible for development to be located in zones with a lower risk of flooding (taking into account wider sustainable development objectives), the exception test may have to be applied. The need for the exception test will depend on the potential vulnerability of the site and of the development proposed, in line with the Flood Risk Vulnerability Classification set out in national planning guidance.

160. The application of the exception test should be informed by a strategic or site specific flood risk assessment, depending on whether it is being applied during plan production or at the application stage. For the exception test to be passed it should be demonstrated that: a) the development would provide wider sustainability benefits to the community that outweigh the flood risk; and b) the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.

161. Both elements of the exception test should be satisfied for development to be allocated or permitted.

Source: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

What is a Strategic Flood Risk Assessment

- 1.4 Local Plans should apply a sequential, risk based approach to the location of development. Development should not be promoted on sites at risk of flooding if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding.
- 1.5 A Strategic Flood Risk Assessment is a study carried out to assess the risk to an area from flooding from all sources, now and in the future, taking account of the impacts of climate change, and to assess the impact that land use changes and development in the area will have on flood risk³.

³ National Planning Policy Guidance Paragraph: 009 Reference ID: 7-009-20140306

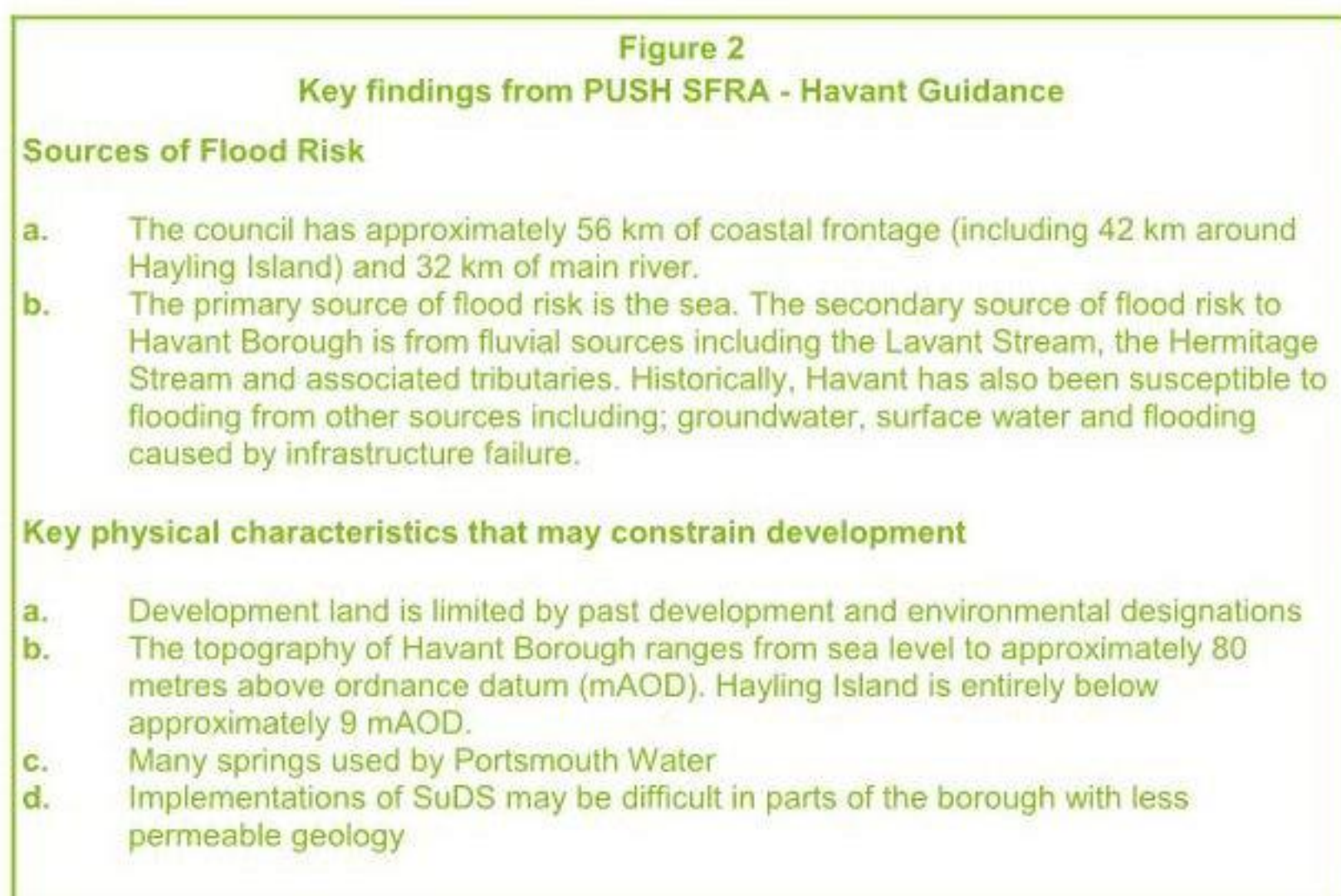
- 1.6 Where an initial Assessment shows that land outside flood risk areas cannot appropriately accommodate all the necessary development, it may be necessary to increase the scope of the Assessment to a more detailed level to provide the information necessary for application of the Exception Test where appropriate. The exception test should demonstrate that there are wider benefits to the community which outweigh flood risk and that the development will be safe for its lifetime.

Previous SFRA work

- 1.7 Preceding the SFRA work summarised in this report, a body of work on flood risk had already been completed, most notably the Strategic Flood Risk Assessment undertaken for the Partnership for Urban South Hampshire (PUSH SFRA).

The PUSH SFRA (2007, 2012 and 2016)

- 1.8 In 2007, a Strategic Flood Risk Assessment was commissioned by PUSH and undertaken by Atkins on behalf of the partner authorities to inform the development of the South East Plan and partner authority Local Plans. A light touch review was undertaken in 2012 at which time small amendments were made to the GIS mapping.
- 1.9 To ensure that it continued to provide a robust, contemporary and sound analysis of flood risks from all sources, the PUSH SFRA was updated in 2016, to update mapping outputs⁴ and to add guidance documents for each Local Authority area⁵. Some key findings of the Havant specific part of the PUSH SFRA are summarised below:



⁴ PUSH SFRA maps

⁵ PUSH SFRA – Havant Guidance

Climate Change

- a. Hayling Island is most vulnerable to climate change, particularly in the South.
- b. It is anticipated that climate change will result in an increase in fluvial flood flows. This may put additional pressure on areas adjacent to the streams in Havant.

Source: PUSH SFFRA, Havant Guidance Document (2016)

Local Plan Sustainability Appraisal (Regulation 18 Consultation)

- 1.10 The Sustainability Appraisal accompanying the Local Plan, flood risk was considered. The SA framework contains a specific objective regarding Flood Risk.

Figure 3 HBLP2036 Sustainability Appraisal - Objective 5

To reduce the risk of flooding from all sources and the resulting detriment to public wellbeing, the economy and the environment. Take a sequential approach to development and avoid putting more people and property at risk of being affected by flooding, where possible. Manage flood risk where necessary.

- 1.11 With regard to objective 5 more specifically, the SA report ⁶ explains at paragraph 4.14 that

'The National Planning Policy Framework (NPPF) states that Local Plans should apply a sequential, risk-based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change (Paragraph 100, NPPF). This has been carried out through the assessment of objective 5 as an assessment of a "strong negative effect" would have highlighted a site as not suitable for development due to flood risk. No sites have been assessed as having a "strong negative effect". While some of the sites which have not been recommended for inclusion in the draft plan have a lower risk of flooding than some that have been recommended for inclusion, there were overriding reasons for these sites not to be included. For this reason, the Council had to consider some sites which were partially in flood zones 2 and/or 3. Out of the sites which have been recommended for inclusion in the draft plan, the majority are not situated in flood zones 2 and/or 3. However, there are some sites which are partially in flood zone 2 and/or 3. In these instances the sites have been assessed as having a "negative effect" and recommendations regarding site design and layout have been made to avoid development in the flood zones. In conjunction with the requirements of proposed policies E12 and E13, it is considered that flood risk can be mitigated on these sites.'

- 1.12 During the Regulation 18 Consultation on the draft Local Plan, the Environment Agency (EA) raised concern that the supporting information did not adequately demonstrate that the Council had taken a sequential approach to site selection, and as such risked the plan being found unsound. This document has been developed in partnership with the Environment Agency to satisfy these concerns.

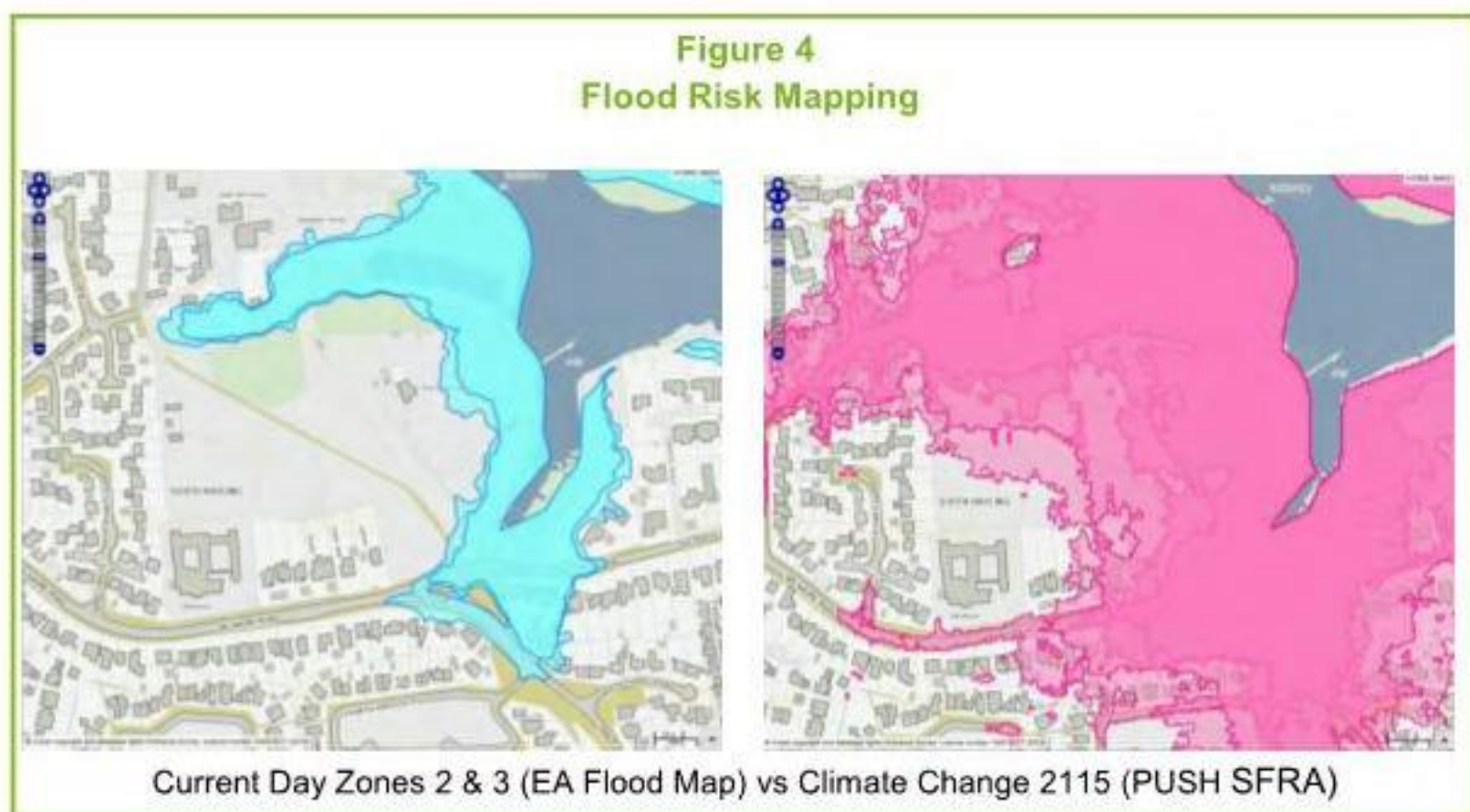
⁶ HPLB2036 Regulation 18 draft: <http://www.havant.gov.uk/localplan/regulatory-requirements>

2. SFRA Site Review Process

- 2.1 The council applied a multi-stage process for this Local Plan Sites SFRA.

Stage A: Site Screening

- 2.2 The first stage was to compile a spreadsheet of all the potential allocation sites in the borough, including both those identified by the council, as well as those submitted by landowners and developers. With the help of GIS mapping, these sites were overlaid onto EA Flood Zone mapping⁷, as well as climate change mapping from the PUSH SFRA. Together, these two mapping layers allowed the council to identify those sites at risk of flooding now and in the future. A sample extract is shown at Figure 4 below. As well as this mapping, both the EA and Havant's coastal defence team the Eastern Solent Coastal Partnership (ESCP) reviewed the long list of sites and noted any additional ones of concern, even where the available mapping did not identify the site.



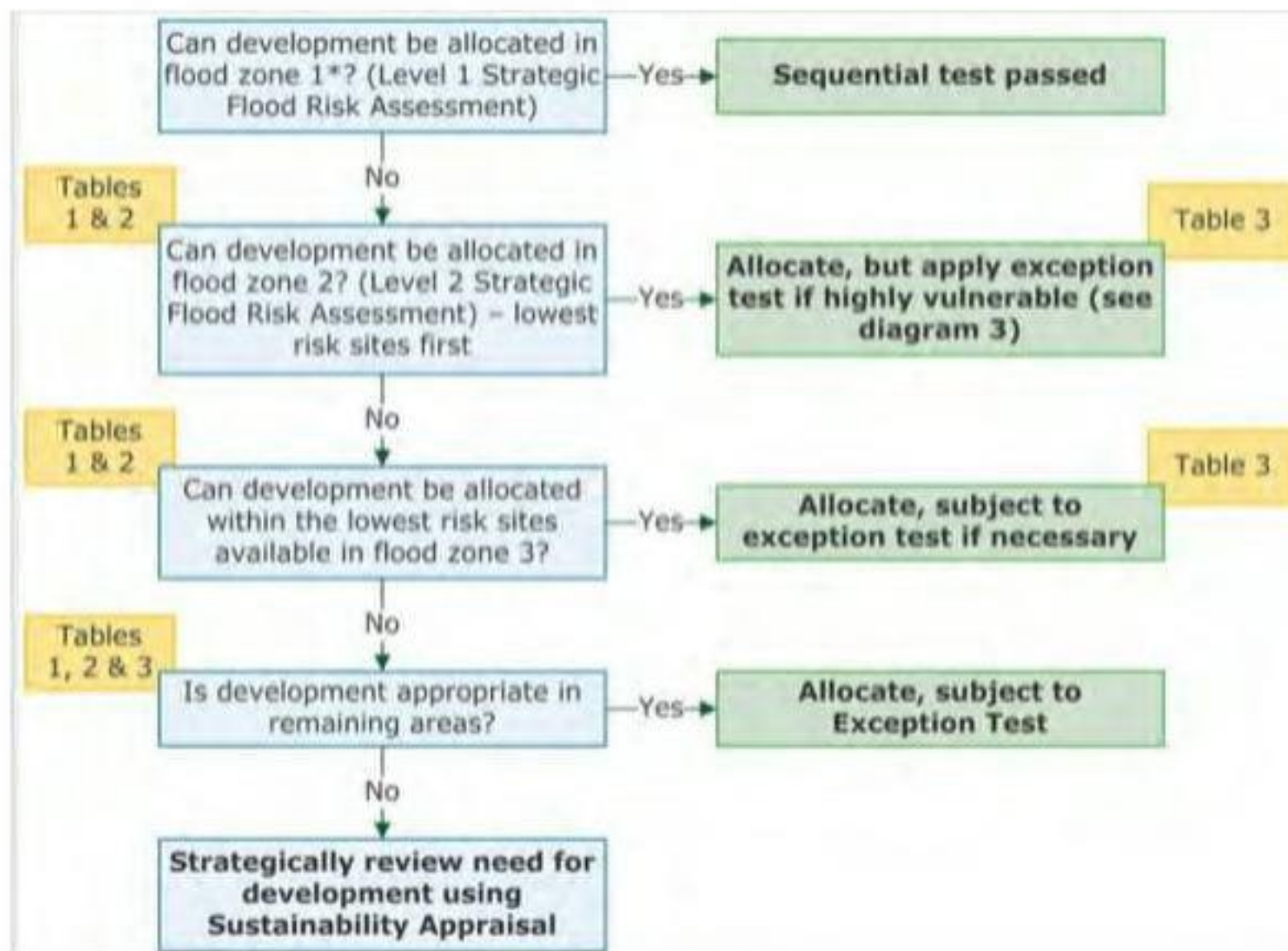
- 2.3 In line with the flood risk management hierarchy, the starting point was to make the assumption that only those sites where flood risk could be avoided should be taken forward. This is in line with national guidance on applying the sequential test the sites selection for the Local Plan⁸:

⁷ Up to date flood zone mapping from the EA is available at <https://flood-map-for-planning.service.gov.uk/>

⁸ Diagram 2: Paragraph: 021 Reference ID: 7-021-20140306, National Guidance on Flood Risk and Coastal Change. <https://www.gov.uk/guidance/flood-risk-and-coastal-change>

Figure 5

Application of the Sequential Test for Local Plan preparation



- 2.4 The site screening therefore focussed on identifying those sites not at risk of flooding – these are the sequentially preferable sites. They are shown at Appendix A.
- 2.5 This sift showed that of the sites under consideration for allocation⁹, around half had no flood risk constraints now or in the future, and as a result would not require further consideration through the SFRA.

Stage B: Site Review

- 2.6 Stage B involved taking all the sites identified as being affected by flood zones 2 and 3 or raised by the Environment Agency as of concern, and reviewing the flood risk situation more thoroughly.

Assessing Flood Risk

- 2.7 The process of assessing the risk and establishing the prospect of safe development comprised both area wide reviews and site specific reviews.
- 2.8 Sites with no site-specific flood risk issues, which would have been excluded from further consideration, but for known issues in the wider area were reviewed in clusters. Specifically, this affected sites in Flood Zone 1 in Emsworth (where there are known drainage issues) and on Hayling Island (where the single access onto and off the island is at risk of flooding). The

⁹ Some sites appear on the list twice, being considered for both housing and commercial allocation.

sites are listed, with commentary for the group, at Appendix B. The findings of this group review apply equally to sites in Emsworth and on Hayling Island, which were assessed more fully.

- 2.9 For sites affected directly by tidal or fluvial flood risk, i.e. those in Flood Zone 2 or 3, a fact sheet was produced. The sheets for each of the sites are found at Appendix C. They record factual information initially, and then go on to assess for each site whether
- The sequential test could be passed
 - The exception test could be passed
 - There was a reasonable prospect of delivering safe development.
- 2.10 It should be noted that proposed site of Havant Thicket Reservoir has not been considered further through this assessment. While it is noted that flood risk can arise from a reservoir, it is not possible to assess this at the Local Plan level. The detailed work on flood risk arising from the reservoir will take place at the detailed design and planning stage.

Sequential Approach at Site Level

- 2.11 In the first instance the review of individual sites focussed on establishing whether it was possible to avoid flood risk by taking the sequential approach within the site. On this basis, the extent of the area affected by flood risk for each site was mapped, making it possible to establish those sites which only had very small areas affected by flood risk now and in the future. These sites are considered appropriate to be taken forward in the Local Plan, with appropriate policy safeguards in the allocation policies.
- 2.12 Alternatively, where a greater part of the site was affected, it was considered whether a site area remained which would make a viable allocation, taking into account the proposed use, site size, access points etc. These sites are also considered appropriate to be taken forward in the Local Plan, with appropriate policy safeguards in the allocation policies. In some cases, this involved allocating for a lower site yield than initially anticipated.

The Exception Test

- 2.13 Taking this sequential approach within each site was not possible in all cases. Where flood risk could not be avoided in this way, further evidence (FRAs from past planning applications, and Site specific FRA information from site promoters) was sought to understand whether other methods could be employed to make the site safe for development. Where supported by evidence, sites with a reasonable prospect of delivering safe development were considered appropriate for inclusion in the Local Plan. Where no or insufficient evidence was available, these sites have not been further considered for inclusion in the Local Plan, unless the council considered there to be an overriding sustainability reason for their inclusion.

Site Review Table

- 2.14 The information gathered through the stages described in this chapter, is pulled together in Table 1 on the following pages.

Site Review Summary Table

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
EMS	EM1	Emsworth Victoria Cottage Hospital	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	Area has known drainage capacity issues. This is being addressed by a specific policy in the Local Plan which requires development to reduce post development runoff.	Yes
EMS	EM2	Gas Site, Palmer's Road	Housing	A small area in the eastern part of the site lies in the flood zone. According to information available a small area in the middle of the site is additionally affected by climate change. Advice from EA indicates that this is likely to increase once more detailed modelling work is completed (EA project).	No	No detailed information available to demonstrate that this could be made safe.	No	While the flood risk is acknowledged, and it has not been possible to be conclusive about the extent of the future risk taking into account climate change, the council considers that there are sustainability benefits in allocating the site. This is a brownfield site, with likely contamination issues due to its previous use as a gas holder. Therefore, there are safety benefits in seeking redevelopment of the site, which could address both the flood risk and the contamination. The policy will need to acknowledge the flood risk and set requirements for it to be addressed. It is equally acknowledged that less vulnerable uses could be considered, but these are unlikely to create sufficient value to make development viable.	Yes
EMS	EM3	Fowley Cottage	Housing	Southern part of site affected by tidal FZ 2&3; coverage increases with climate change. Sequential approach on site is possible: Site remains developable while avoiding areas at risk of flooding.	No	Safe development is achievable by taking the sequential approach on site.	Yes	Safe development is achievable by taking the sequential approach on site. Policy to stipulate that areas at risk of flooding now and in the future must be avoided.	Yes
EMS	EM4	Land at Selangor Avenue	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	Area has known drainage capacity issues. This is being addressed by a specific policy in the Local Plan which requires development to reduce post development runoff.	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
EMS	EM5A	Land at Westwood Close	Housing	Site boundary includes land within FZs 2 and 3, including access. This is likely to increase with Climate Change. A smaller site area could avoid areas at risk of flooding.	No	Site specific work (under APP/18/00672) has shown that it is possible to accommodate development outside of the area at risk of flooding, if the site area is reduced and a smaller number is accommodated.	Yes	If an allocation were to be made, the site area and housing yield would need to be reduced. The policy would need to highlight the flood risk from the River Ems, and also make clear that any land raising would be subject to flood storage compensation requirements. However, the Council is also conscious of the wider flood risk issues in Emsworth. The Environment Agency have confirmed that they are in the process of undertaking flood modelling for the River Ems Climate Change scenario, as part of a desire to deliver a River Ems Flood Alleviation Scheme. At this stage it cannot be ruled out that land in this location would be needed for this scheme. Looking beyond the deliverability of this site for development, it is considered that there are overriding reasons not to allocate the land for development, but instead to safeguard it for a River Ems Flood Alleviation Scheme. If further detailed work to bring forward this scheme shows that the land is not needed, it may be possible to release it for development through a review of the Local Plan.	No
EMS	EM6B	West of Coldharbour Farm	Housing	Eastern part of site part of site affected by fluvial FZ from West Brook. Sequential approach on site is possible: Site remains developable while avoiding areas at risk of flooding.	No	Safe development is achievable by taking the sequential approach on site. Flood storage compensation possible.	Yes	Detailed site specific work has shown that the site can be developed safely. Nevertheless, policy will need to make clear that further work will be required in relation to the required volumes and location of compensatory storage to be provided.	Yes
EMS	EM7	Land north of Long Copse Lane	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	Area has known drainage capacity issues. This is being addressed by a specific policy in the Local Plan which requires development to reduce post development runoff.	Yes
EMS	EM8B	Land rear of 15-27 Homdean Road	Housing	Western part of site affected by fluvial FZ from West Brook; Sequential approach on site is possible: Site remains developable while avoiding areas at risk of flooding; Known drainage issues in Emsworth	No	Safe development is achievable by taking the sequential approach on site.	Yes	Safe development outside the areas at risk of flooding is likely. Policy would need to make clear that further work will be required in relation to the required volumes and location of compensatory storage to be provided. Area has known drainage capacity issues. This is being addressed by a specific policy in the Local Plan which requires development to reduce post development runoff.	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
EMS	EM9	Land South of Long Copse Lane	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	Area has known drainage capacity issues. This is being addressed by a specific policy in the Local Plan which requires development to reduce post development runoff.	Yes
EMS	EM10	Land west of Westbourne	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	Area has known drainage capacity issues. This is being addressed by a specific policy in the Local Plan which requires development to reduce post development runoff.	Yes
EMS	n/a	Interbridges West	Commercial	Largely in FZ1 - small part on the edge of the central part of the site at risk of flooding;	No	not required - less vulnerable use	not required	There is a good prospect of safe delivery. The vast majority of the site is free from flood risk. Policy to stipulate that areas at risk of flooding now and in the future must be avoided. Area has known drainage capacity issues. This is being addressed by a specific policy in the Local Plan which requires development to reduce post development runoff.	Yes
EMS	STR1	Southleigh	Key Sites	While there are sequentially preferable smaller sites in the borough, there are none that could accommodate the quantum or type of comprehensive development proposed here.	Yes	This is a very large site with plans for substantial areas of open space. Flood Risk can be avoided within the site.	Yes	Policy to stipulate that areas at risk of flooding now and in the future must be avoided, including for flood risk management infrastructure/surface water management. It is acknowledged that this will require some reworking of the draft Masterplan, which is expected in any case as the evidence base on a range of issues is refined. Further work will be required in relation to the required volumes and location of flood storage to be provided. This is a very large site with plans for substantial areas of open space, which gives sufficient flexibility in terms of site layout. HBC is confident that flood risk can be avoided and/or mitigated within the site.	Yes
H&B	BD1	Langstone Technology Park	Commercial	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	BD10	Land North of Regional Business Centre	Commercial	Site currently in FZ1, but whole of the site affected by climate change	No	not required - less vulnerable use	not required	It is not possible at this point to conclude that there is a reasonable prospect of safe development. Further detailed work may be able to conclude that safe delivery is possible. In the absence of this information, it is not possible to conclude that the site is suitable for allocation.	No

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
H&B	BD11	Brockhampton West	Commercial / Leisure	Only very small area in eastern boundary only of site is affected by Fluvial FZ from Brocklands Stream. Sequential approach on site is possible. Site remains developable while avoiding areas at risk of flooding.	No	Safe development is achievable by taking the sequential approach on site.	not required	There is a good prospect of safe delivery. The vast majority of the site is free from flood risk. Policy to stipulate that areas at risk of flooding now and in the future must be avoided.	Yes
H&B	HB1	Wessex Site	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB2	Portsmouth Water HQ	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB3	Land at Palk Road	Housing	The Northern part of the site lies in FZ1 now and in the future. The southern part is in FZ2&3 when climate change is taken into account. While there is some indication that this is an overestimate, there is no alternative information available.	No	It is possible to avoid the area at risk of flooding in future by restricting development to the parcel of land north of Palk Road. It is acknowledged that further detailed flood risk work may show that the area at risk of flooding in the future is much smaller than currently thought and therefore, it may be possible to avoid flood risk even with a larger development. The site is a brownfield land sustainably located in the urban area, and therefore could provide sustainability benefits by being developed for housing.	Yes	Any allocation for development should be restricted to northern parcel. This could be achieved either through an allocation of just the parcel north of Palk Road, or a wider allocation with caveats and requirements regarding flood risk on the southern part. In any case, site yield should be based on capacity of northern part only, and flood risk needs to be highlighted in policy.	Yes
H&B	HB4	9 East Street	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB5B	Land south of Bartons Road	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB6	Littlepark House	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB7	Land south of Lower Road	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB8	Havant Garden Centre	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB9	Southleigh Park House	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
H&B	HB10	Forty Acres	Housing	Southern part of site affected by tidal FZ 2&3; coverage increases with climate change.	No	Planning Application APP/18/00450 shows ground raising is feasible to mitigate risk	Yes	Planning application APP/18/00450 has demonstrated what mitigation measures (ground raising) are feasible to make the site safe. There is therefore a reasonable prospect that the site can be made safe. Any allocation would need to include policy wording recognising the flood risk on the site and a development requirement to fully mitigate the risk from flooding.	Yes
H&B	HB11B	Land east of Castle Avenue	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB12	Helmsley House	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB13A	Camp Field, Bartons Road	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB14	Havant College	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB15	Southmere Field	Housing	Site affected is in future (climate change) tidal FZ, particularly southern part of the site. With climate change, only around 0.5 ha in the north west of the site remain in FZ1. Flood risk could be avoided by allocating a much reduced area.	No	Safe development is achievable by taking the sequential approach on site. However, flood risk significantly reduces the developable area.	Yes	It has not been demonstrated that development could be delivered safely across the whole site. Future flood risk would significantly limit the developable area. Given flood risk on the southern and eastern part of the site, the site should not be allocated, or restricted to the flood risk free area only. This would need to be considered in the round with broader considerations around the resulting built form. In any case, site yield should be based on the capacity of the flood risk free part only.	No
H&B	HB16	Land to the east of Manor Farm Close	Housing	Largely in FZ1 - small part on the edge of the central part of the site at risk of flooding; Extent of Climate Change not known, but likely that sequential approach on site is possible: Site remains developable while avoiding areas at risk of flooding	No	Safe development is achievable by taking the sequential approach on site.	Yes	Safe development is likely. Any allocation would need to include policy wording recognising the flood risk on the site and a development requirement to avoid areas at risk of flooding including climate change.	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
H&B	HB36	Portsmouth Water Land north of Solent Road	Commercial	A large part of the site is in FZ2 and 3, both in the present day and with climate change. As the vast majority of the site is shown to be in the area at risk of flooding, it cannot be avoided within the site. The site is being promoted for general industrial use. There are sequentially preferable sites available.	No	not required - less vulnerable use	not required	The EA have indicated that the key issue on this site is the offsite implications of flooding from development of the site i.e. floodplain compensation. Previous work has given confidence that an employment use can be safely delivered. On that basis, there is a prospect of safe delivery, although a detailed assessment of this would be required at application stage, in particular in relation to flood storage compensation, so any allocation policy would need to be heavily caveated with assessment requirements. It is acknowledged that the site was allocated in the previous Local Plan for a new Portsmouth Water HQ. The sequential test at that time was passed on the basis that the HQ had to be in this location for operational reasons, being close to a water source. The company has since decided to locate their HQ elsewhere and is promoting this site for general B1 or B8 (trade counter) use. The council considered that there are other sequentially preferable sites in the Borough for general employment use, and the exception made for the HQ use therefore falls away. Therefore, although it had been accepted in the past that there may be a prospect of safe delivery, this question does not arise, as the sequential test is not passed. An allocation for general employment use is not supported.	No

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
H&B	HB63	Kingscroft Farm	Housing	Climate change shows most of the site covered in FZ2 and 3. However, the EA indicate that this is likely to be an overestimate of the risk on this site. It is possible, on the present day flood zones to avoid the areas at risk. This is not possible when taking available flood risk information on Climate Change into account.	No	Although the EA and the site promoter agree that the Climate Change information on the PUSH SFRA is likely to be an overestimate of the extent of the future flood zones, no alternative information is available.	No	It is not possible at this point to conclude that there is a reasonable prospect of safe development. It has been suggested that hydraulic modelling is needed to establish the extent of the future flood zones. Such further work may be able to conclude that safe delivery is possible, but in the absence of this information, it is not possible to conclude that the site is suitable for allocation. As a greenfield site, it is not considered that sustainability benefits to the community exist that outweigh the flood risk.	No
H&B	TC1	Havant Town Centre	Key Sites	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
H&B	HB70	Eastleigh House, Bartons Road	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
HAY	HY1	Land rear of 13-21 Mengham Road	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	HY10	Land rear of Westjay, 107 Havant Road	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	HY11	Land at Hayling Island College (Sports Field)	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
HAY	HY16	The Nab Car Park, Southwood Road	Key Sites	Significant proportion of the site area is in FZ2&3, including the access road. With climate change, almost the entirety of the site will be in FZ 2&3 in the future.	No	It is considered that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk. Further detailed work will need to establish how the site can be developed safely.	Yes	While there may be sequentially preferable sites for development, the purpose of this allocation is to provide regeneration and new facilities for the Hayling Seafront. This cannot take place anywhere but Hayling Seafront, all of which is at risk of flooding. A combination of off-site strategic, on-site and adjacent off-site measures could make the development safe. Any residual risk will need to be properly assessed and appropriate mitigation measures identified. The policy for the site will have to highlight the flood risk and require mitigation measures to be put in place.	Yes
HAY	HY17	Beachlands	Key Sites	The site currently lies in FZ1, but with climate change, significant parts are shown to be at risk in the future. The access road also lies in FZs 2&3 in the future.	No	It is considered that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk. Further detailed work will need to establish how the site can be developed safely.	Yes	While there may be sequentially preferable sites for development, the purpose of this allocation is to provide regeneration and new facilities for the Hayling Seafront. This cannot take place anywhere but Hayling Seafront, all of which is at risk of flooding. A combination of off-site strategic, on-site and adjacent off-site measures could make the development safe. Any residual risk will need to be properly assessed and appropriate mitigation measures identified. The policy for the site will have to highlight the flood risk and require mitigation measures to be put in place.	Yes
HAY	HY18	Eastoke Corner	Key Sites	Significant proportion of the site area is in FZ2, including the access road to the west, and the road running through the site. The road running norther is unaffected in the current day, but becomes vulnerable in the climate change scenario. The area of the undeveloped green on the corner of Rails Lane and the Seafront is in FZ1, and remains largely unaffected by the climate change scenario.	No	It is considered that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk. Further detailed work will need to establish how the site can be developed safely.	tbc	While there may be sequentially preferable sites for development, the purpose of this allocation is to provide regeneration and new facilities for the Hayling Seafront. This cannot take place anywhere but Hayling Seafront, all of which is at risk of flooding. A combination of off-site strategic, on-site and adjacent off-site measures could make the development safe. Any residual risk will need to be properly assessed and appropriate mitigation measures identified. The policy for the site will have to highlight the flood risk and require mitigation measures to be put in place.	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
HAY	HY19	West Beach	Key Sites	The site currently lies in FZ1, but with climate change, most of the site and the access road lie in FZs 2&3 in the future.	No	It is considered that the proposed development will provide wider sustainability benefits to the community that outweigh flood risk. Further detailed work will need to establish how the site can be developed safely.	Yes	While there may be sequentially preferable sites for development, the purpose of this allocation is to provide regeneration and new facilities for the Hayling Seafront. This cannot take place anywhere but Hayling Seafront, all of which is at risk of flooding. A combination of off-site strategic, on-site and adjacent off-site measures could make the development safe. Any residual risk will need to be properly assessed and appropriate mitigation measures identified. The policy for the site will have to highlight the flood risk and require mitigation measures to be put in place.	Yes
HAY	HY2	Pullingers, Elm Grove	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	HY3	Manor Nurseries	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	HY4	Land at Sinah Lane	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
HAY	HY5	Land north of Tournurbury Lane	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	HY6	Northney Marina	Housing	Small area on edge of site in tidal FZ2&3 (increases with climate change), but access road substantially affected by FZ2&3.	No	Detailed FRA work has demonstrated that proposed buildings will remain safe and not subject to flooding. Flooding on access is considered to be predictable with several days advance notice, so can be managed by means of a robust flood risk management plan.	Yes	Detailed FRA work has demonstrated that proposed buildings can remain safe and not subject to flooding, by siting proposed residential development on the highest ground within the site, and raising the level of the commercial area. Flooding on access is considered to be predictable with several days advance notice, so can be managed by means of a robust flood risk management plan. Policy would have to require that this is prepared as part of application.	Yes
HAY	HY7	Fathoms Reach	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	HY8	Rook Farm	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
HAY	HY9	Land south of Stoke Barn	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	HY46	Land north of Selsmore Road	Housing	Currently, a very small part in the south eastern corner of the site is affected by Flood Zones 2 and 3. The area at risk of flooding increases notably with climate change, covering the likely access point off Selsmore Road and a large part of the site.	No	Flood Risk on site could be avoided. This would require a much reduced area / housing yield. No information available to demonstrate that a safe access could be delivered, particularly in the climate change scenario.	No	While a much reduced development could be brought forward on land not at risk of flooding, it has not been demonstrated that safe access could be delivered. While risk on the site could be avoided by reducing substantially the developable area and therefore the number of homes, it has not been demonstrated that safe access is achievable. Together, these call into question the desirability of an allocation on this greenfield site.	No
HAY	HY49	41 Station Road	Housing	In FZ1 - Sequentially Preferable site - no site specific fluvial or tidal issues.	Yes	not needed - sequential test passed	not required	While the site itself is in FZ1, it is noted that access on and off Hayling Island is at risk. The Council have developed and Emergency Response Plan and Hayling Island Emergency Planning Framework. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately	Yes
HAY	BD77	Northney Marina	Commercial	Small area on edge of site in tidal FZ2&3 (increases with climate change), but access road substantially affected by FZ2&3.	No	proposed use classed as mixture of 'water compatible' and 'less vulnerable'. Exception test not required. Nevertheless, floor levels may be raised to lift buildings out of flood risk.	not required	Detailed FRA work has demonstrated that proposed buildings can remain safe and not subject to flooding, by siting proposed residential development on the highest ground within the site, and raising the level of the commercial area. Flooding on access is considered to be predictable with several days advance notice, so can be managed by means of a robust flood risk management plan. Policy would have to require that this is prepared as part of application.	Yes
LEI	TC2	Leigh Park District Centre	Key Sites	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	LP1	Strouden Court	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
LEI	LP2	Land at Riders Lane	Housing	Very close to the fluvial FZ for the Hermitage Stream. Extent increases into western part of site with climate change. Sequential approach on site is possible. Site remains developable while avoiding areas at risk of flooding.	No	Safe development is achievable by taking the sequential approach on site.	Yes	The draft policy already suggests that the open space required to support the development should be the western part of the site. Strengthen policy wording to recognise flood risk on the site and include a requirement to avoid areas at risk of flooding including climate change. In addition, clarify that any flood storage and attenuation needs to be located outside of the areas at risk of flooding.	Yes
LEI	LP3	Land at Dunsbury Way	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	LP4	Scottish and Southern Energy Offices	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	LP5A	Cabbagefield Row	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	LP6	Colt Site	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	n/a	Havant Thicket Reservoir	Reservoir	Not assessed further as proposed development is a reservoir. Many factors govern where this can be located - it would not be appropriate to apply the sequential test to this type of facility.	n/a	not required - water use	not required	It is noted that flood risk can arise from a reservoir, it is not possible to assess this at the Local Plan level. The detailed work on flood risk arising from the reservoir will take place at the detailed design and planning stage. The policy needs to reflect this.	Yes
LEI	LP127	Land east of A3(M) at Hulbert Road	Commercial / Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	BD63	Dunsbury Park	Commercial	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	BD65	Land South of Fulford Road	Commercial	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	BD83	Leigh Park Gas Holder	Commercial	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	BD84	Velocity, Stanbridge Road	Commercial	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
LEI	BD85	Colt Site, New Lane	Commercial	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	TC3	Waterlooville Town Centre	Key Sites	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV1	154 London Road	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes

Area of HBC	Site ref	Site Name	Proposed Dev Type	Sequential Test Commentary	Sequ. Test Passed	Exception Test Commentary	Possible to pass Exc. Test	Prospect of Safe Delivery Commentary and Conclusion for SA of HBLP2036	Acceptable for HBLP2036 allocation
WAT	WV2	Padnell Grange	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV3	Woodcroft Primary School	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV4	Blue Star	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV5	Woodcroft Farm	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV6	Campdown	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV7	South Downs College	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV9	Land at Waterlooville Golf Club	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV10	Land south of Purbrook Heath Road	Housing	Northern parcel lies in FZ2&3; southern part along London Road in FZ1; no climate change data is available	No	Flood risk could be avoided if only the southern part along London Road was allocated.	Yes	Flood risk could be avoided if only the southern part along London Road was allocated or policy would have to stipulate that areas at risk of flooding now and in the future must be avoided.	Yes
WAT	WV11	Land at Crookhorn College	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	WV69	Land north of High Bank Avenue, Widley	Housing	In FZ1 - Sequentially Preferable site	Yes	not needed - sequential test passed	not required	no flood risk	Yes
WAT	BD54	Former BAE Systems Park	Commercial	Small area in southern part of site affected by tidal FZ2. Sequential approach on site is possible: Site remains developable while avoiding areas at risk of flooding.	No	Safe development is achievable by taking the sequential approach on site.	not required	Safe development is achievable by taking the sequential approach on site. Policy to stipulate that areas at risk of flooding now and in the future must be avoided.	Yes

3. Findings

Summary

- 3.1 This review has pulled together flood risk information for all the sites proposed for allocation in the Havant Borough Local Plan 2036.
- 3.2 Some have been shown to be free from the risk of tidal or fluvial flooding. For others, there are area wide policy approaches which make them acceptable, and for others again, it is possible to avoid flood risk within the site.
- 3.3 Those sites with more fundamental issues the prospect of safe delivery have been assessed in greater detail. Only those sites, where either further evidence has shown that there is a reasonable prospect that flood risk may be overcome, or where there are overriding sustainability reasons why the site should be allocated have been suggested for allocation.
- 3.4 This documents views flood risk in isolation. This is of course not the only factor to be considered in determining whether to take forward a site as a development allocation in the Local Plan. The findings of this report have formed just one part of the Sustainability Appraisal of the Local Plan, where the final conclusion as to whether to allocate a site is drawn.

Implications for HBLP2036

- 3.5 As well as determining which sites are suitable for allocation, the work has highlighted a number of other matters to take forward into the Local Plan.
 - a) For sites that are subject to flood risk, even where it has been determined through this assessment that safe delivery is possible, the site allocation policy will need to highlight the flood risk and set a development requirement that it must be dealt with satisfactorily before development can go ahead, together with any more site specific requirements established through this assessment.
 - b) This assessment has focussed on tidal and fluvial flood risk. However, at site specific level, other forms of flooding, including from surface water are equally important. It is proposed that the Local Plan includes two topic policies covering Flood Risk and Drainage. Together, these will ensure developers fully consider flood risk and drainage and deliver a package of measures to ensure sites are safe from flooding and flood risk and drainage are adequately managed into the future. They include requirements to:
 - Undertake site specific flood risk assessments
 - meet the sequential and exception tests as set out in the NPPF;
 - demonstrate that development will be safe over its lifetime without increasing flood risk elsewhere;
 - put in place appropriate flood warning and evacuation plans
 - make contributions towards any identified flood alleviation scheme(s).

- Reduce run-off rates to below the pre-development rate, or, if this is not possible, to allow no increase in surface water run-off compared with the pre-development rate;
 - Design drainage systems so that they meet the drainage needs of the development in full over the lifetime of the development and do not increase flood risk elsewhere;
 - Incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
- c) The Council will continue to work with its partners to bring about strategic flood risk management schemes, this includes Coastal Defence Schemes and fluvial flood risk management schemes, particularly in Emsworth. Any schemes known at the time of writing will be highlighted in the Council's Infrastructure Delivery Plan and/or relevant policies in the plan, and land will be safeguard for their delivery.

Future Planning Applications

- 3.6 The information presented in this report will facilitate decisions on the strategic allocation of sites for future development. This does not preclude the need for developers to undertake site specific flood risk assessments (FRAs). This document, by its very nature, is a high level assessment of flood risk at the local authority level. It does not provide sufficiently detailed information to satisfy all of the requirements of a site specific FRA as outlined in the National Planning Policy Framework. As such these will still be required on sites in FZ 2&3 or of 1 ha or more in size. These will also have to consider all sources of flooding.

Appendix A: Sequentially Preferable Sites

Group I. Sites unaffected by tidal or fluvial flood risk			
Site Ref	Site Name	Area of the Borough	Commentary
BD1	Langstone Technology Park	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB1	Wessex Site	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB2	Portsmouth Water HQ	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB4	9 East Street	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB5B	Land south of Bartons Road	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB6	Littlepark House	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB7	Land south of Lower Road	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB8	Havant Garden Centre	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB9	Southleigh Park House	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB11B	Land east of Castle Avenue	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB12	Helmsley House	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB13A	Camp Field, Bartons Road	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB14	Havant College	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
HB70	Eastleigh House, Bartons Road	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
TC1	Havant Town Centre	Havant & Bedhampton	In FZ1 - Sequentially Preferable site
BD63	Dunsbury Park	Leigh Park	In FZ1 - Sequentially Preferable site
BD65	Land South of Fulflood Road	Leigh Park	In FZ1 - Sequentially Preferable site
BD83	Leigh Park Gas Holder	Leigh Park	In FZ1 - Sequentially Preferable site
BD84	Velocity, Stanbridge Road	Leigh Park	In FZ1 - Sequentially Preferable site
BD85	Colt Site, New Lane	Leigh Park	In FZ1 - Sequentially Preferable site
LP1	Strouden Court	Leigh Park	In FZ1 - Sequentially Preferable site
LP3	Land at Dunsbury Way	Leigh Park	In FZ1 - Sequentially Preferable site
LP4	Scottish and Southern Energy Offices	Leigh Park	In FZ1 - Sequentially Preferable site
LP5A	Cabbagefield Row	Leigh Park	In FZ1 - Sequentially Preferable site
LP6	Colt Site	Leigh Park	In FZ1 - Sequentially Preferable site
TC2	Leigh Park District Centre	Leigh Park	In FZ1 - Sequentially Preferable site
LP127	Land east of A3(M) at Hulbert Road	Leigh Park	In FZ1 - Sequentially Preferable site
TC3	Waterlooville Town Centre	Waterlooville	In FZ1 - Sequentially Preferable site
WV1	154 London Road	Waterlooville	In FZ1 - Sequentially Preferable site
WV2	Padnell Grange	Waterlooville	In FZ1 - Sequentially Preferable site
WV3	Woodcroft Primary School	Waterlooville	In FZ1 - Sequentially Preferable site
WV4	Blue Star	Waterlooville	In FZ1 - Sequentially Preferable site
WV5	Woodcroft Farm	Waterlooville	In FZ1 - Sequentially Preferable site
WV6	Campdown	Waterlooville	In FZ1 - Sequentially Preferable site
WV7	South Downs College	Waterlooville	In FZ1 - Sequentially Preferable site
WV9	Land at Waterlooville Golf Club	Waterlooville	In FZ1 - Sequentially Preferable site
WV11	Land at Crookhorn College	Waterlooville	In FZ1 - Sequentially Preferable site
WV69	Land north of High Bank Avenue	Waterlooville	In FZ1 - Sequentially Preferable site

Appendix B: FZ1 Sites in Emsworth and on Hayling Island

FZ1 site on Hayling Island

Reg 18 Policy Ref	Site Name	Area of the Borough
HY1	Land rear of 13-21 Mengham Road	Hayling Island
HY2	Pullingers, Elm Grove	Hayling Island
HY3	Manor Nurseries	Hayling Island
HY4	Land at Sinah Lane	Hayling Island
HY5	Land north of Tournurbury Lane	Hayling Island
HY7	Fathoms Reach	Hayling Island
HY8	Rook Farm (UE77)	Hayling Island
HY9	Land south of Stoke Barn	Hayling Island
HY10	Land rear of Westjay, 107 Havant Road	Hayling Island
HY11	Land at Hayling Island College (Sports Field)	Hayling Island
HY49	41 Station Road (HY29)	Hayling Island

Commentary

Hayling Island has only one access on and off the island, and the access itself is at risk of flooding. Although the above sites have no site specific tidal or fluvial flood risk issues, consideration of what would happen in the case of an emergency is therefore important.

The Council has developed an Emergency Response Plan and Hayling Island Emergency Planning Framework, available at <http://www.havant.gov.uk/emergency-advice/councils-role-in-an-emergency>. The council is satisfied that with these plans in place, the risks associated with having just one access from on to the Island can be managed appropriately.

FZ1 Sites in Emsworth

Reg 18 Policy Ref	Site Name	Area of the Borough
EM1	Emsworth Victoria Cottage Hospital	Emsworth
EM4	Land at Selangor Avenue	Emsworth
EM7	Land North of Long Copse Lane	Emsworth
EM9	Land South of Long Copse Lane (UE46)	Emsworth
EM10	Land west of Westbourne	Emsworth

Commentary

National Guidance on Flood Risk states that 'Within each flood zone, surface water and other sources of flooding also need to be taken into account in applying the sequential approach to the location of development'¹⁰. Therefore, ways in which drainage capacity in Emsworth, and across the Borough, is proposed to be addressed through the Local Plan is set out in this section, and the conclusions reflected in the Site Assessment Table at Appendix 1 for sites in Emsworth.

The adopted Local Plan included a specific policy on Managing Flood Risk in Emsworth. That policy required development to reduce post development runoff in order to reduce pressure on the drainage system and aim to improve the existing standard of protection. In the Local Plan 2036, these provisions are proposed to be integrated into a Drainage Infrastructure Policy and a Flood Risk Management policy, both covering the whole borough. The intention is not to remove the policy requirements previously in place for Emsworth, rather it is to maintain these and apply the good practice established here across the borough, given the additional pressure the planned development will have on the borough's drainage system. The policy requirements include that

- Run-off rates have been reduced to below the pre-development rate, or, if this is not possible, there is no net increase in surface water run-off compared with the pre-development rate;
- Drainage systems meet the drainage needs of the development in full over the lifetime of the development and do not increase flood risk elsewhere;
- The drainage strategy incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
- Where necessary, a contribution has been made towards any identified flood alleviation scheme(s).

These policies will be carried forward into any site allocations, where they apply, as a development requirement which states that planning will only be granted where the developer provides a drainage solution which reduces surface water run-off and makes a contribution towards identified flood alleviation schemes in the area.

As such, it is considered that concerns about flood risk in Emsworth for those sites which do not have additional site specific fluvial or tidal issues is adequately addressed by these policy requirements. On that basis, it is concluded in this report that there is a reasonable prospect of these sites being safe over their lifetime without increasing the risk of flooding elsewhere.

¹⁰ NPPG Paragraph: 019 Reference ID: 7-019-20140306

Appendix C: Detailed Site Reviews

Basic Information



The Site: The site lies on the seafront in the South East of Hayling Island.

Site Area: 0.27ha

Allocation Proposal: Residential ('more vulnerable') and community centre ('less vulnerable')

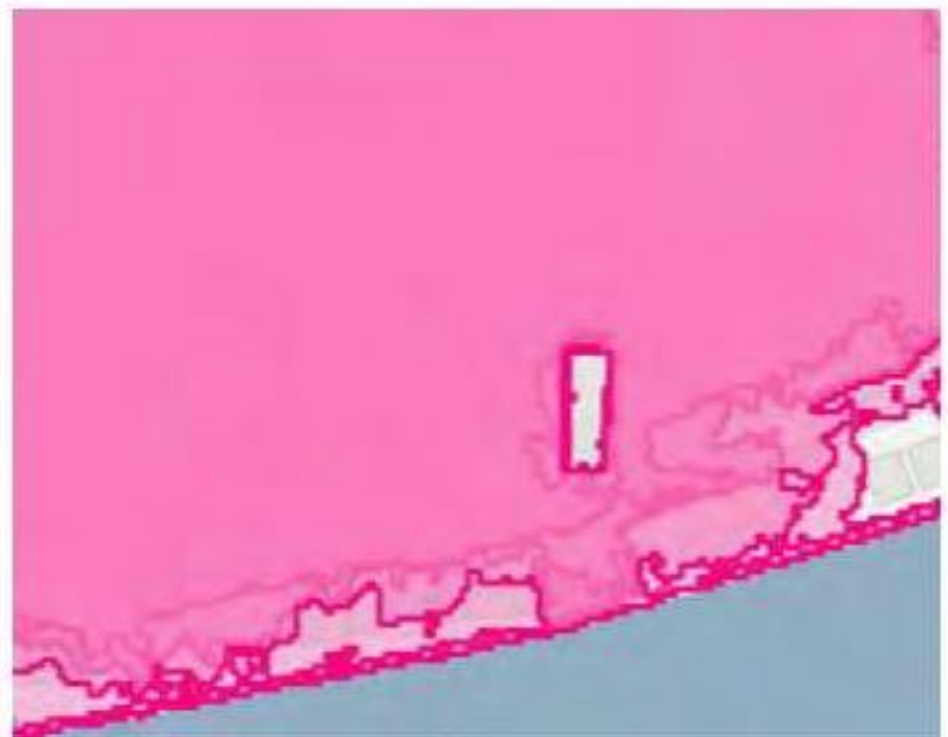
Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the south of the site.

Level of Flood Risk: The site currently lies within flood zone 2. However with climate change and associated sea level rise some of the site will be within flood zone 2 & 3 within the development lifetime (Estimated 2085). Also tidal flooding during a design event will make safe access and exit impossible. Ground levels on the access road into the site are around 3.7-4.0m AOD. This could result in a depth of flooding between 0.5 and 1 metre, which could increase if waves are particularly large

The present day 1:200 year extreme tidal flood level for Chichester Harbour is 3.4 mAOD, increasing to a predicted 4.5 mAOD by the year 2115 (design tide level), due to the effects of climate change. In addition, the present day 1:1000 year extreme tidal flood level for Chichester Harbour is 3.6 mAOD, increasing to a predicted 4.7 mAOD by the year 2115.

The impact of waves can be significant in this area. It is a high energy frontage with a dynamic shingle defence which is vulnerable to modification by certain wave events



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

No – climate change assumptions show a large portion of the site, and the access, in FZ 2 & 3 in the future.

If flood risk cannot be avoided, what is the preferred approach?

Off-site strategic measures: The North Solent Shoreline Management Plan (2010) identifies a policy of Hold the Line for the entire Hayling open coast. The Eastoke Sectoral Strategy identified the option of 'rock revetment with groynes, recharge and recycling' as the preference for delivering flood and erosion protection to a 1 in 200 year standard of protection, in line with this Hold the Line policy. The £5m scheme to implement this multi-faceted approach was completed in November 2013. The South Hayling Beach Management Plan identifies a strategy for delivering the beach management approach along the open coast over the five-year period to 2022).

Funding has also been secured for the period of 2022-2027, to undertake beach management activities to protect the area from a 1/200yr return period flood event (0.5% annual exceedance probability). It is acknowledged that funding has not yet been identified beyond this period, but the council considers it likely that off-site strategic management will continue, given the number of residential properties in the area that benefit from it. The programme this has continually been renewed for the last five period as it protects around 1,500 properties.

On-site measures: Discussions held with Havant Council Engineers confirmed that the site acts as a relief area for tidal flooding in the local area. Through careful management of the flood boards, the car park is utilised as a storage area and conveyance route for tidal flood water and overtopping, which is drained via the open concrete channel into the underground drainage ultimately discharging into the harbour in the east of Hayling Island.

In order to maintain the potential flood storage of the car park a similar volume of storage would need to be provided below any structures constructed on the site. This will need to consider the volume of storage and conveyance required not only now, but into the future, as overtopping volumes are likely to increase, so as not to increase the risk of flooding locally. Potentially this would mean having storage below the proposed car park. Similarly, the possibility of tide-locked conditions on the surface water outfalls(s) will also be considered in liaison with the relevant statutory authorities.

To avoid immediate danger, development at the Nab Car Park would be constructed on a raised podium with no habitable space at ground level, only parking and shared access points. Flood mitigation measures should also be considered such anti-flood valves; stop boards; raised electrical sockets and plant; as well as tying into the existing and any planned seafront flood defences. A flood response plan would also need to be prepared & accepted by the LPA taking advice from the Emergency Planner and Emergency Services which would need to look at conditions experienced in a design and extreme flood event.

Adjacent off site measures: A developer could undertake some raising of the access roads, if acceptable in planning terms, to tie into higher land to the west or north of the sites. This would reduce reliance upon continued funding and implementation of the beach management scheme and reduce the residual risk of flooding from breach or overtopping of the shingle beach. However, it is acknowledged that this is a built up area, so the acceptability of this solution will have to be carefully considered. The degree of raising that will be required would have to be informed by both design tide levels and potential overtopping impacts, and then assessed in terms of the visual and practical impact on the area.

It would be preferred that a combination of all the options are employed to ensure that the development is safe and does not increase flood risk elsewhere. It is likely that some residual risk will remain, so there will need to be a robust Flood Response Plan which will show how flood risk will be managed i.e. through evacuation or safe refuge.

Conclusion on prospect of safe development in light of flood risk

A combination of feasible measures should ensure that the site can be made safe. The site lies within a stretch of development along this area of coast. It is therefore considered that there is a reasonable prospect that strategic measures will continue to attract funding. On site measures are also likely to be deliverable. Site specific work will need to confirm this, fully assessing the risk and delivering appropriate mitigation measures.

Implications for Local Plan 2036

While the flood risk is acknowledged, and further detailed site level work is required to ascertain how the site can deliver safe development, the council considers that there are sustainability benefits in allocating the site, as it forms part of a wider regeneration strategy for Hayling Seafront. The policy will need to acknowledge the flood risk and set requirements for it to be addressed. It is equally acknowledged that less vulnerable uses could be considered, but these are unlikely to create sufficient value to make development viable and/or bring about wider improvements to the Seafront.

Basic Information



The Site: The site lies on the seafront in the South East of Hayling Island.

Site Area: 2.9ha

Allocation Proposal: retail, leisure and public conveniences ('less vulnerable'); residential ('more vulnerable'). The emerging proposals for the Eastoke are focused on improving the leisure offer for the island in the seaward side, south of the road. The existing green area on the northern corner of Rails Lane has been identified for potential residential development.

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The primary flood risk to the sites is from tidal sources with fluvial, groundwater and artificial sources of flooding generating a low risk at both sites. The pathway will be overtopping of the frontage to the south of the site.

Level of Flood Risk: Significant proportion of the site area is in FZ2, including the access road to the west, and the road running through the site. The road running norther is unaffected in the current day, but becomes vulnerable in the climate change scenario. The area of the undeveloped green on the corner of Rails Lane and the Seafront is in FZ1, and remains largely unaffected by the climate change scenario.

The present day 1:200-year extreme tidal flood level for Chichester Harbour is 3.4m AOD, increasing to a predicted 4.5m AOD by the year 2115 (design tide level), due to the effects of climate change. The present day 1:1000-year extreme tidal flood level for Chichester Harbour is 3.6m AOD, increasing to a predicted 4.7m AOD by the year 2115. Ground levels on the access road into the site are around 3.7-4.0m AOD.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

The residential element is proposed on that part of the site which is and remains in FZ1, avoiding the areas at risk. Nevertheless, the remainder of the site, which is proposed for leisure and retail uses, and the road running through the site is at risk of flooding (FZ2) both in the present day and the climate change scenario.

If flood risk cannot be avoided, what is the preferred approach?

Off-site strategic measures: The North Solent Shoreline Management Plan (2010) identifies a policy of Hold the Line (through evolution) for the entire Hayling open coast. The Eastoke Sectoral Strategy identified the option of 'rock revetment with groynes, recharge and recycling' as the preference for delivering flood and erosion protection to a 1 in 200 year standard of protection, in line with this Hold the Line policy. The £5m scheme to implement this multi-faceted approach was completed in November 2013. The South Hayling Beach Management Plan identifies a strategy for delivering the beach management approach along the open coast over the five-year period to 2022). Funding has also been secured for the period of 2022-2027, to undertake

beach management activities to protect the area from a 1/200yr return period flood event (0.5% annual exceedance probability). This funding also covers a feasibility study for Eastoke drainage improvement scheme. It is acknowledged that funding has not yet been identified beyond this period, but the council considers it likely that off-site strategic management will continue, given the number of residential properties in the area that benefit from it. The programme this has continually been renewed for the last five period as it protects around 1,500 properties.

On-site measures: On the northern green area finished floor levels for residential and commercial should be set above the design flood level of the lifetime of the development according to the higher vulnerability classification. Whilst the area is in FZ1 it could be a precautionary principle to incorporate flood mitigation measures such anti-flood valves; stop boards; raised electrical sockets and plant.

Safe access and egress for the site may not be possible during an extreme tidal flood event, therefore occupants may be reliant on the provision of safe internal refuge. Any residential development will need to demonstrate that safe internal refuge, above the 1:200 year design tide level of 4.5m AOD for Chichester Harbour in 2115, can be provided, and Flood Warning and Evacuation plan is likely to be needed.

A developer could implement land raising on the southern part of the site to reduce reliance upon continued funding and implementation of the beach management scheme, and reduce the residual risk of flooding from breach or overtopping of the shingle beach.

The access through the site to the Promenade has a flood board integrated into the wall/footway. During storm flood events seawater has been known to come over at this point and flow into the corner of the road at the junction with Bembridge Close. It enters Southern Water's system at this point and flows out into Fishery Creek when the tide has cleared. A solution for this, which could include raising the level of the path to create a hump will be considered in any design.

It would be preferred that a combination of all the options are employed to ensure that the development is safe and does not increase flood risk elsewhere. It is likely that some residual risk will remain, so there will need to be a robust Flood Response Plan which will show how flood risk will be managed.

Conclusion on prospect of safe development in light of flood risk

The seafront areas within FZ2 are being proposed for intensification of the less vulnerable leisure and retail uses that currently exist in order to enhance the attractiveness of the area for visitors. These are considered acceptable in FZ2. The more vulnerable residential uses are being proposed in FZ1. A combination of feasible measures should ensure that the site can be made safe. The site lies in a developed area of coast. It is therefore considered that there is a reasonable prospect that strategic measures will continue to attract funding. On site measures are also likely to be deliverable. Site specific work will need to confirm this, fully assessing the risk and delivering appropriate mitigation measures.

Implications for Local Plan 2036

While the flood risk is acknowledged, and further detailed site level work is required to ascertain how the site can deliver safe development, the council considers that there are sustainability benefits in allocating the site, as it forms part of a wider regeneration strategy for Hayling Seafront. The policy will need to acknowledge the flood risk and set requirements for it to be addressed. It is equally acknowledged that less vulnerable uses could be considered, or the residential element removed from the scheme, but this approach is unlikely to create sufficient value to make development viable and/or bring about wider improvements to the Seafront.

Basic Information



The Site: The site lies on the seafront in the South of Hayling Island, and is currently occupied by the funfair, leisure and retail uses.

Site Area: 2.47ha

Allocation Proposal: retail and leisure ('less vulnerable'); Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the south of the site.

Level of Flood Risk: The site currently lies within flood zone 1. However, with climate change and associated sea level rise some of the site will be within flood zone 2 & 3 within the development lifetime. Also, tidal flooding during a design event will make safe access and exit impossible. Ground levels on the access road into the site are around 3.7-4.0m AOD. This could result in a depth of flooding between 0.5 and 1 metre, which could increase if waves are particularly large.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

No – substantial parts of the site will be at risk of flooding in the future.

If flood risk cannot be avoided, what is the preferred approach?

Off-site strategic measures: The North Solent Shoreline Management Plan (2010) identifies a policy of Hold the Line for the entire Hayling open coast. The Eastoke Point Sectoral Strategy Study identifies Beach Management as the preferred option for delivering flood and erosion protection to a 1 in 200 year standard of protection, in line with this Hold the Line policy.

On-site measures: A raised defence could be constructed around the site however it would be easily outflanked if wave overtopping is significant and would be difficult to secure safe access and egress through this method.

A developer could implement land raising on site to reduce reliance upon continued funding and implementation of the beach management scheme, and reduce the residual risk of flooding from breach or overtopping of the shingle beach. Locating non-residential uses at ground floor would ensure that the sequential approach is taken across the site, and that residential dwellings would be located above the predicted future tide level and could provide a refuge should flooding occur. Key services should still continue to function during the design flood event. A flood response plan would also need to be prepared & accepted by the LPA taking advice from the Emergency

Hayling Seafront: Beachlands – Site Ref: HY17

Planner and Emergency Services which would need to look at conditions experienced in a design and extreme flood event.

Adjacent off site measures: A developer could undertake some raising of the access roads, if acceptable in planning terms, to tie into higher land to the north of the site. This would reduce reliance upon continued funding and implementation of the beach management scheme, and reduce the residual risk of flooding from breach or overtopping of the shingle beach.

It would be preferred that a combination of all the options are employed to ensure that the development is safe. If there is a risk (actual or residual) of flooding to the access and egress route remains after the implementation of a set of agreed measures, there will need to be a robust Flood Response Plan which will show how flood risk will be managed i.e. through evacuation or safe refuge. This must be acceptable to the LPA once consulted with the Emergency Planner and Emergency Services.

Conclusion on prospect of safe development in light of flood risk

A combination of feasible measures should ensure that the site can be made safe. Therefore HBC believe that the measures have a reasonable prospect of delivery. Site specific work will need to confirm this, fully assessing the risk and delivering appropriate mitigation measures.

Implications for Local Plan 2036

While the flood risk is acknowledged, and further detailed site level work is required to ascertain how the site can deliver safe development, the council considers that there are sustainability benefits in allocating the site, as it forms part of a wider regeneration strategy for Hayling Seafront. The policy will need to acknowledge the flood risk and set requirements for it to be addressed. It is equally acknowledged that less vulnerable uses could be considered, or the residential element removed from the scheme, but this approach is unlikely to create sufficient value to make development viable and/or bring about wider improvements to the Seafront.

Basic Information



The Site: The site lies on the seafront in the South West of Hayling Island, to the north of the Inn on the Beach.

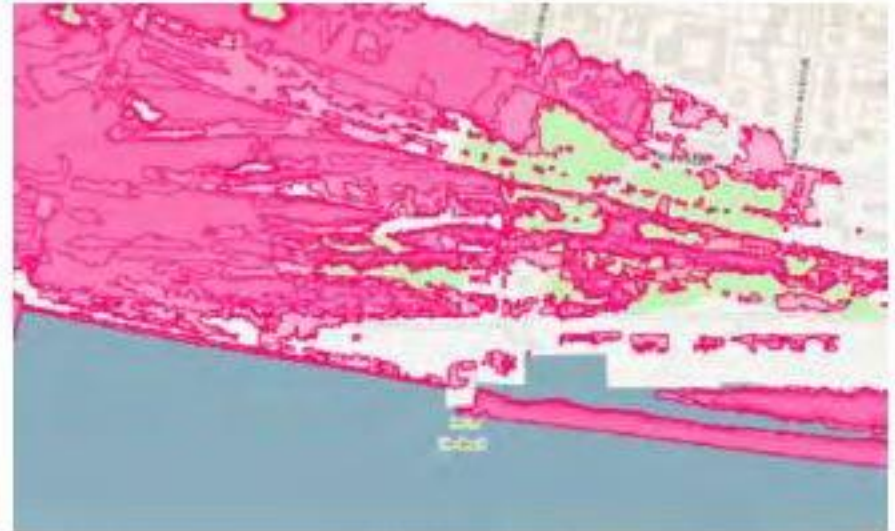
Site Area: 4.42ha

Allocation Proposal: Watersports centre, public toilets, changing facilities (less vulnerable), short term holiday accommodation (more vulnerable)

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the south of the site.

Level of Flood Risk: The site currently lies in FZ1, but with climate change, much of the site and the access road lie in FZs 2&3 in the future.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

No – in the future the site lies entirely within FZ2&3.

If flood risk cannot be avoided, what is the preferred approach?

It is considered that in this case, the risk to more vulnerable uses on the site can be dealt with by means of a flood warning and evacuation plan, since the proposal is for short term holiday lets, rather than any more permanent residential accommodation. This will allow their use to be prevented in the event of an impending flood.

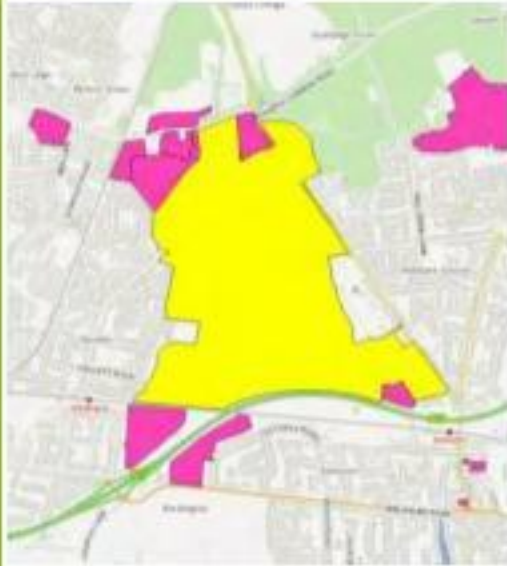
Conclusion on prospect of safe development in light of flood risk

It is considered likely, that an acceptable solution can be found for the more vulnerable uses proposed here, which relies on avoiding their use at times of a likely flood event, thereby avoiding danger to life.

Implications for Local Plan 2036

While the flood risk is acknowledged, and further detailed site level work is required to ascertain how the site can deliver safe development, the council considers that there are sustainability benefits in allocating the site, as it forms part of a wider regeneration strategy for Hayling Seafront. The policy will need to acknowledge the flood risk and set requirements for it to be addressed. It is equally acknowledged that less vulnerable uses could be considered, or the residential element removed from the scheme, but this approach is unlikely to create sufficient value to make development viable and/or bring about wider improvements to the Seafront.

Basic Information



The Site: It is predominately agricultural land, with some currently inaccessible parkland in the north-east. The site is surrounded by residential development to the east and west, and more limited developed areas along Barton Road to the north. A number of existing dwellings are on Eastleigh Road which runs north-south through the middle of the northern part of the site.

The A27 and the railway line run along the south of the site. Immediately adjacent to the site are a number of existing and proposed housing allocations.

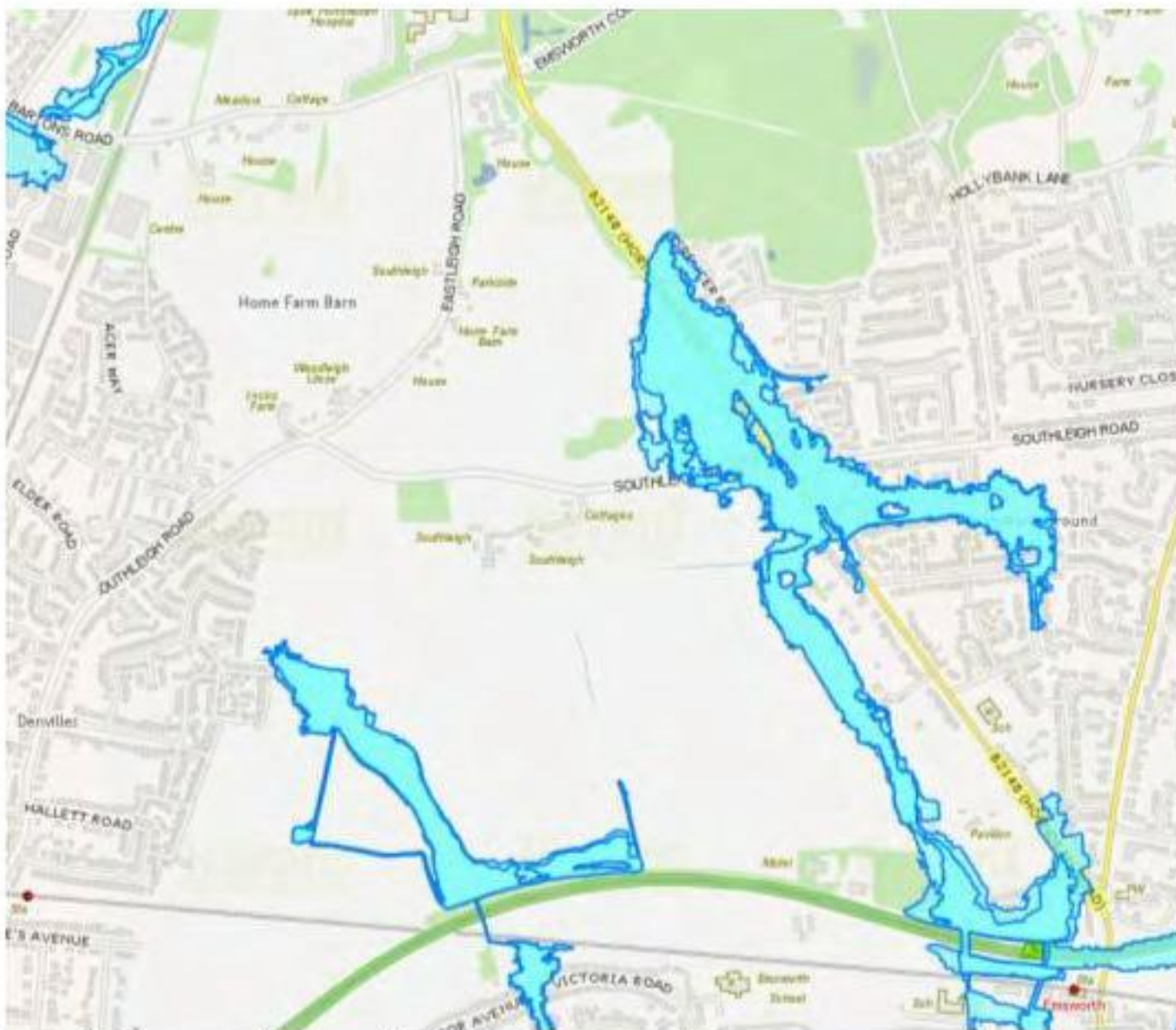
Site Area: 149ha

Allocation Proposal: Residential ('more vulnerable') and associated infrastructure (Local centre, school, community use)

Flood Risk Information

Source / Pathway: Fluvial (Nore Farm Stream and West Brook), and Surface Water

Level of Flood Risk: The vast majority of the site is in Flood Zone 1, and not at risk of flooding, with a small part in the south east of the site is in the FZ of the West Brook. There are also known surface water management issues in the Emsworth Area. A flood risk mitigation scheme for the Nore Farm Stream has been agreed by the EA, and land in the south of the site is safeguarded for that purpose. The extent of the flood easement for that scheme is shown on the EA Flood Risk map. SFRA Climate Change mapping does not show any additional risk.



Source: Environment Agency Flood Map

Sequential Approach - Can areas of flood risk be avoided?

Yes. This is a very large site with plans for substantial areas of open space. Flood Risk can be avoided within the site.

If flood risk cannot be avoided, what is the preferred approach?

While flood risk can be avoided, additional mitigation measure will be planned in during the masterplanning of the site, avoiding flood risk from the river and paying particular attention to drainage. The initial framework masterplan envisages drainage attenuation in the form of lakes and ponds in the south of the site. This will have to include sufficient capacity to mitigate the post development rate of flow, and must also avoid or compensate the loss of storage created under the agreed scheme shown above.

Conclusion on prospect of safe development in light of flood risk

Given the size of the site, and in comparative terms limited extent of the flood risk, there is a high degree of confidence that development can take place in the light of flood risk. HBC is confident that flood risk can be avoided and/or mitigated within the site.

Implications for Local Plan 2036

Policy to stipulate that areas at risk of flooding now and in the future must be avoided, including for flood risk management infrastructure, including surface water management. It is acknowledged that this will require some reworking of the draft Masterplan, which is expected in any case as the evidence base on a range of issues is refined. Further work will be required in relation to the required volumes and location of flood storage to be provided. This is a very large site with plans for substantial areas of open space, which gives sufficient flexibility in terms of site layout.

Basic Information



The Site: The land west of Coldharbour Farm is located directly north of the A27 and is sandwiched between the A27 Service Station to the west and Coldharbour Farm Road to the east. The Emsworth Recreation Ground is situated to the north-east. The site is directly adjacent to the Southleigh Strategic Site. Outline planning permission was granted in October 2014 (reference APP/14/00360) for residential development to provide 53 dwellings with new vehicular access from Coldharbour Farm Road. This has since expired and a revised layout is being explored.

Site Area: 1.66ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: Fluvial.

Level of Flood Risk: Eastern part of site part of site affected by fluvial FZ from West Brook. The Climate Change data from the PUSH SFRA does not show a change to this situation.



Current Day Zones 2 & 3 Source: EA Flood Map

Sequential Approach - Can areas of flood risk be avoided?

Sequential approach on site is possible. Site remains developable while avoiding areas at risk of flooding. However, flood storage compensation will be needed.

If flood risk cannot be avoided, what is the preferred approach?

Detailed site specific work has shown, and the EA have agreed, that the site can be developed safely, and that flood storage compensation is acceptable in principle. However, further work will be required in relation to the required volumes and location of compensatory storage to be provided. This additional work should be included within an up to date Flood Risk Assessment.

Conclusion on prospect of safe development in light of flood risk

Detailed site specific work has shown that the site can be developed safely, and that flood storage compensation possible.

Implications for Local Plan 2036

Policy will need to make clear that further work will be required in relation to the required volumes and location of compensatory storage to be provided.

Basic Information



The Site: The site is located in Northern Emsworth, to the west of Westwood Close. It extends from Westwood Close eastwards to the edge of the River Ems floodplain

Site Area: 1 ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: Fluvial: The River Ems flows immediately to the east of the site. The site boundary follows the outline of the current day flood zone.

Level of Flood Risk: The site boundary follows the outline of the current day flood zone, staying fully in FZ1. While the PUSH SFRA assumptions for climate change do not indicate an increase in the future, it is understood that this is unlikely to be accurate. Detailed modelling is needed to understand the extent accurately.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

Detailed flood risk work by the site promoter (under APP/18/00672) has demonstrated that areas at risk of flooding can be avoided, by pulling the site boundary back and reducing the number of homes.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

Detailed flood risk work by the site promoter has demonstrated that safe development is possible.

Implications for Local Plan 2036

If an allocation were to be made, the site area and housing yield would need to be reduced. The policy would need to highlight the flood risk from the River Ems, and also make clear that any land raising in the flood zones would be subject to flood storage compensation requirements. However, the Council is also conscious of the wider flood risk issues in Emsworth. The Environment Agency have confirmed that they are in the process of undertaking flood modelling for the River Ems Climate Change scenario, as part of a desire to deliver a River Ems Flood Alleviation Scheme. At this stage it cannot be ruled out that land in this location would be needed for this scheme. Looking beyond the deliverability of this site for development, it is considered that there are overriding reasons not to allocate the land for development, but instead to safeguard it for a River Ems Flood Alleviation Scheme. If further detailed work to bring forward this scheme shows that the land is not needed, it may be possible to release it for development through a future review of the Local Plan.

Basic Information



The Site: The site is a cleared area of land following the dismantling of a gasholder. It lies on Palmers Road, behind the commercial units fronting onto North Street in Emsworth. The River Ems runs to the east of the site.

Site Area: 0.47 ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: Fluvial: The River Ems flows immediately to the east of the site.

Level of Flood Risk: A small area in the eastern part of the site lies in the flood zone. While the PUSH SFRA assumptions for climate change indicate only a small increase in the future, in the middle of the site. It is understood that this is unlikely to be accurate. The EA are in the process of undertaking detailed modelling. It is expected that this will show an increase in flood risk in the climate change scenario.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

The present day flood zones could be avoided, but the climate change scenario is likely to be more extensive. The site is small, so it is unlikely that areas at flood risk can be entirely avoided.

If flood risk cannot be avoided, what is the preferred approach?

The likely built form in this location is flats, giving confidence that all living accommodation could be provided above the flood level.

Conclusion on prospect of safe development in light of flood risk

The flood risk is acknowledged. It is not possible at this time to fully assess the risk, as information on the climate change flood risk (EA study) is yet to be completed. It should be noted, however, that based on the information currently available only a small part of the site is affected by the climate change scenario. In addition, the likely built form means that future residents are likely to be accommodated above flood level.

Implications for Local Plan 2036

While the flood risk is acknowledged, and it has not been possible to be conclusive about the extent of the future risk taking into account climate change, the council considers that there are sustainability benefits in allocating the site. This is a brownfield site, with likely contamination issues due to its previous use as a gas holder. Therefore, there are safety benefits in seeking redevelopment of the site, which could address both the flood risk and the contamination. The policy will need to acknowledge the flood risk and set requirements for it to be addressed. It is equally acknowledged that less vulnerable uses could be considered, but these are unlikely to create sufficient value to make development viable.

Fowley Cottage – Site Ref: EM3

Basic Information



The Site: The site lies in southern Emsworth. It extends from Warblington Road south to the shore of Chichester Harbour. It comprises a single large house in extensive grounds.

Site Area: 0.96 ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the south of the development.

Level of Flood Risk: Currently, a small part at the southern end of the site is affected by Flood Zones 2 and 3. The area at risk of flooding increases notably with climate change.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

The site area is approximately 1ha, with about half remaining unaffected by the extent of the 2115 tidal flood zone, which takes climate change into consideration. Access to the site is to the north and is not at risk of flooding. The draft allocation assumed 7 dwellings for this site. Even with only half a hectare available, this would still result in a low density scheme of 14dph, demonstrating that the development should easily be accommodated outside of the areas at risk of flooding.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

The proposed allocation for 7 dwellings can be accommodated outside of the areas at risk of flooding.

Implications for Local Plan 2036

Any allocation would need to include policy wording recognising the flood risk on the site and a development requirement to avoid areas at risk of flooding including climate change.

Basic Information



The Site: The site lies to the south of Havant Road, west of the A3(M) at Bedhampton.

Site Area: 23.1ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the south of the development.

Level of Flood Risk: Currently, most of the site lies in Flood Zone 1, with the southern part of the site affected by Flood Zones 2 and 3. The area at risk of flooding increases notably with climate change.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

The site area is approximately 23ha, with about one third remaining unaffected by the extent of the 2115 tidal flood zone, which takes climate change into consideration. Access to the site is to the north and is not at risk of flooding. The draft allocation assumed 300 dwelling for the site. A planning application has been made for 322 dwellings and a care home. With this quantum of development it is not possible to avoid the areas at risk of flooding.

If flood risk cannot be avoided, what is the preferred approach?

An application has been made under reference APP/18/00450 for 322 dwellings and a care home. The application is accompanied by a Flood Risk Assessment. This has assessed the extent of the area at risk over the lifetime of the development. The potential tidal flood levels over the development lifetime (100 years for residential development) are estimated at 4.4mAOD. A topographic survey has shown existing ground levels to be below 4.4mAOD. The applicant therefore proposes to raise existing ground levels to a minimum of 4.4mAOD and will set finished floor levels at 4.7mAOD.

Conclusion on prospect of safe development in light of flood risk

Through the flood mitigation proposals the applicant has demonstrated that the development and future occupants can be kept safe up to and including the extreme flood event.

Implications for Local Plan 2036

Any allocation would need to include policy wording recognising the flood risk on the site and a development requirement to fully mitigate the risk from flooding.

Basic Information



The Site: The site is located to the south of the Abrams Place development, which lies off Ranelagh Road. Immediately to the east of the site lies the Marples Way industrial area. The current use is fields and paddocks.

Site Area: 7.9ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: Tidal and Fluvial: The site is bordered to the north and west by the Hermitage Stream which is designated as a Main River by the Environment Agency. Ordnance Survey mapping indicates that the Hermitage Stream is tidally influenced along much of its length adjacent to the site, and the EA have confirmed that the risk to the site is largely tidal. A branch of the Hermitage Stream runs as a 1500mm culvert under the site.

Level of Flood Risk: Only a small part of the site is affected by flood risk in the current day. However, climate change assumptions show a large portion of the site being in FZ 2 & 3 in the future. The EA indicate that this is likely to be an overestimate of the risk on this site, but hydraulic modelling would be required to accurately assess the flood risk. The EA have confirmed that the site benefits from fluvial defences along the Hermitage Stream for the 1 in 100 years which area in good condition. Furthermore, the culverting of the branch of the Hermitage Stream at the site provides additional fluvial defence for the 1 in 5 scenario.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

It is possible, based on the present day flood zones to avoid the areas at risk. This would involve limiting the development yield and locating community infrastructure such as open space on the vulnerable areas. However, when taking available flood risk information on Climate Change into account, this is not possible, as the majority of the site is affected. Although the EA and the site promoter agree that the Climate Change information on the PUSH SFRA is likely to be an overestimate of the extent of the future flood zones, no alternative information is available.

If flood risk cannot be avoided, what is the preferred approach?

No alternative approach has been explored.

Conclusion on prospect of safe development in light of flood risk

It is not possible at this point to conclude that there is a reasonable prospect of safe development. It has been suggested that hydraulic modelling is needed to establish the extent of the future flood zones. Such further work may be able to conclude that safe delivery is possible, but this is not possible with the information currently available.

Implications for Local Plan 2036

It is not possible at this point to conclude that there is a reasonable prospect of safe development. The information available at present does indicate that the site could be made safe, and therefore does not support an allocation. As a greenfield site, it is not considered that sustainability benefits to the community exist that outweigh the flood risk.

Basic Information



The Site: The site is located to the south of the railway line and to the north of Hermitage Stream. Residential development lies to the north of the site. It is currently used for open storage in association with Portsmouth Water's operation.

Site Area: 1.28ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: Fluvial.

Level of Flood Risk: The Northern part of the site lies in FZ1 now and in the future. The southern part is in FZ2&3 when climate change is taken into account. While there is some indication that this is an overestimate, there is no alternative information available.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

It is possible to avoid the area at risk of flooding in future by restricting development to the parcel of land north of Palk Road.

If flood risk cannot be avoided, what is the preferred approach?

No alternative approach has been explored.

Conclusion on prospect of safe development in light of flood risk

Safe delivery is possible by avoiding flood risk. It is acknowledged that further detailed flood risk work may show that the area at risk of flooding in the future is much smaller than currently thought and therefore, it may be possible to avoid flood risk even with a larger development area. The site is a brownfield land sustainably located in the urban area, and therefore could provide sustainability benefits by being developed for housing.

Implications for Local Plan 2036

Given uncertainties about flood risk on the southern part of the site, any allocation for development should be restricted to the northern parcel. This could be achieved either through an allocation of just the parcel north of Palk Road, or a wider allocation with caveats and requirements regarding flood risk on the southern part. This will need to be balanced with broader considerations around the resulting built form through the SA process. In any case, site yield should be based on capacity of northern part only.

Basic Information



The Site: The site lies to the north of Selsmore Road in the South East part of Hayling Island. It is currently used as paddocks. It is bounded by residential development to the south and west, with residential curtilage and trees to the north and east.

Site Area: 1.35ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the east of the development.

Level of Flood Risk: Currently, a very small part in the south eastern corner of the site is affected by Flood Zones 2 and 3. The area at risk of flooding increases notably with climate change, covering the likely access point off Selsmore Road and a large part of the site.

The subject site is approximately 2.700 AOD at its lowest point. The access points to the site are at a higher risk of flooding than the site itself. Selsmore Road in the present day has a potential flood depth of up to 300mm along the majority of the road in a low risk scenario. Velocity of flooding could potentially reach over 0.25m/s. Predicted flood levels indicate that more of Selsmore Road will eventually lie within FZ3.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

Flood Risk on site could be avoided. This would require a much reduced area / housing yield, of around 10 dwellings. Flood risk on the access cannot be avoided.

If flood risk cannot be avoided, what is the preferred approach?

The site promoter suggest that it would be reasonable and appropriate to the design of any proposed residential units to set the finished floor level at least 375mm above ground level. In the unlikely event of an incursion, the floor level would therefore remain above the maximum projected surface water level. This takes in to account the PUSH SFRA Climate Change information where the subject site could potentially be in flood zone 2 by 2115. Additional low level protection measures are also suggested:

- Seal service entry connections
- All service outlets within the building to be a minimum of 450mm above floor level.
- External doors to have slotted jamb provisions for flood boards.
- All drain and service access covers at ground level to have locking covers and frames.

Conclusion on prospect of safe development in light of flood risk

Land at Selsmore Road – Site Ref: HY46

While a much reduced development could be brought forward on land not at risk of flooding, it has not been demonstrated that safe access could be delivered.

Implications for Local Plan 2036

While risk on the site could be avoided by reducing substantially the developable area and therefore the number of homes, it has not been demonstrated that safe access is achievable. Together, these call into question the desirability of an allocation on this greenfield site.

Basic Information



The Site: The site lies at the north end of Hayling Island, off Northney Road to the rear of the Langstone Hotel, immediately adjacent to Chichester Harbour.

Site Area: 5.13 ha

Allocation Proposal: Residential ('more vulnerable'), Commercial ('less vulnerable') and Marina ('water compatible')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the north of the site.

Level of Flood Risk: The majority of the site falls within Flood Zone 1 at the present day, according to the Environment Agency Flood Map for Planning. It is therefore estimated to have a low probability of flooding from the sea. However, due to the susceptibility of the site to sea level rise, a progressively greater proportion of the site is at a high probability of flooding over the next 100 years. 100 years is the assumed lifetime of residential development. According to the Partnership for Urban South Hampshire Strategic Flood Risk Assessment, an area in the centre of the site is expected to be at high probability of flooding from the sea. The duration and frequency of flooding will increase with time as sea levels rise, and could be very frequent towards the end of the development lifetime.

LiDAR data suggests that minimum site levels are in the region of 3.3m AOD. The design tidal event for assessing risk to residential development in this area is the 0.5% probability extreme tidal event in 2115, during which the tide level is predicted to reach 4.5m AOD. Maximum flood depths in the area at risk could therefore reach 1.2m AOD, without an allowance for wave heights. This poses a hazard to people on a scale classified as 'danger for most' using the DEFRA/Environment Agency report FD2320/TR2 "Flood Risk Assessment Guidance for New Development".

The site is accessed via Northney Road, which falls within Flood Zone 3 at the present day, according to the Environment Agency Flood Map for Planning. It is therefore estimated to have a high probability of flooding from the sea. Northney Road experiences inundation during very high tides. The risk of flooding will increase if left unmitigated. Road levels vary, however minimum levels between Langstone Bridge and Northney Marina are in the region of 2.5m AOD. Maximum flood depths could therefore reach around 2 metres during the design event, without an allowance for wave heights. This poses a hazard to people on a scale classified as 'danger for most' (including the emergency services). The North Solent Shoreline Management Plan policy for this area of coastline is 'Hold the Line' however there are no schemes being developed currently to implement this policy and, due to the limited economic benefits in comparison to other schemes nationally, it is unlikely that central government funding will be available to meet the cost of any risk management work.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

It would be possible to avoid development in the present day Flood Zones 2 and 3. At present all land proposed for residential development and commercial purposes is in Flood Zone 1. The proposed residential area will remain in Flood Zone 1 throughout its design life of 100 years. With only around half of the site remaining in FZ1 in the Climate Change Scenario, it is not possible to avoid FZ2 and 3 for the commercial elements also. There is no alternative means of access to the site which avoids areas at risk of flooding.

If flood risk cannot be avoided, what is the preferred approach?

Parts of the proposed commercial zone are at risk of flooding when the impact of climate change is considered. However, this will be mitigated by raising the area by an average of approximately 400mm. This will ensure the area remains in Flood Zone 1 throughout its design life. Since the flood risk is tidal, there will be no adverse impact caused by raising ground levels.

Conclusion on prospect of safe development in light of flood risk

By siting proposed residential development on the highest ground within the site, and raising the level of the commercial area, the development can be made safe. Flooding on the access is considered to be predictable with several days advance notice, so can be managed by means of a robust flood risk management plan.

Implications for Local Plan 2036

The Borough Council accepts that flood risk avoidance and mitigation is possible on site. Combined with the likely lengthy advance warning of any flood, this is acceptable, provided that a robust flood risk management plan is prepared. Any site allocation policy would have to require that this is prepared as part of application.

Land at Riders Lane – Site Ref LP2

Basic Information



The Site: The former Riders Lane allotment site comprises a large area of open space to the north-east of the Hermitage Stream in Leigh Park.

Site Area: 1.94ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be fluvial flooding from the Hermitage stream.

Level of Flood Risk: The site lies very close to the fluvial floodzone for the Hermitage Stream. The extent increases into the western part of the site with climate change.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

Although it is noted that the climate change information in the PUSH SFRA is out of date and is likely to overestimate the extent of the climate change outline, a precautionary approach has been taken. On that basis, an assessment has been made as to the whether the draft allocation can be accommodated outside of the area at risk of flooding. The area of the site that remains unaffected by the extent of the 2115 climate change tidal flood zone is approximately 1.9ha in size. The draft allocation assumes about 65 dwellings for this site. Using only the part of the site not at risk of flooding, this would result in a development of approximately 34dph. This would be relatively low density, showing that even if additional space is required for infrastructure, the suggested number is deliverable in principle. Access to the site is to the east, away from the area at risk of flooding.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Land at Riders Lane – Site Ref LP2

Conclusion on prospect of safe development in light of flood risk

The proposed allocation for 65 dwellings can be accommodated outside of the areas at risk of flooding.

Implications for Local Plan 2036

The draft policy already suggests that the open space required to support the development should be the western part of the site. Strengthen policy wording to recognise flood risk on the site and include a requirement to avoid areas at risk of flooding including climate change. In addition, clarify that any flood storage and attenuation needs to be located outside of the areas at risk of flooding.

Basic Information



The Site: The site is located north of Solent Road, east of Brockhampton Road and directly south of the current headquarters of Portsmouth Water.

Site Area: 1.68 ha

Allocation Proposal: Commercial ('less vulnerable')

Flood Risk Information

Source / Pathway: Fluvial from Brockhampton Stream

Level of Flood Risk: A large part of the site is in FZ2 and 3, both in the present day and with climate change. As the vast majority of the site is shown to be in the area at risk of flooding, it cannot be avoided within the site.

The site benefits from defences along the Brockhampton Stream for the 1 in 40 year scenario. The defences consist of high ground and a wall and most of them are in good condition based on the last inspection undertaken in 2018; The 1D model results for the 1 in 100 year event (Flood Zone 2) indicate that the levels on the Brockhampton Stream range from 5.90 m AOD1 at the eastern (upstream) end of the watercourse site to 5.15 m AOD at the western (downstream) end of the watercourse. The 1D model results for the 1 in 1000 year event (Flood Zone 1) indicate that the levels on the Brockhampton Stream range from 5.93 m AOD in the eastern (upstream) end to 5.41 m AOD in the western (downstream) end of the watercourse.

Access / egress to the site is via Solent Road. However, the Environment Agency's flood risk mapping indicates that Solent Road to the south of the site is in Flood Zone 3 and therefore at high risk of flooding. It is recommended that site-specific hydraulic modelling should be undertaken to refine the flood zone extents at the site and consequently determine if any mitigation measures are required to facilitate safe access / egress.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

No – the vast majority of the site is in FZ2 and 3, both in the present day and with climate change. The access is also on FZ3.

If flood risk cannot be avoided, what is the preferred approach?

It may be possible to modify the shape of a fluvial floodplain to generate a more favourable flood outline that allows the development area of a site to be maximised. If that is to be pursued, it would be necessary to demonstrate that compensatory storage can be provided on a level for level basis for any floodplain displaced by a development. If it is proposed to develop areas in fluvial Flood Zone 3, compensatory

Land North of Solent Road – Site Ref: HB36

storage would be required. The feasibility of providing compensation at the site depends on ground conditions and groundwater levels below the site. It would also be necessary to demonstrate through hydraulic modelling that the proposed compensatory storage is effective at mitigating the loss of floodplain and effective at maintaining the current level of flood risk to neighbouring property.

Conclusion on prospect of safe development in light of flood risk

The EA have indicated that the key issue on this site is the offsite implications of flooding from development of the site i.e. floodplain compensation. Previous work has given confidence that an employment use can be safely delivered. On that basis, there is a prospect of safe delivery, although a detailed assessment of this would be required at application stage, in particular in relation to flood storage compensation, so any allocation policy would need to be heavily caveated with assessment requirements

Implications for Local Plan 2036

It is acknowledged that the site was allocated in the previous Local Plan for a new Portsmouth Water HQ. The sequential test at that time was passed on the basis that the HQ had to be in this location for operational reasons, being close to a water source. The company has since decided to locate their HQ elsewhere and is promoting this site for general B1 or B8 (trade counter) use. The council considers that there are other sequentially preferable sites in the Borough for general employment use, and the exception made for the HQ use therefore falls away. Therefore, although it had been accepted in the past that there may be a prospect of safe delivery, this question does not arise, as the sequential test is not passed. An allocation for general employment use is not supported.

Former BAE Systems Park – Site Ref: BD54

Basic Information



The Site: The site is located within the Brambles Business Park to the south of Elettra Avenue in Waterloooville.

Site Area: 5.7ha

Allocation Proposal: Commercial / Leisure ('less vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be fluvial flooding.

Level of Flood Risk: Currently, a small part in the south western corner of the site is affected by Flood Zones 2 and 3. The PUSH SFRA does not show any additional flood risk in the future.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

Yes, the small area in the south western part of the site could be avoided.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

Avoid area at risk of flooding; note flood risk in policy and stipulate that area must be avoided.

Implications for Local Plan 2036

Allocation acceptable.

Southmere Field – Site Ref: HB15

Basic Information



The Site: The site lies to the west of the A3023 (Langstone Road) in Langstone, south of Langstone Technology Park.

Site Area: 3.7ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be tidal flooding. The pathway will be overtopping of the frontage to the south of the development. The Lavant stream runs along the east side of the site.

Level of Flood Risk: Present day flood mapping shows only the areas immediately adjacent to the Lavant stream to the west of the site being at risk of flooding. However, with climate change a much larger portion of the site is affected by FZ2 and 3, from the coast to the south.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

With climate change, only around 0.5 ha in the north west of the site remain in FZ1. Flood risk could be avoided by developing a reduced area.

If flood risk cannot be avoided, what is the preferred approach?

No alternative approaches have been explored

Conclusion on prospect of safe development in light of flood risk

It has not been demonstrated that development could be delivered safely across the whole site. Future flood risk would significantly limit the developable area.

Implications for Local Plan 2036

Given flood risk on the southern and eastern part of the site, the site should not be allocated, or restricted to the flood risk free area only. This would need to be considered in the round with broader considerations around the resulting built form. In any case, site yield should be based on the capacity of the flood risk free part only.

Brockhampton West – Site Ref BD11

Basic Information



The Site: The site lies to the south of the A27 in the Brockhampton area, to the west of the teardrop junction.

Site Area: 9.29ha

Allocation Proposal: Commercial / Leisure ('less vulnerable')

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be fluvial flooding from the watercourse to the east of the site (Brooklands stream)

Level of Flood Risk: Present day flood mapping shows only the areas immediately adjacent to the Brooklands stream to the east of the site being at risk of flooding. This area increases to a small degree with climate change, but still leaves the vast majority of the sites free from flood risk.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

Yes – the vast majority of the site is free from flood risk.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

There is a good prospect of safe delivery. The vast majority of the site is free from flood risk.

Implications for Local Plan 2036

Allocation acceptable in flood risk terms. Policy would have to stipulate that small areas at risk of flooding now and in the future must be avoided.

Land South of Purbrook Heath Road – Site Ref: WV10

Basic Information

The Site: The site is an L-shaped parcel of land adjacent to Purbrook Heath Road to the north of the site, and London Road (A3) to the west of the site.

Site Area: 3.76 ha

Allocation Proposal: Residential 'more vulnerable'

Flood Risk Information

Source / Pathway: The dominant source of flooding to this site will be fluvial flooding from the watercourse immediately to the north of the site, and another running through the site.

Level of Flood Risk: The site is split into a northern parcel and southern parcel running along Purbrook Heath Road and London Road respectively. The northern parcel is sandwiched between two identified Environment Agency (EA) main rivers. The majority of the northern parcel lies in Flood Zones 2 and 3. The southern parcel is in Flood Zone 1. No Climate Change Data available.



Current Day Zones 2 & 3 Source: EA Flood Map

Sequential Approach - Can areas of flood risk be avoided?

Flood risk could be avoided if only the southern part along London Road was allocated.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

Flood risk could be avoided if only the southern part along London Road was allocated.

Implications for Local Plan 2036

Allocation acceptable in flood risk terms, although the area would need to be reduced and/or policy would have to stipulate that areas at risk of flooding now and in the future must be avoided.

Basic Information



The Site: The site lies on the edge the current built up area of Denvilles, to the south east of the Manor Farm Close estate. The railway line runs along the southern edge of the site. The land was identified at Reg18 as part of the wider Southleigh Strategic Site, but has been submitted for considerations as a separate site.

Site Area: 10.26 ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: Fluvial – Nore Farm Stream and linked drainage ditches.

Level of Flood Risk: A small part of the site is affected by flood risk on the current EA Flood Map. SFRA Climate Change mapping does not show any additional risk.



Current Day Zones 2 & 3 Source: EA Flood Map

Sequential Approach - Can areas of flood risk be avoided?

In the present day, areas at risk of flooding can be avoided. However, the extent of the flood zones with climate change allowance is uncertain. Therefore, further evidence would be needed to answer this question. Given the size of the site, however, it is considered likely that some development is possible outside the areas at risk now and in the future.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

Given the size of the site it is considered likely that development is possible outside the areas at risk now and in the future. It would be possible to avoid areas at risk of flooding.

Implications for Local Plan 2036

Safe development is likely. Any allocation would need to include policy wording recognising the flood risk on the site and a development requirement to avoid areas at risk of flooding including climate change.

Land rear of 15-27 Horndean Road – Site Ref EM8B

Basic Information

The Site: The site lies behind the existing properties at 17-25 Horndean Road in Emsworth. To the north a new housing schemes (Land to the West of Horndean Road) is being built out. To the south lies Emsworth Recreation Ground. The land was identified at Reg18 as part of the wider Southleigh Strategic Site, but has been submitted for considerations as a separate site.

Site Area: 0.93 ha

Allocation Proposal: Residential ('more vulnerable')

Flood Risk Information

Source / Pathway: Fluvial from West Brook

Level of Flood Risk:

The majority of the site lies in Flood Zone 1, but the south west corner of the site is at lower elevation and lies in FZ2/3 of the West Brook.

SFRA Climate Change mapping does not show any additional risk.

Current Day Zones 2 & 3 Source: EA Flood Map



Sequential Approach - Can areas of flood risk be avoided?

In the present day, areas at risk of flooding can be avoided. However, the extent of the flood zones with climate change allowance is uncertain. Therefore, further evidence would be needed to answer this question. Given the size of the site, however, it is considered likely that some development is possible outside the areas at risk now and in the future.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

Given the size of the site, it is considered likely that development is possible outside the areas at risk now and in the future.

Implications for Local Plan 2036

Safe development outside the areas at risk of flooding is likely. Any allocation would need to include policy wording recognising the flood risk on the site and a development requirement to avoid areas at risk of flooding including climate change.

Basic Information



The Site: The site lies on the north side of the eastern end of Harts Farm Way, one of the Borough's established employment areas.

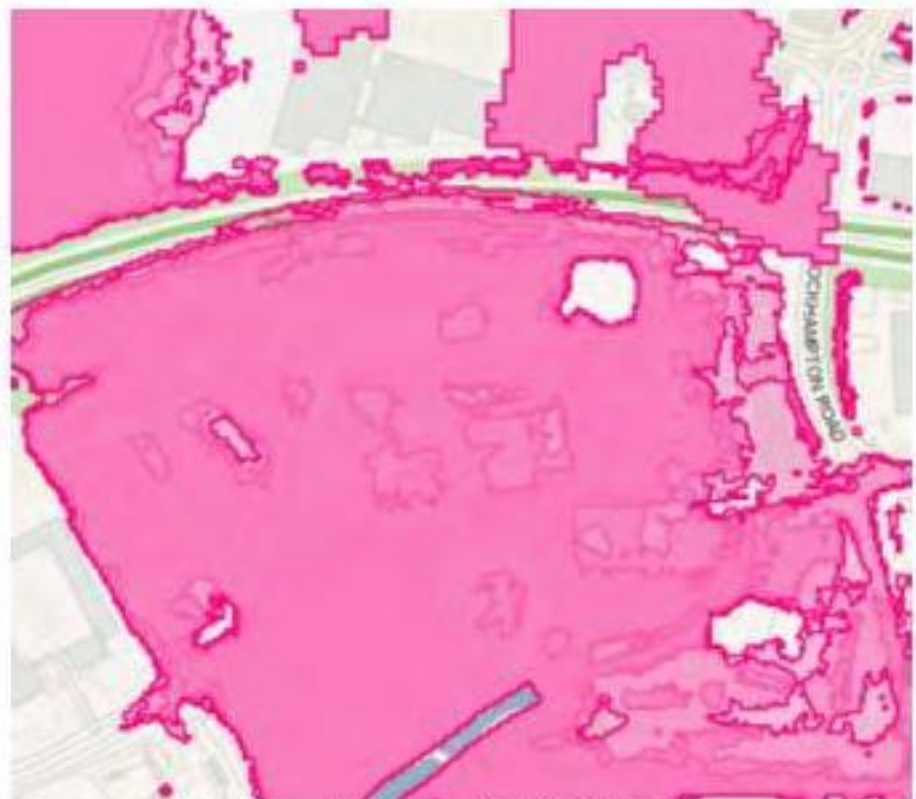
Site Area: 0.96ha

Allocation Proposal: Commercial ('less vulnerable')

Flood Risk Information

Source / Pathway: Fluvial (Lavant Stream); may be tidally influenced

Level of Flood Risk: Site currently in FZ1, but eastern boundary affected by climate change.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

With current day flood risk

If flood risk cannot be avoided, what is the preferred approach?

No detailed information is available to determine whether other solutions could overcome the issue and make the site safe.

Conclusion on prospect of safe development in light of flood risk

It is not possible to avoid flood risk on site, once climate change scenario has been taken into account. No detailed information is available to determine whether other solutions could overcome the issue and make the site safe.

Implications for Local Plan 2036

Currently available information does not support an allocation.

Interbridges West

Basic Information

The Site: The is bounded entirely by the A27 which curves gently around the norther boundary of the site, and the Havant to Brighton and London Victoria Railway line, which runs in a straight line along the southern boundary. Most of the site is greenfield, while a small part occupied by a petrol filling station.

Site Area: 6.88ha

Allocation Proposal: Commercial ('less vulnerable')

Flood Risk Information

Source / Pathway: Fluvial from West Brook

Level of Flood Risk: A small area in the far east of the site is affected by flood risk now and in the future. The vast majority of the site lies in FZ1.



Current Day Zones 2 & 3 vs Climate Change 2115. Source: EA Flood Map and PUSH SFRA

Sequential Approach - Can areas of flood risk be avoided?

Yes – the vast majority of the site is free from flood risk.

If flood risk cannot be avoided, what is the preferred approach?

n/a

Conclusion on prospect of safe development in light of flood risk

There is a good prospect of safe delivery. The vast majority of the site is free from flood risk.

Implications for Local Plan 2036

Allocation acceptable in flood risk terms. Policy would have to stipulate that small areas at risk of flooding now and in the future must be avoided.

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Wiltshire SP1 2BP
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Fax: 01722 332296
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