Planning Policy Team
Brentwood Borough Council
Town Hall
Brentwood
Essex
CM15 8AY

Our ref: AE/2009/109691/CS-01/IS2-L01
Your ref: Preferred site allocations

Date: 26 March 2018

Dear Sir/Madam

BRENTWOOD DRAFT LOCAL PLAN PREFERRED OPTIONS CONSULTATION.

Thank you for your consultation on the Preferred Options for your new Local Plan, received on 4 February 2018. We have reviewed the Brentwood Draft Local Plan: Preferred Site Allocations (herein referred to as the Local Plan) and the Sustainability Appraisal (SA) of the Brentwood Local Plan: Interim SA Report (herein referred to as the Sustainability Appraisal). We have provided our comments under the same format as the Sustainability Appraisal.

Biodiversity (SA – 10.3)

It is encouraging to see the emphasis on protecting green belt land and the promotion of green infrastructure in the Local Plan. We recommend that more detail is included in the Local Plan with regards to the rivers within the borough, their ecological status and potential opportunities for improving these through drivers such as the Water Framework Directive (WFD) and Eel Regulations.

We do not consider the Local Plan to consider WFD in enough detail. Local Planning Authorities have a duty under the WFD Regulations to have regard to the River Basin Management Plan (RBMP) to help deliver the objectives of the WFD. Several of the water bodies are currently at less than 'good' ecological status (e.g. River Wid) and need to be at 'good' status or 'good potential' status by 2027 in order to meet the requirements of the WFD. Any development proposals need to be compliant with the WFD in ensuring no deterioration and where possible seek enhancements.

Whilst the SA does include that 'the network of green infrastructure and natural assets should be protected, enhanced and strategically expanded to deliver benefits for people and wildlife', no provision has been given to protecting and enhancing the biodiversity of the water environments in the borough as part of the Local Plan.

The Local Plan is very land centric and only mentions water bodies or waterways in passing. It is disappointing to see no specific mention of rivers and waterways in the biodiversity section of the SA. We would like to see further detail regarding the rivers within the Borough and specifically the headwaters of the Rivers Wid and Mardyke. Given the improvements suggested above, we consider that this could be addressed through a completely separate policy, which should address water quality and the requirements of the WFD and RBMP objectives. We would like to see more detail on the protection, enhancement and buffering of watercourses to help in the achievement of WFD objectives and to help you ensure that you meet your WFD obligations. A new policy should include the provision of ecological buffer strips and corridors, native tree planting and the new wetland areas to help manage flood risk (Natural Flood Management) and reduce diffuse pollution whilst connecting people to nature. This could also include de-culverting, removal of redundant structures and alien species removal where appropriate. Development should be required to include these provisions in the design of their schemes.

It is positive to see in the SA the recommendation to the Council to take careful account of the Government's 25 Year Environment Plan. The 25 Year Plan has the aim of 'reaching or exceeding objectives for rivers, lakes, coastal and ground waters that are specially protected, whether for biodiversity or drinking water as per our River Basin Management Plans' (Summary of Targets in 25 year environment plan). Including specific reference to water courses in any biodiversity policy would help to fully engage with the 25 Year Plan.

Climate Change (SA – 10.4)

It is positive to see that the opportunity to 'adopt ambitious standards of 'sustainable design'' (SA 10.4 p42) has been highlighted. It is understandable that most of the climate change mitigation policy is concentrated around reducing carbon emissions from transport and energy in the Local Plan. However, it should be noted that climate change is predicted to have an impact on the availability and reliability of future water resources. Carbon reductions will reduce the effects of climate change, and therefore reduce the impact to water resources. Similarly a more efficient use of water will lead to carbon reductions. There is an option here to link water efficiency measures to climate change mitigation measures, and carbon reduction policies for the borough.

Flooding (SA – 10.8)

Although we note that flooding has been considered in the SA, there is nothing within the Preferred Site Allocations draft Local Plan in regards to flood risk. We would prefer to see an approach included in the Local Plan to manage and communicate the risks and consequences of flooding arising from all sources of flood risk for Brentwood.

The Local Plan should apply the sequential test and use a risk based approach to the location of development. The plan should be supported by a Strategic Flood Risk Assessment (SFRA) and should use the NPPF Planning Practice Guidance (PPG). The PPG advises how planning can take account of the risks associated with flooding and coastal change in plan-making and the planning application process.

We have provided some general advice under the ‘Flood Risk General Advice’ heading below. This advice should be considered in respect of each site allocation.

Preferred Site Allocations

Most of the preferred site allocations are situated in Flood Zone 1, so we have no issues with these sites from a flood risk perspective. The sites referenced 263 and 276 have small areas in Flood Zones 2 and 3, and part of the site referenced 200 (Dunton Hills Garden Village) is located in Flood Zone 3.

Applicants should be aware of the modelled watercourses in the area as proposed developments may be required to model nearby watercourses to determine local flood risk. All development proposals within the flood zone (which includes Flood Zones 2 and 3), or elsewhere on sites of 1 hectare or more must be accompanied by a Flood Risk Assessment (FRA).

Dunton Hills Garden Village

The watercourse through the middle of the site proposed for the Dunton Hills Garden Village has not been modelled, and therefore the risk of flooding to the site is currently unknown. Modelling would be required to accurately establish the risk to any proposed development and ensure that the site is designed to reflect the current and future flood risk. Built development should be located away from areas of future flood risk. Further information in respect of modelling is provided below under the heading ‘JFLOW’.

Flood Risk General Advice

The following advice could be considered when compiling the Local Plan to ensure potential development is sequentially sited or, if at flood risk, it is designed to be safe and sustainable in the future.

Sequential Approach

The sequential approach should be applied within specific sites in order to direct development to the areas of lowest flood risk. If it isn’t possible to locate all of the development in Flood Zone 1, then the most vulnerable elements of the development should be located in the lowest risk parts of the site. This must include an assessment of future flood risk with the addition of an appropriate climate change allowance. If the whole site is at high risk (Flood Zone 3), an FRA should assess the flood characteristics across the site and direct development towards those areas where the risk is lowest.

Finished Floor Levels

We strongly advise that proposals for "more vulnerable" development, as defined in Table 2 of the Flood Risk and Climate Change section of the Planning Practice Guidance (PPG), should include floor levels set no lower than 300 millimetres above the level of any flooding that would occur in a 1% (1 in 100) Annual Exceedence Probability (AEP) flood event (including allowances for climate change). We are

likely to raise an objection where this is not achieved in line with Paragraph 060 of the NPPF's Planning Practice Guidance which advises that there should be no internal flooding in "more vulnerable" developments from a design flood.

We recommend "less vulnerable" development also meet this requirement to minimise disruption and costs in a flood event. If this is not achievable then it is recommended that a place of refuge is provided above the 0.1% AEP flood level.

Safe Access

During a flood, the journey to safe, dry areas completely outside the 1% (1 in 100) AEP flood event, including allowances for climate change, should not involve crossing areas of potentially fast flowing water. Those venturing out on foot in areas where flooding exceeds 100 millimetres or so would be at risk from a wide range of hazards, including, for example; unmarked drops, or access chambers where the cover has been swept away. Safe access and egress routes should be assessed in accordance with the guidance document 'FD2320 (Flood Risk Assessment Guidance for New Developments)'.

Emergency Flood Plan

Where safe access cannot be achieved, or if the development would be at residual risk of flooding in a breach, an emergency flood plan that deals with matters of evacuation and refuge should demonstrate that people will not be exposed to flood hazards. The emergency flood plan should be submitted as part of a FRA and will need to be agreed with yourselves. As stated above refuge should ideally be located 300mm above the 0.1% AEP flood level including allowances for climate change. If you do produce a flood safety framework as mentioned above, it will be important to ensure emergency planning considerations and requirements are used to inform it.

Flood Resilience/Resistance Measures

To minimise the disruption and cost implications of a flood event we encourage development to incorporate flood resilience/resistance measures up to the extreme 0.1% AEP climate change flood level. Information on preparing property for flooding can be found in the documents 'Improving the Flood performance of new buildings' and 'Prepare your property for flooding'.

Increases in Built Footprint

When developing in areas at risk of flooding consideration should be given to preventing the loss of floodplain storage. Any increase in built footprint within the 1% AEP, including allowances for climate change, flood extent will need to be directly compensated for to prevent a loss of floodplain storage. If there are no available areas for compensation above the design flood level and compensation will not be possible then a calculation of the offsite flood risk impacts will need to be undertaken. If this shows significant offsite impacts then no increases in built footprint will be allowed. Further guidance on the provision of compensatory flood storage is provided in section A3.3.10 of the CIRIA document C624.

Climate Change

Our guidance 'Flood risk assessments: climate change allowances' should be used to inform the spatial distribution of growth and the requirements of FRA's for individual applications.

The National Planning Practice Guidance provides advice on what is considered to be the lifetime of the development in the context of flood risk and coastal change. The 'Flood risk assessments: climate change allowances' guidance provides peak river flow and peak rainfall intensity allowances to help planners understand likely impact of climate change on river and surface water flood risk. For some development types and locations, it is important to assess a range of risk using more than one allowance. Please refer to this guidance: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances. This advice updates previous climate change allowances to support the NPPF and may result in flood extents being greater than they have been in the past. This does not mean our flood map for planning has changed, as these maps do not consider climate change, but fluvial flood maps that may have been produced as part of SFRAs and other flood risk studies may be out of date. FRAs submitted in support of new development will need to consider the latest climate change allowances.

JFLOW

Some sites within the preferred option locations are in areas of JFLOW which are flood zones produced from basic national generalised flood modelling. We have not undertaken detailed modelling at these locations (with the exception of flood extents derived from JFLOW) and therefore, no flood level data is available.

JFLOW outputs are not suitable for detailed decision making. Normally, in these circumstances, an FRA will need to undertake a modelling exercise in order to derive flood levels and extents, both with and without allowances for climate change, for the watercourse, in order to inform the design for the site. Without this information, the risk to the development from fluvial flooding associated with the ordinary watercourse is unknown.

Modelling is required to accurately establish the risk to the proposed development in terms of potential depths and locations of flooding. The watercourse should be modelled in a range of return period events, including the 1 in 20, 1 in 100 and 1 in 1000 year events, both with and without the addition of climate change. The flood levels on the development site should be determined and compared to a topographic site survey to determine the flood depths and extents across the site.

Environmental Permit for Flood Risk Activities

An environmental permit for flood risk activities may be required for work in, under, over or within 8 metres (m) from a fluvial main river and from any flood defence structure or culvert or 16m from a tidal main river and from any flood defence structure or culvert.

Application forms and further information can be found at: https://www.gov.uk/guidance/flood-risk-activities-environmental-permits. Anyone carrying out these activities without a permit where one is required, is breaking the law.

The Local Plan should consider this when allocating development sites adjacent to a 'main river'. A permit may be required and restrictions imposed upon the work as a result in order to ensure the development does not have a detrimental impact upon the environment and flood risk.

The preferred site allocations referenced 263, 276 & 200 may require a permit for work within 8 metres of a defence structure/culvert. We would however, prefer that any works around a main river must allow space for maintenance of our assets. This would also provide multiple benefits including an ecological buffer strip and corridors as outlined in the biodiversity section above.

Brownfield Development (SA – 10.11)

We are supportive of the plans prioritisation of brownfield sites where they exist within the borough over greenfield sites. The remediation of these sites increases the available land area for development while at the same time maximising the benefits to the soil and groundwater environment. Several of the allocated sites are situated on the locally significant Stanmore Gravels and Bagshot Formation which are designated as Secondary A aquifers. Development on these locations should take into account any potential impacts on controlled waters, especially where contamination is suspected or known.

The plan has not indicated how brownfield land will be dealt with to ensure the protection of human health, property, ecological systems and the environment. The document should refer to a tiered or phased approach to the development of contaminated land which meets with good practice, including CLR11 Model Procedures for the Management of Land Contamination, when dealing with land affected by contamination. Applicants proposing development on brownfield sites should refer to the Environment Agency Guiding principles for land contamination for the type of information that we require in order to assess risks to controlled waters from the site. This includes the following:

- A Preliminary Risk Assessment (PRA) which has identified all previous uses and contaminants associated with those uses. A conceptual model of the site identifying sources, pathways and receptors and any unacceptable risks arising from contamination at the site.

- A site investigation and detailed assessment of risk to all potential receptors both on and off site.

- An options appraisal and remediation strategy giving details of remediation measures proposed and how they will be undertaken.

- A verification report demonstrating completion of the remedial works.

The Local Authority can advise on risk to other receptors, such as human health.

We would also advise that developers of these brownfield sites should:

- Consider using the National Quality Mark Scheme for Land Contamination Management which involves the use of competent persons to ensure that land contamination risks are appropriately managed.

- Refer to the contaminated land pages on GOV.UK for more information.

Site Investigations

We expect any site investigations to be carried out in accordance with best practice guidance for site investigations on land affected by land contamination. E.g. British Standards when investigating potentially contaminated sites and groundwater, and references with these documents:

- BS5930:2015 Code of practice for site investigations;

- BS 10175:2011+A1:2013 Code of practice for investigation of potentially contaminated sites;

- BS ISO 5667-22:2010 Water quality. Sampling. Guidance on the design and installation of groundwater monitoring points;

- BS ISO 5667-11:2009 Water quality. Sampling. Guidance on sampling of groundwaters (A minimum of 3 groundwater monitoring boreholes are required to establish the groundwater levels, and flow patterns but more maybe required to monitor groundwater quality).

- Use MCERTS accredited methods for testing contaminated soils at the site.

Water Quality and Water Resources (SA – 10.13)

With regard to water resource and water quality, it is expected that the recommendations of the 2016 Draft Plan explained in Section 10.13, parts 10.13.3 and 10.13.4 of the SA, will be included in the Local Plan. If this is the case, there will be sufficient provision on these issues. It is also useful to note that the water resource availability for a large part of the Borough is explained in the Roding, Beam, Ingrebourne and Mardyke (RBIM) Abstraction Licensing Strategy available here.

We welcome the inclusion in the SA of the appraisal of the 2016 Draft Plan, regarding the issue of waste water capacity at Ingatestone and Doddinghurst. It should be ensured that there is capacity for the disposal of treated effluent. We would place caution on development proposed in the catchments of Ingatestone and Doddinghurst Water Recycling Centres (WRCs), unless Anglian Water agree to accommodate further growth in these catchments. In these areas, planning permissions should be caveated that development can only proceed once an

approved plan is in place to upgrade the appropriate WRC and obtain a revised permit, and developments can only be occupied once the plan has been delivered.

Foul Drainage

We are encouraged to see that the majority of allocated sites will be able to access foul water mains and sewerage connections. Where an applicant considers a planning application that involves non-mains drainage; a Foul Drainage Assessment (FDA) form should be completed. This is available here: https://www.gov.uk/government/publications/foul-drainage-assessment-form-fda1

Completion of this form and its submission with the planning application will help to identify:

- Any concerns that might lead to pollution or nuisance arising from a non-mains drainage system.
- A need for significant changes to a developer's intended foul drainage arrangements.
- Where an application for an environmental permit might be refused, or particularly stringent conditions imposed.

Further to this, although no development sites have been allocated within the Local Plan, the land along the A128 Ongar Road, past the Coxtie Green Road junction towards Bentley and Kelvedon Hatch has numerous small private housing developments recently permitted and more potential sites identified by developers. This area of Brentwood has no sewer network and the number of private package treatment works is therefore increasing. Many of these package treatment works discharge to small tributaries and ditches, some of which are seasonally dry, and climate change will increase this. This has the potential to increase the risk to water quality from an overload of nutrients and little dilution. In order to accommodate growth in this area, first time sewerage should be considered with Thames Water.

Surface Water Drainage

With respect to surface water management, SuDS schemes must be designed to ensure the protection of the water environment. Infiltration SUDs should not be located in unsuitable and unstable ground conditions such as land affected by contamination or solution features, and any development must incorporate appropriate pollution prevention measures and a suitable number of SuDS treatment train components in line with the requirements of CIRIA C753 and the SuDS manual. Where infiltration SuDS are to be used for surface run-off from roads, car parking and public or amenity areas, they should have a suitable series of treatment steps to prevent the pollution of groundwater. For the immediate drainage catchment areas used for handling and storage of chemicals and fuel, handling and storage of waste and lorry, bus and coach parking or turning areas, infiltration SuDS are not permitted without an environmental permit. Further advice is available in the updated CIRIA SUDs manual which can be found here: http://www.ciria.org/Resources/Free_publications/SuDS_manual_C753.aspx. The

use of deep infiltration systems should be the last option in the SuDS hierarchy. The plan should encourage the use of shallow infiltration devices with appropriate pollution prevention measures. Where these are not possible, a discharge to watercourse or sewer should be explored prior to considering deep infiltration systems. (Groundwater Protection Position Statements G1 and G9 to G13).

We trust this advice is useful. We would be pleased to provide you with further advice to contribute towards the Local Plan going forward. Please note this may fall under our planning advice service and there will be a charge for this. For more information, please contact us on the details below.

Yours faithfully

Ms Charlie Christensen
Planning Adviser