

Brighton & Hove City Council
Strategic Flood Risk Assessment

**PPS25 Sequential and Exception Tests
for the Brighton & Hove Core Strategy**

October 2009 update



**Brighton & Hove
City Council**

Brighton & Hove City Council Strategic Flood Risk Assessment:

PPS25 Sequential and Exception Tests for the Brighton & Hove Core Strategy

Introduction

The emerging Core Strategy for the Brighton & Hove Local Development Framework is required to identify broad areas for development.

This paper sets out the sequential tests relating to the seven broad areas (or 'Development Areas') identified in the Core Strategy, following the steps outlined in PPS25.

- The first part of this paper gives information about the broad locations referred to in the Core Strategy;
- Part 2 sets out the Sequential test for each broad location;
- Part 3 sets out the Exception test for particular uses in the development areas that fall into Flood Zone 3.

Separate sequential tests will be prepared for land uses identified through the site allocations DPD, and for any masterplans that are prepared as part of the Local Development Framework.

This note was originally prepared in May 2008. It has been updated October 2009 to take into account:

- Publication of the revised PPS25 Practice Guide, June 2008;
- Publication of the South East Plan; and
- Amendments to the proposals and indicative amounts of development proposed at the Development Areas in the Submission Core Strategy and any associated implications for the contribution of those areas to delivering sustainable development.

The amendments to the Core Strategy in the Submission version do not alter the City Council's view that residential development in the urban fringe is a less sustainable option than identified Development areas, and hence should only be considered on a 'contingency' basis in the post 2020 plan period.

When the South East Plan was published in May 2009 it included a designation of Shoreham Harbour as a 'strategic development area' with an associated allocation of 10,000 dwellings pending further detailed studies. This means that the scale for Sequential Testing of development at Shoreham Harbour needs to reflect the spatial strategy for the South East region because the allocation is specifically for that area and not for the City as a whole. However in the absence of a Sequential Test in the evidence base for the South East Plan then the City Council with its partners on the Shoreham regeneration project has been working to prepare a separate Sequential Test, and if appropriate Exception Test, to consider the proposed strategic development area as a whole, going beyond the City's administrative boundaries to also cover the parts in Adur District.

The revisions to the PPS25 Practice Guide includes clarification about application of the Sequential Test in areas requiring regeneration. That additional guidance supports the approach taken by the City Council in addressing the regeneration needs at Brighton Marina (DA2) in the Core Strategy and in the previous draft of the Sequential Test. See paragraphs 4.33 to 4.36 of the Practice Guide.

Part I – Context and background

There are no rivers within Brighton & Hove so fluvial flood risk is not a problem, although the aquifer in the chalk downland means that emergent groundwater presents a significant risk of flooding to some areas.

The City shares approximately 14km of its boundary with the sea so there is also a risk of coastal flooding along some sections of the seafront.

In addition to these sources of flood risk, surface water run off from existing and new development can contribute to flood risk.

The following table sets out the seven Development Areas identified in the Core Strategy, existing land uses of each, proposed uses, the Flood Risk Vulnerability Classification for the proposed uses (according to PPS25), and where applicable existing flood defences that provide protection for the site from flooding.

See the key diagram in the Core Strategy for a map of the Development Areas.

Table I – analysis of proposed Development Areas identified in the Core Strategy

Notes:

- Flood Risk Zones are identified in the Brighton & Hove Strategic Flood Risk Assessment, which is informed by Environment Agency Flood Maps

Policy no.	Development Area	Flood risk zone(s)	Existing flood defences	Existing uses	Proposed uses	Flood vulnerability classification (according to PPS25 table D2)
DA1	Brighton Centre and Churchill Square area	FZ1	n/a	Retail Leisure Hotels Offices Church Residential	20,000sqm retail Hotel 25,000sqm leisure	Less vulnerable More vulnerable Less vulnerable
DA2	Brighton Marina, Gas Works, and Black Rock Area	FZ3	Currently defended to 1 in 200 (0.5%) annual probability level (see Section 7 of the SFRA) ¹	Retail Leisure Residential Hotel Employment	500sqm offices 4000sqm industrial 5000sqm retail 3500sqm leisure 1650 residential units community building	Less vulnerable Less vulnerable Less vulnerable Less vulnerable More vulnerable (or highly vulnerable if basements) More vulnerable/less vulnerable (depending on details)
DA3	Lewes Road Area	FZ1	n/a	Residential Retail Education Employment	23,600sqm offices 22,374seats (multi purpose stadium) 445 residential units Community Building University Expansion	Less vulnerable Less vulnerable More vulnerable More vulnerable More vulnerable/less vulnerable (depending on details)

¹ Since the SFRA was completed further work has been undertaken by Brighton Marina Company to improve the flood defences at the Marina. The associated modelling has not been subject to independent scrutiny so has not yet been incorporated into the SFRA.

DA4	New England Quarter and London Road Area	FZ1	n/a	Residential Retail Hotel Employment Leisure Education	34,000sqm offices 875 residential units 16,000sqm community uses	Less vulnerable More vulnerable More vulnerable/less vulnerable (depending on details)
DA5	Eastern Road Edward Street Area	FZ1	n/a	Residential Retail Health Employment Leisure Community	30,000sqm offices 10,000sqm industrial 205 residential units GP surgery 30,000sqm hospital, community building	Less vulnerable Less vulnerable More vulnerable More vulnerable More vulnerable/less vulnerable (depending on details)
DA6	Hove Station Area	FZ1	n/a	Residential Retail Employment	15,000sqm offices 240 residential units	Less vulnerable More vulnerable
DA7	Shoreham Harbour Area	FZ3 and FZ1	South Portslade – n/a Shoreham Harbour - estimated defence of 1 in 50 year standard	Port Employment Residential Retail Education Community	210 residential units	More vulnerable

Part 2 – The Sequential Test

Note:

Government guidance in PPS25 and the revised PPS25 Practice Guide does not intend to prevent all development on sites liable to flooding, accepting that some form of development may have to have place there. the focus is instead to minimise risks to people and property.

PPS25 and the Practice Guide sets out that the overall aim of decision-makers should be to steer new development to Flood Zone 1. Where there are no reasonably available sites in Flood Zone 1, decision-makers should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Flood Zone 2, applying the Exception Test if required. Only where there are no reasonably available sites in Flood Zones 1 or 2 should decision-makers consider the suitability of sites in Flood Zone 3, taking into account the flood risk vulnerability of land uses and applying the Exception Test if required.

Within each Flood Zone, new development should be directed first to sites at the lowest probability of flooding and the flood vulnerability of the intended use matched to the flood risk of the site ie higher vulnerability uses should be located on parts of the site at lowest probability of flooding.

The Brighton & Hove Core Strategy includes Development Areas in Flood Zones 1 and 3 so the following tests consider those locations in sequence.

Table 2 – the Sequential Test

1. Are the proposed Development Areas in Flood Zone 1 – low probability of flood risk?	
Yes	<p>Development Areas wholly within Flood Zone 1 include:</p> <ul style="list-style-type: none">• DA1 Brighton Centre and Churchill Square Area• DA3 Lewes Road Area• DA4 New England Quarter and London Road Area• DA5 Eastern Road and Edward Street Area• DA6 Hove Station Area <p>Development Areas partly in Flood Zone 1 include:</p> <ul style="list-style-type: none">• DA7 Shoreham Harbour Area <p>For the areas listed above that are wholly within Flood Zone 1, the broad location is appropriate in that flood zone and there is no need to proceed with the Sequential Test for those areas.</p>
No	For areas wholly or partly within Flood Zone 2 and 3, proceed to question 2

	<p>Relevant Development Areas are:</p>
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- DA2 Brighton Marina, Gas Works, and Black Rock Area
- DA7 Shoreham Harbour Area

2. Could the following proposed Development Areas in Flood Zones 2 and 3 be alternatively located in Flood Zone 1?

- DA2 Brighton Marina, Gas Works, and Black Rock Area
- DA7 Shoreham Harbour and South Portslade

No

a) identify alternative sites that were considered and explain why there were dismissed

Table 3 in the Appendices gives details of the alternative broad strategic locations and strategies that were considered in the Core Strategy and explanations about why they have not been taken forward. The locations considered were:

- Portland Road
- Old Shoreham Road corridor
- Western Seafront (Kingsway and Wellington Road)
- Urban Fringe

It was also considered whether the proposed development could be alternatively located in Flood Zone 1 by breaking it down into a greater number of smaller allocations rather than as a large, strategic, Development Area. Table 4 in the Appendices provides details of alternatives considered.

b) explain why the proposals cannot be redirected to Zone 1

- **if the site is in Flood Zone 2, proceed to question 3**

none

- **if the site is in Flood Zone 3a proceed to question 4**

The only site in flood zone 3a, in whole or in part, is Brighton Marina, Gas Works, and Black Rock Area

- **if the site is in Flood Zone 3b proceed to question 5**

the only site in flood zone 3b, in whole or in part, is Shoreham Harbour Area

Note: if the site is located in more than one flood zone, it will be necessary to answer questions 3, 4, and 5 as necessary for each part of the site that's in a different flood zone

Question 3 – for sites in Flood Zone 2	
<ul style="list-style-type: none"> • There is no development Areas in Flood Zone 2, in whole or in part. 	
Question 3a – are the proposed uses in the ‘water compatible’, ‘less vulnerable’, ‘more vulnerable’ or ‘essential infrastructure’ Flood Risk Vulnerability Classifications as presented in Table D2 of PPS25	
Yes	<p>List the proposed uses in these classifications:</p> <p>Not applicable</p> <p>These proposals are appropriate if located in Flood Zone 2 and there is no need to proceed with the Exception Test.</p>
No	<p>List the proposed uses that are not within those classifications:</p> <p>Not applicable</p> <p>For these proposed uses proceed to question 3b</p>
3b - can the ‘highly vulnerable’ and ‘more vulnerable’ development types be directed to parts of the site where the risks are lower both for the occupiers and the premises themselves?	
Yes	<p>Identify how the risks have been reduced:</p> <p>Not applicable</p> <p>Proceed with the Exception Test</p>
No	<p>Explain why the development types cannot be relocated:</p> <p>Not applicable</p> <p>Proceed to the Exception Test</p>

Question 4 – for Development Areas in Flood Zone 3a

Locations in flood zone 3a in part or in whole include:

- DA2 Brighton Marina, Gas Works, and Black Rock Area

Question 4a. can the development be redirected to Flood Zone 2?

No	<p>Explain why the development types cannot be relocated to FZ2:</p> <ul style="list-style-type: none">• The SFRA illustrates that apart from a thin coastal strip, FZ2 is overlain by FZ3 in Brighton & Hove, therefore there are no sites in FZ2 where development could be reasonably redirected to. <p>CHECK SA Brighton Marina is situated at the base of the cliffs to the east of the city centre. It was created in the 1970's and now functions as an independent component of the city's urban area.</p> <p>The Marina contains a mix of housing, shopping, commercial, leisure and recreational buildings, together with yacht moorings and a working harbour which creates a unique marine character.</p> <p>Recreation and leisure uses have expanded over the years, as have the number of residential developments. However, different construction phases within the Marina have occurred without the benefit of a planned approach. Consequently the Marina has become characterised by piecemeal development and areas of poor public realm.</p> <p>The strategy for the development area is to facilitate the creation of the Marina and the wider area as a sustainable mixed use district of the City, through the generation of a high quality marina environment through various objectives set out in DA2.</p> <p>The PPS25 Practice Guide, published since the original Sequential Test for the Core Strategy, offers further clarification for Flood Zone 2/3 sites which are part of an existing regeneration strategy such as Brighton Marina (see paragraphs 4.33 to 4.36 of Practice Guide 2008). It recognises that the development cannot go anywhere else if the regeneration benefits are to be realised, although the Exception Test must still be passed.</p> <p>Proceed to Question 4b</p>
Yes	Not applicable

4b. Are the proposed uses [for Brighton Marina, Gas Works and Black Rock Area] in the 'water compatible' or 'less vulnerable' Flood Risk Vulnerability Classifications as presented in Table D2 of PPS25?	
Yes	<p>List the proposed uses in these classifications:</p> <p>Water compatible – amenity open space/public realm improvements</p> <p>Less vulnerable – retail (Brighton Marina), restaurants/cafes (Brighton Marina), offices (Brighton Marina).</p>
No	<p>List the proposed uses not in these classifications:</p> <p>More vulnerable – residential (Brighton Marina), health services (Brighton Marina).</p>

4c. is the development proposal in the 'highly vulnerable' classification?	
No	Proceed to question 4d

4d. can the more flood sensitive development use types be directed to parts of the site where the risks are lower for both the occupiers and the premises themselves?	
	<ul style="list-style-type: none"> • Planning policies and guidance, based on the SFRA, will where possible direct the more vulnerable uses away from the sources of flooding and closer to the outer edges of FZ3. The most sensitive uses on each sites should be located in the areas of relatively lower flood risk through more detailed discussion at the planning application stage. • In all cases it must be demonstrated that an adequate standard of safety can be achieved through a site specific Flood Risk Assessment and will comply with Environment Agency requirements and the exceptions test if applicable. <p>Proceed to the Exceptions Test</p>

5. For sites in FZ3b the functional flood plain

Locations in flood zone 3b in part or in whole include:

- DA7 Shoreham Harbour Area

5a. Can the development proposal be redirected to FZ2?

No	<p>Explain why:</p> <p>The Shoreham Harbour Area extends from South Portslade, in the west of the City, through to Shoreham Town Centre in Adur District.. Parts of the area in south Portslade are in FZ1 and the most vulnerable land uses, including residential, should be directed there in accordance with the sequential approach in PPS25. The rest of the site lies in the Port itself which has been identified in the SFRA as FZ3b. In accordance with PPS25 only water compatible uses may be appropriate in FZ3b such as sand and gravel workings, ship building, wharves, amenity open space, and water-based recreation.</p> <p>Proceed to Question 5b</p>
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5b. can the development proposal be redirected to FZ3a?

No	<p>The SFRA indicates that no parts of the Development Area are located in FZ3a. However the SFRA is by its nature 'strategic' and relatively broad in the modelling. Further more detailed modelling may show differentiations in flood risk level within the area defined in the SFRA as FZ3b because PPS25 encourages a cautionary approach where there is a lack of data. Furthermore the PPS25 Practice Guide, published subsequent to the SFRA, provides clarification about the definition of 'functional floodplain' which would need to be taken into account in any further modelling of flood risks in the area.</p> <p>The only sites in the city located in FZ3a (at Brighton Marina) are already identified for development (see previous in this Sequential Test).</p>
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5c. is the development proposal in the 'water compatible' classification?

Yes	<p>Parts of the proposed development are 'water compatible' eg sand and gravel workings.</p> <p>These forms of development are appropriate in that location.</p>
No	<p>Proceed to question 5d.</p>

5d. is the development proposal in the 'less vulnerable', 'more

vulnerable', 'highly vulnerable', or 'essential infrastructure' classifications?	
Yes	Part of the development is likely to include residential, retail, and offices, in accordance with the allocation in the South East Plan for housing at Shoreham Harbour. Those forms of development, and any others from the categories listed in question 5a would be inappropriate within FZ3b and should not normally be permitted there, except for 'essential infrastructure' which may be appropriate subject to the application of the Exception Test.

Part 3 – The Exception Test

Note: the purpose of the Exception Test is not to prevent development, but to ensure the risks have been properly assessed and that appropriate mitigation measures are provided. All development proposals for a site located in Flood Zone 3 must pass the Exception Test, and must have already passed the Sequential Test.

Questions 1 to 4 below are set out in PPS25.

<p>1. do the development proposals make a positive contribution to sustainable communities and to the sustainable development objectives of the Brighton & Hove Local Development Framework (the 22 Sustainability Objectives set out in the Sustainability Appraisal for the Core Strategy):</p>	
<p><i>(1) To achieve a net gain in biodiversity under conservation management as a result of development and improve understanding of local, urban biodiversity by local people</i></p>	
<p>Yes / No</p>	<p>The Marina itself has a severe lack of green space, therefore any development could potentially lead to an increase in biodiversity if the recommended suggestions for mitigation are incorporated. However, the Black Rock site, which is designated a SNCI due to the presence of coastal vegetative species, in addition to the Brighton to Newhaven cliffs SSSI, could be compromised and therefore any development must ensure the protection of these areas and planting of complimentary vegetation.</p> <p>To ensure that development contributes towards achieving an increase in biodiversity, a number of measures should be incorporated into developments including:</p> <ul style="list-style-type: none"> • The encouragement of coastal vegetation; • The inclusion of features such as green roofs, green walls, tree planting and nesting boxes; • The inclusion of areas of green space. <p>All developers will be required to carry out a thorough survey to assess the impact of developments on sites which are of biodiversity importance, and must consider indirect effects such as shading and pollution that may reduce people’s ability to appreciate and access biodiversity.</p>
<p><i>(2) To improve air quality by continuing to work on the statutory review and assessment process and reducing pollution levels by means of transport and land use planning</i></p>	
<p>Yes / No</p>	<p>Sustainable modes of transport are currently not given enough priority in the Marina, with poor access for pedestrians and cyclists. This, combined with the availability of free car-parking, does little to encourage visitors to travel to the Marina in a sustainable way.</p> <p>Development proposals for the Outer Harbour scheme and Inner Harbour</p>

	<p>strategic allocation could lead to an increase in the number of cars accessing the site.</p> <p>Existing infrastructure and future development may therefore cause an increase in the number of cars accessing the site, which in turn may result in a reduction in air quality, however transport and land-use planning could help to improve air quality if a number of measures are incorporated into developments:</p> <ul style="list-style-type: none"> • The improvement in public transport to/from the Marina; • The improvement of pedestrian and cycling access to the Marina; • The development of car-free facilities (e.g. at Black Rock); • The development of a Park & Ride scheme. <p>In addition, part of the Core Strategy's policy on sustainable transport is to implement a public-transport based Coastal Transport System which would link the Marina to the city centre and beyond and help contribute to delivering improvements in air quality.</p> <p>The cumulative effects of each development within the Marina on each other must be assessed in order to minimise the negative effects on air quality that would be caused by the predicted increase in traffic.</p>
<p><i>(3) To maintain local distinctiveness and preserve, enhance, restore and manage the city's historic landscapes, townscapes, parks, buildings and archaeological sites effectively</i></p>	
<p>Yes</p>	<p>The buildings and form of the Marina are introspective without many views of the sea and areas of public realm are poor due to the haphazard groupings of buildings. Therefore, any development has the potential to increase the distinctiveness and visual appearance of the Marina.</p> <p>However, any development must take into account, be sensitive to, and compliment the surrounding areas, in particular:</p> <ul style="list-style-type: none"> • Local residential areas including the Kemp Town Conservation Area; • The cliffs to the North and East of the site which are designated a SSSI. <p>The site may be suitable for tall buildings, however any proposal for tall buildings must have due regard for the residential areas to the north, as well as the overall composition when viewed along the coast.</p>
<p><i>(4) to protect, conserve and enhance the South Downs and promote sustainable forms of economic and social development and provide better sustainable access</i></p>	
<p>No?</p>	<p>Improvements to sustainable transport, both fromwithin Brighton to the Downs, as well as into Brighton must occur in order to protect the Downs. The implementation of the Coastal Transport System, which would link any future development in the Marina to the city centre, would provide a</p>

	<p>positive step in improving sustainable travel within the city, as well as provide a link to the edge of the Downs.</p> <p>It is difficult to state whether developments at the Marina itself would lead to an increase in visitors to the Downs, however developments throughout Brighton may lead to an increase in visitors to the city.</p> <p>Development situated within the built up area of the city, including the Marina, would help to avoid a negative impact on the setting of the Downs, through decreasing the need to develop on land situated on the urban fringe.</p>
<i>(5) to meet the essential need for decent housing, particularly affordable housing</i>	
Yes	<p>Development of the Marina site will meet the need for decent housing including affordable housing, providing that developers meet the council's requirement for a proportion of new houses to be affordable.</p> <p>Anticipated development at the Marina area includes the construction of 1650 dwellings. This would equate to 660 affordable homes at the rate of 40%.</p>
<i>(6) to reduce the amount of private car journeys and encourage more sustainable modes of transport via land use and urban development strategies that promote compact, mixed-use, car-free and higher-density development</i>	
Yes	<p>Sustainable modes of transport are currently not given enough priority in the Marina, with poor access for pedestrians and cyclists. This, combined with the availability of free car-parking, does little to encourage visitors to travel to the Marina in a sustainable way. Future development may increase the number of people living, working or visiting the Marina, which is likely to increase the number of cars owned or car journeys to the Marina area.</p> <p>However, there are a number of ways in which future developments could encourage sustainable transport and reduce the amount of private car journeys including:</p> <ul style="list-style-type: none"> • Greater emphasis on pedestrian priority; • More dedicated cycle routes with adequate provision of cycle parking; • Improved transport interchange facilities; • Improved signage on arrival and parking facilities; • Provision of information regarding train services and an enhancement of the Volks Railway service to the Palace Pier; • Improved infrastructure for taxis; • Development of car-clubs for residents; • Mixed-use developments. <p>In addition, car journeys would be reduced through the proposed Coastal Transport Scheme that links the area to the city centre.</p>
<i>(7) minimise the risk of pollution to water resources in all development</i>	

Yes	<p>New development could help to minimise the risk of pollution to water resources if Sustainable Urban Drainage Systems (SUDS) are incorporated in developments, where possible.</p> <p>SUDS would not be suitable for areas of contaminated land, and therefore may not be appropriate for the Gas Works site, which forms part of the Marina development area.</p>
<i>(8) minimise water use in all developments and promote the sustainable use of water for the benefit of people, wildlife and the environment</i>	
Yes / No	<p>Any development will lead to an increase in water use during the construction phase and operation. However, water use could be minimised during the operation of any developments if high water efficiency technologies are incorporated into developments.</p> <p>Developments will be encouraged to use the Code for Sustainable Homes and reach the highest possible water efficiency levels through the implementation of schemes such as grey-water recycling.</p>
<i>(9) to promote the sustainable development of land affected by contamination</i>	
Yes	<p>Development will promote the use of contaminated land as the Gas Works site has potential for significant contamination due to its previous use. Part of this site has already been remediated but further investigation of the site is needed to ensure the land is suitable for development.</p>
<i>(10) manage coastal defences to protect the coastline and minimise coastal erosion and coastal flooding</i>	
Yes	<p>The cliffs between Black Rock and Saltdean are protected by a number of designations including a SSSI and are considered to be of high geological value.</p> <p>Any future proposals will be expected to make provision for the protection and enhancement of the visibility of the cliffs and their management and it will necessary for developers to discuss any proposals with English Nature.</p> <p>The Shoreline Management Plan, which forms part of the strategy for flood and coastal erosion risk management, identifies a strategy of hold the line for the next 100 years.</p> <p>Future activities must avoid significant destabilisation of the cliffs, which might be incurred as a result of construction activity, such as demolition works, piling and compaction of earthworks.</p>
<i>(11) to balance the need for employment creation in the tourism sector and improvement of the quality of the leisure and business visitor experience with those of local residents, businesses and their shared interest in the environment</i>	
Yes	<p>The Marina site attracts visitors and any developments may increase visitor numbers. However, development could balance the needs of local residents, business and visitors in a number of ways:</p> <ul style="list-style-type: none"> • Through the employment of local people in the construction and

	<p>operation stage of development;</p> <ul style="list-style-type: none"> • By ensuring that improvements to the areas of public realm are incorporated into developments; • By increasing provision of industrial units in East Brighton by including the development of light industrial units for small and start-up businesses during the regeneration of the Gas Works site; • By ensuring that any development must be comprised of mixed-use sites, including services and facilities for residents.
<p><i>(12) to support initiatives that combine economic development with environment protection, particularly those involving targeted assistance to the creative and digital industries, financial services, tourism, retail, leisure and hospitality sectors</i></p>	
Yes	<p>The Marina is designated as a District Centre, however currently lacks essential shops and services. Development will be beneficial to various sectors with the proposed housing development leading to an increase in AI units to meet residents' needs.</p> <p>The Black Rock site has been identified principally for tourism and leisure facilities and will therefore directly support the tourism and leisure sectors.</p> <p>Environmental protection of these sites and mitigation of possible impacts will be considered before development occurs and will include energy, water, waste, improvements to public realm, accessibility, biodiversity and air quality surveys.</p>
<p><i>(13) to improve the health of all communities in Brighton & Hove, particularly focussing on reducing the gap between those with the poorest health and the rest of the city</i></p>	
Yes	<p>The Marina site is adjacent to the East Brighton Ward, within which the Whitehawk Estate is situated. This estate is one of the most deprived areas in the city, as defined by the Index of Multiple Deprivation. The development of key health and other services within the Marina will be complimentary to existing provision located within neighbouring areas and will be accessible to residents within the Marina, as well as to residents in East Brighton. This could therefore potentially lead to an improvement in health of residents in neighbouring communities and reduction in health inequalities.</p> <p>All developers will be requested to conduct a Health Impact Assessment (HIA) as part of their scheme.</p> <p>Developments will incorporate new areas of public space, as well as improve existing areas of public realm, which will have a positive effect on the health and well-being of residents.</p>
<p><i>(14) to integrate health and community safety considerations into city urban planning and design processes, programmes and projects</i></p>	
Yes	<p>The Inner Harbour strategic allocation includes the provision of community</p>

	<p>facilities, including a Healthy Living Centre and community centre. New developments will consider community safety, particularly when planning areas of public realm.</p>
<p><i>(15) to narrow the gap between the most deprived areas and the rest of the city so that no one should be seriously disadvantaged by where they live</i></p>	
Yes	<p>Development may lead to the gap between the most deprived areas and the rest of the city being narrowed as services, facilities and amenities become more accessible to residents from neighbouring communities.</p> <p>The development proposals incorporate improved transport, health, and leisure opportunities, as well as potentially offering employment opportunities and housing, all of which are wider determinants of health.</p> <p>See also Objective (13).</p>
<p><i>(16) to engage local communities into the planning process</i></p>	
Yes	<p>There has been extensive stakeholder and public consultation concerning the detailed proposals for the Outer Harbour and Inner Harbour schemes. There is currently a period of consultation underway for the Brighton Marina Masterplan Planning Advisory Note and widespread public consultation will occur for all other proposals.</p>
<p><i>(17) to make the best use of previously developed land</i></p>	
Yes	<p>The Marina, Black Rock and Gas Works sites are all areas of land that have previously been developed.</p>
<p><i>(18) to maximise sustainable energy use and mitigate the adverse effects of climate change through low/zero carbon development and maximise the use of renewable energy technologies in both new development and existing buildings</i></p>	
Yes/No	<p>Any development will lead to an increase in energy use during the construction and operation stages.</p> <p>However, development at the Marina site could include the implementation of large scale zero and low-carbon energy technologies to serve the Marina and wider city, particularly those that take advantage of the Marina's coastal location.</p> <p>All new build residential units are expected to be zero carbon for energy use, be designed to Lifetime Home Standards, and achieve a minimum rating of Level 4 of the Code for Sustainable Homes .</p> <p>All non residential developments are expected to score at least 60% in the energy and water sections of the relevant BREEAM assessment</p>
<p><i>(19) to ensure all developments have taken into account the changing climate and are adaptable and robust to extreme weather events</i></p>	
Yes	<p>Climate change is predicted to cause a rise in sea-level for the south coast as well as cause an increase in summer temperature and increased periods of</p>

	<p>extreme weather events, including winter precipitation.</p> <p>A site specific Flood Risk Assessment will be required as part of the planning application process to demonstrate that all proposed developments at the Marina are safe, will not increase the risk of flooding, and where possible will reduce the flood risk overall.</p> <p>Implementation of other local policy should ensure that new development is adaptable to a changing climate.</p>
<p><i>(20) to encourage new developments to meet the high level Code for Sustainable Homes/BREEAM 'Excellent' standard</i></p>	
<p>Yes</p>	<p>Residential units are expected to achieve a minimum rating of Level 4 of the Code for Sustainable Homes .</p> <p>All non residential developments are expected to score at least 60% in the energy and water sections of the relevant BREEAM assessment.</p> <p>All developers will be required to submit a completed Brighton & Hove Sustainability Checklist as part of the planning application.</p>
<p><i>(21) to promote and improve integrated transport links and accessibility to health services, education, jobs, and food stores</i></p>	
<p>Yes</p>	<p>A Healthy Living Centre, situated within the District Centre of Brighton Marina, is proposed to be included within the Inner Harbour strategic allocation. This would be situated within close proximity to a transport interchange, to ensure improved access to other amenities including local supermarkets, employment sites and leisure facilities within the Marina.</p> <p>Sustainable travel will be integrated into all developments, as described in Objective (6).</p> <p>Services for the emerging population will be balanced with the needs of visitors and tourists, as described in Objective (11).</p>
<p><i>(22) to reduce waste generation, and increase material efficiency and reuse of discarded material by supporting and encouraging development, businesses and initiatives that promote these and other sustainability issues</i></p>	
<p>No</p>	<p>Redevelopment of the site will lead to an increase in waste during the construction and operation phases.</p> <p>The Sustainability Appraisal states that a site waste management plan must be submitted with any application for planning, and that the Construction & Demolition Waste SPD and the Recyclable Materials and Waste Storage PAN must be referred to in order to reduce the amount of waste produced through various stages of development.</p>

2. Are the development proposals on developable brownfield land or where there are no reasonable alternative options on brownfield land?

yes	Brighton Marina is on brownfield land
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3. has a flood risk assessment been produced that demonstrates the development is safe, the residual risks of flooding to people and property (including the likely effects of climate change) are acceptable and can be satisfactorily managed?

Yes	<p>A Strategic Flood Risk Assessment for the city was undertaken in 2007/8. This includes a Level 2 SFRA for the Brighton Marina area which looks in detail at various aspects of risk such as depth, rate of onset, and residual risks to people and property.</p> <p>Therefore the development must take into account all of the risks and suggested mitigation and management measures as identified in the SFRA in section 7.2.9 which sets out the minimum requirements to ensure safe development at the Marina, and also any site-specific Flood Risk Assessment (FRA) that is prepared at the time of the application.</p>
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4. does the development make a positive contribution to reducing or managing flood risk?

?	A site-specific FRA must be carried out for the site in order to demonstrate that the development will not increase flood risk on the site or elsewhere, and that where possible it will reduce flood risk.
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Appendices

Alternative broad strategic locations that were considered

The council's spatial strategy is set out in the refreshed Preferred Options document as follows:

The council's overarching spatial strategy for the city to 2026 is to aim to accommodate future development within the built up area of the city by optimising development on brownfield land and thereby preserving the countryside.

This will be achieved by directing significant development to seven broad areas of the city where it is possible to make full use of public transport/ public transport interchanges and where identified capacity exists to accommodate future development.

The development areas are proposed to accommodate a significant amount of development because they contain opportunities for change, they can deliver development of citywide or regional importance and/or because they are in need of regeneration. These seven areas are:

- Brighton Centre and Churchill Square Area
- Brighton Marina, Gas Works, and Black Rock Area
- Lewes Road Area
- New England Quarter and London Road Area
- Eastern Road and Edward Street Area
- Hove Station Area
- Shoreham Harbour Area.

Table 3 below sets out which other broad strategic locations were considered at earlier stages of the spatial strategy.

It shows that based on current available data, there are no other 'reasonably available' or suitable strategic locations in areas of lesser flood risk.

The table should be read in conjunction with:

- Questions 2 – can the Development Areas be redirected to FZ1?
- Questions 4a and 4b – can the Development Areas be redirected to FZ2?

Table 3 – alternative broad strategic locations that were considered in the Core Strategy

Alternative sites considered	Reasons not taken forward/dismissed from Core Strategy
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Portland Road	- following consultation comments and further assessment whilst opportunities were identified for townscape improvements and improvements to the local shopping centre there was not sufficient capacity to accommodate significant development to warrant its inclusion as a specific Development Area. The proposed Sustainable Neighbourhoods Proposals and general Core Policies were considered sufficient policy guidance for future development in this area. The EDF site on Portland Road is proposed for inclusion in the wider Shoreham Harbour/ South Portslade area and within the draft AAP.
Old Shoreham Road corridor –	following consultation comments and further assessment, it is considered that whilst there is the potential for improvements relating to the sustainable transport corridor and north-south links in the Hove area along the corridor, the majority of sites along Old Shoreham Road have been identified within the Employment Land Study as requiring safeguarding for employment uses and therefore do not present significant development opportunity. However links to Old Shoreham Road have been made in the Hove Station Area as they relate to that area and in the Shoreham Harbour and South Portslade area.
Western Seafront (Kingsway and Wellington Road)	- following further investigation of opportunities for additional development beyond existing commitments it was felt that this area did not present significant development potential and opportunities regarding townscape improvements and improved links to the seafront could be better dealt with in a revised Seafront Preferred Option (see SA1).
Exclusion of the Urban Fringe from the Spatial Strategy	Whilst consultation responses suggested a lack of consensus as to the role of the Urban Fringe, the option of allowing limited development within the urban fringe in the longer term (beyond 10 years) was reconsidered as part of the overall strategy for accommodating development and growth in the city. As a result the proposed approach (SA4) is for managed release of land within the urban fringe for residential development to only be considered on a 'contingency' basis in the post 2020 plan period should it be required to help meet regional housing targets in the South East Plan. Instead, future development should be accommodated primarily within the existing built up area of the city, and significant development should be directed to areas with good sustainable transport links and areas in need of regeneration and renewal.

The following areas were combined to create a larger broad development area:

Brighton Station/ New England area and London Road/ Preston Road Corridor	have been merged as one Development Area because it was considered following further investigation and the findings of the LR2 Regeneration Strategies (2007) that the close proximity of the New England area to London Road town centre and the Preston Road corridor suggested that these areas were better treated comprehensively and this would also offer greater clarity for investment decisions and coordination of strategies
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Table 4 – alternative ways of accommodating the development in order to locate it within Flood Zone I

Alternative ways to accommodate the development considered	Reasons not taken forward/dismissed from Core Strategy
Locate the 2000 homes plus associated development at one of the other identified Development Areas*	Studies so far indicate that none of the identified Development Areas have capacity to accommodate that scale of development in addition to what is already proposed in the Core Strategy.
Divide up the 2000 homes plus associated development, between the other identified Development Areas eg each taking an additional 200-300 homes	<p>If the amount of residential development was significantly increased at the other Development Areas then it would be at the cost of other land uses that are allocated in the Core Strategy for that area. This varies according to the Development Area, but potentially it could conflict with necessary land use allocations for tourism, retail, employment, education/community facilities, open space or regeneration objectives.</p> <p>This could risk delivering unbalanced and unsustainable communities in those Development Areas.</p> <p>Dividing up the development could also threaten the developer contributions received towards significant items of infrastructure such as the Rapid Transport System.</p>
Rely on the 2000 homes to be delivered through windfall sites rather than identified Development Areas	Interim findings of the SHLAA suggest that it may be necessary to include an allowance for the development of (small) windfall sites to meet PPS3 requirements for housing delivery over a 15 year period given the significant development

	constraints affecting the city and the lack of opportunity to identify specific sites. However monitoring of small windfall suggests that relying on windfall to accommodate the scale of development proposed at Brighton Marina would lead to a shortfall against the targets in the South East Plan. To rely that significantly on windfall would also have implications for the developer contributions and investment that could be secured, especially in terms of large items of infrastructure that are vital to the city.
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In addition, all of the above options also do not take into account the need to provide ongoing flood protection for existing residents and businesses that are already at the Marina, and to help deliver a more sustainable community at the Marina for example by improving transport links and provision of community facilities. This is considered in more detail in the Exception Test for the Marina.

* The identified Development Areas in the Core Strategy are Brighton Centre and Churchill Square Area, Brighton Marina Gas Works and Black Rock Area, Lewes Road Area, New England Quarter and London Road Area, Eastern Road and Edward Street Area, Hove Station Area, and Shoreham Harbour Area.