

10. Environmental Challenges

Introduction

This chapter covers Bromley's planning policy response to the current and future challenges of a range of environmental issues including:

- waste management,
- flood risk management
- pollution prevention and control
- sustainable design and construction
- carbon reduction

Local policies are being developed to reinforce the importance of strategic policy or to add value to higher level policies set out in the London Plan and NPPF. These planning policies are designed to work alongside and complement other regulatory systems such as Building Control and environmental protection legislation which apply nationwide.

Waste Management

Draft policy – Sustainable Waste Management

The Council will support sustainable waste management by:

- Supporting the waste hierarchy in its approach to future waste management
- Meeting the London Plan apportionment targets in collaboration with the London Boroughs of Bexley, Greenwich, Southwark, Lewisham and City of London by allocating and protecting strategic waste management sites
- Allocating the strategic waste management sites of Waldo Road, Churchfields and Cookham Road (location maps to be included)
- Requiring Site Waste Management Plan for major developments to reduce waste onsite and manage remaining waste sustainably
- Supporting recycling by requiring the provision of adequate space in new development

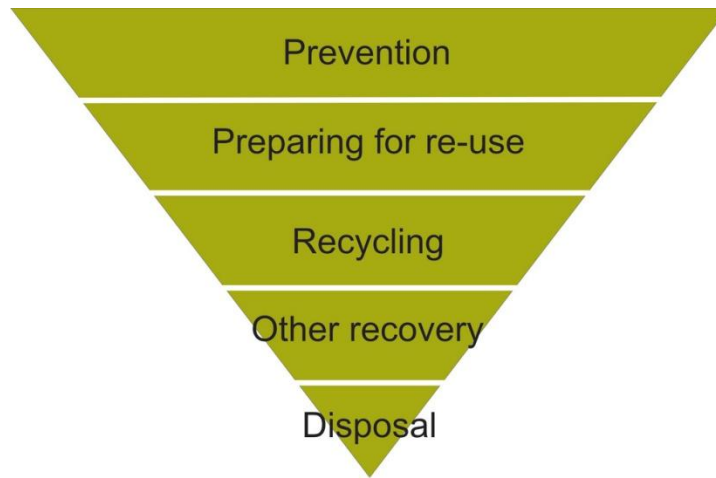
Supporting Text

Both central government and the GLA set out a clear strategy for waste management which involves a key role for local planning authorities. Through their allocation of sites and the application of their policies they are expected to positively influence not only the type and amount of waste that is produced but also its treatment and movement.

The waste hierarchy shows the preferred options for managing waste – the most important solution being to reduce that waste in the first place, the least desirable being disposal of that waste, for example, to landfill. There are clear environmental

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and economic benefits of moving up the hierarchy away from disposal as far as possible but there are a number of practical challenges to be overcome as waste management practices shift from old to new.



The Government has recently consulted on revised planning policy for waste which is to replace PPS10, and although the wording of the hierarchy has changed a little, the message is the same. Local Planning authorities are still expected to take responsibility for driving waste management up the hierarchy, providing a framework for communities to be able to reduce waste and enable more effective recycling and disposal and making sure any facilities are appropriately sited to protect health and the environment.

The London Plan states that the Mayor will work collaboratively with the boroughs, waste authorities, the private sector and others to achieve a set of challenging targets. As well as trying to create “positive environmental and economic impacts” from waste processing, there should be no biodegradable or recyclable waste going to landfill by 2031. In addition, London should be managing all of its waste its own boundary by that time – a significantly difficult task. To these ends, the Mayor expects each borough to allocate enough land and identify facilities to be able to manage a certain amount of waste – the waste apportionment targets – which are set out in the London Plan. Policy 5.17 states that boroughs may collaborate by pooling their requirements and should demonstrate this through the preparation of joint waste DPDs, evidence papers or bilateral agreements.

Bromley has developed a strong relationship with a number of other boroughs through the South East London Waste Management Group. Bromley, Bexley, Lewisham, Greenwich and Southwark (and City of London) have been collaborating to pool their individual waste apportionment requirements set out in the London Plan and their collective waste management capacities. The City of London asked to join the group because of its significant problems in finding land for waste management and the amount of excess capacity that the group provides until 2031 currently allows for this.

Bromley’s proposed future strategy is to use the excess existing capacity in boroughs such as Bexley rather than allocate further waste management facilities within the Borough. The London Plan requires boroughs to protect their existing

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strategic waste management sites – in Bromley these sites are considered to be Waldo Road and Churchfields Road reuse and recycling centres and Cookham Road composting facility. It should be noted that planning permission has been given to Cookham Road to create an anaerobic digester (producing heat and electricity from waste) and further changes to this site have recently been proposed. It is not yet operational in this respect but the intention has been to offer any excess capacity to other Boroughs.

In order to support the waste management strategies of all the boroughs, and especially to demonstrate that Bromley is committed to providing some capacity of its own, the three existing strategic waste management sites will need to be formally allocated in the Local Plan. Should any of the capacity of these sites be lost to a non-waste function, that capacity would need to be re-provided elsewhere in the Borough. It will be important to show that there are currently no additional strategic waste sites that should be allocated, and this may be achieved through both the collaborative approach and an assessment of the suitability of any of the smaller existing sites (as part of the site allocations process).

The table below shows the latest published version of the apportionment figures and the capacities. Figures were correct for 2011 and are being checked and updated.

	2011	2016	2021	2026	2031
Bexley	398,000	453,000	512,000	574,000	640,000
Bromley	213,000	243,000	274,000	308,000	343,000
Greenwich	292,000	333,000	376,000	422,000	470,000
Lewisham	182,000	207,000	234,000	263,000	293,000
Southwark	213,000	243,000	275,000	308,000	343,000
City of London	100,000	100,000	100,000	100,000	100,000
SE Apportionment	1,398,000	1,579,000	1,771,000	1,975,000	2,189,000
SE Sites Capacity	2,207,278	2,237,492	2,247,931	2,258,508	2,265,084
Projected Surplus	809,278	658,492	476,931	283,508	76,084

Table A.4 London Plan Apportionment Requirements (MSW & C&I tonnes per annum)

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Draft policy - New waste management facilities

New waste management facilities and extensions and/ or alterations to existing waste management facilities must demonstrate that they will not undermine the local waste planning strategy and help the Borough move up the waste hierarchy.

The likely impact of the proposal on the local environment and on amenity will be considered against the development plan as a whole and the specific criteria for waste management facilities set out in national policy.

New facilities, extensions and alterations should be well designed and contribute positively to local character as far as possible.

It is important that any new waste management facility or extension and alterations help move waste management in a more sustainable direction, that is, up the waste hierarchy.

Criteria for considering the potential impact of the development of waste facilities are currently set out in PPS10 and will be retained in the replacement guidance. These can, but do not necessarily need to be, repeated in Local Plans unless there additional information can enhance them.

The criteria include:

- Protection of water resources
- Land instability
- Visual intrusion
- Nature conservation
- Conserving the historic environment
- Traffic and access
- Air emissions including dust
- Odours
- Vermin and birds
- Noise and vibration
- Litter
- Potential land use conflict

References

[PPS10 - sustainable waste management](#)

[New national waste policy consultation](#)

[The London Plan 2011, Chapter 5](#) – from page 158

[London Borough of Greenwich Waste Technical Paper](#)

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Flood Risk

Draft Policy - Reducing Flood risk

To minimise river flooding risk, development in Flood Risk Areas (Environment Agency Flood Zones 2 and 3 and surface water flood risk hotspots) will be required to seek opportunities to deliver a reduction in flood risk compared with the existing situation.

In Flood Risk Areas the sequential test and exception test as set out in the NPPF and associated technical guidance should be applied. Flood Risk Assessments should be submitted in support of all planning applications in these areas and for major development proposals across the Borough.

All development proposals should reduce surface water run-off entering the sewerage network reduce rainwater run-off through the use of suitable Sustainable Drainage Systems (SUDS) as far as possible.

The Government sets out requirements for planning and development in relation to flood risk in the National Planning Policy Framework and supplementary guidance. Local Planning Authorities have a responsibility to ensure that inappropriate development in areas of flood risk is avoided, that new development does not increase vulnerability to flooding and that risks are managed through suitable long-term measures. Opportunities to improve existing vulnerable areas should be taken, for example, by incorporating sustainable drainage systems in new developments or incorporating green infrastructure.

The London Plan reiterates the national importance given to flood risk assessment, advising Boroughs that they should use Strategic Flood Risk Assessments when developing their Local Plans, identify areas with surface water management problems and encourage development to use Sustainable Urban Drainage Systems (SUDS).

Bromley is covered by two river catchments, the Ravensbourne and the Cray and both of these rivers and many of their tributaries have their source in Bromley. The risk of fluvial flooding within the urban parts of Bromley has been greatly reduced by the construction of defences and channel culverting however there are still some problems with surface water flooding in the urban area.

In accordance with national guidance, Bromley Council has produced a strategic flood risk assessment (SFRA) which identifies areas of the Borough that are at risk of flooding from a range of sources. This study is being updated to accompany the development of the Local Plan, both to help develop future policy and to inform the process of site allocation.

Flood Risk Areas have been identified which include Environment Agency Flood Zones 2 and 3 and surface water flood risk hotspots (see map). In these areas particular attention needs to be paid to reducing both the existing and potential risk from flooding and therefore any new development will be required to assess its potential impact and mitigate accordingly. Outside these areas, major

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developments, as a result of their nature in being larger or more significant, will also be required to make a full assessment of their impacts.

To address the contribution that even small developments can make to flooding problems, all developments should aim to reduce surface water run-off to sewers and minimise rainwater run-off by following the drainage hierarchy set out in the London Plan (see SUDS policy below).

The Council will need update Bromley's Strategic Flood Risk Assessment at least every 5 years or more frequently if circumstances require, ensuring that changes in flood risk area are identified and suitable responses implemented.

Draft Policy - Sustainable Urban Drainage Systems

All developments should seek to incorporate SUDS or demonstrate alternative sustainable approaches to the management of surface water as far as possible. Applications for developments located within Flood Zones 2, 3a and 3b and in Flood Zone 1 for areas identified as hot spots in Bromley's Surface water Management Plan (SWAMP), Preliminary Flood Risk Assessment (PFRA) and in the Local Strategy must be accompanied by a FRA which addresses the criteria listed below:

Application of a site wide sequential approach to development by locating buildings within the areas of lowest flood risk on a site in accordance with the areas set out within the Surface Water Management Plan as areas with increased risk of surface water flooding.

Determination of potential overland flow paths and proposals for appropriate solutions to minimise the impact of development on surface water flooding. Road and building configuration should be considered to preserve existing flow paths and improve flood routing, whilst ensuring that flows are not diverted towards other properties elsewhere,

Application of SUDS measures to achieve at least 50% attenuation of the undeveloped (existing) sites' surface water run-off at peak times, aiming for 100% attenuation in line with the preferred standard in the Mayor's Sustainable Design and Construction SPG. In the areas outlined in the Surface Water Management Plan and in the Local Strategy as areas with increased risk of surface water flooding, a FRA should mitigate off site surface water flooding by aiming to achieve greenfield run-off rates or better. SUDS techniques should be applied with regard to the London Plan Sustainable Drainage Hierarchy outlined in Policy 5.13 or such guidance as supersedes it. Demonstrable justification should be provided on the extent to which each measure is being proposed.

Incorporation of soft landscaping and permeable surfaces into all new residential and non-residential developments. Retention of soft landscaping and permeable surfaces in front gardens and other means of reducing, or at least not increasing the amount of hard standing associated with existing homes is encouraged. New driveways or parking areas associated with non-residential developments and those located in front gardens should be made of permeable material.

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Consideration of vulnerability and importance of local ecological resources (such as water quality and biodiversity) when determining the suitability of drainage strategies/SUDS.

Demonstration of the maintenance and long term management of SUDS through a SUDS Management Plan. The developer and the Council will agree who will adopt the SUDS scheme and be responsible for the on-going maintenance.

Pollution prevention and control

Draft Policy - Contaminated land

Where the development of contaminated land, or land suspected of being contaminated, is proposed, details of site investigations and remedial action should be submitted.

Applicants are required to submit, for approval:

- A desk study before starting investigations on site
- A full site investigation including relevant sampling and analysis to identify pollutants, risks and a remediation strategy
- A remediation strategy
- A closure report on completion of works

The NPPF states that new development should be appropriate for its location in order to prevent potential risks to health, the environment and general amenity. The London Plan states that, wherever practicable, sites that have been affected by contamination should be brought back into use and in doing so the risks to health and the environment can be dealt with. When the development of contaminated land is proposed it is vital to assess the nature of that contamination and fully address measures to remediate that land wherever possible. If planning permission is given based on an initial desktop study, that permission will include conditions ensure that the further stages of investigation and management are secured.

Draft Policy - Noise pollution

In order to minimise adverse impacts on noise sensitive receptors, proposed developments likely to generate noise and or vibration will require a full noise/vibration assessment to identify issues and appropriate mitigation measures.

New noise sensitive development should be located away from existing noise emitting uses unless it can be demonstrated that satisfactory living and working standards can be achieved and that there will be no adverse impacts on the continued operation of the existing use.

The design and layout of new development should ensure that noise sensitive areas and rooms are located away from parts of the site most exposed to noise

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wherever practicable. External amenity areas should incorporate acoustic mitigation measures such as barriers and sound absorption where this is necessary and will assist in achieving a reasonable external noise environment.

In mixed use buildings, conversions and changes of use which increase internal noise should incorporate measures to minimise the transfer of noise between different parts of the building.

The broad approach to reducing potential negative impacts of noise upon people's health and wellbeing has been set out in the [Noise Policy Statement for England](#) (DEFRA, 2010). The NPSE sets out the Government's vision for a co-ordinated approach to noise policy. It promotes the "effective management" of noise within the context of sustainable development with the following aims:

- Avoid significant adverse impacts on health and quality of life
- Mitigate and minimise adverse impacts on health and quality of life; and
- Where possible, contribute to the improvement of health and quality of life.

The NPSE refers to the World Health Organisation noise impacts levels – from No Observed Effect to Significant Observed Effect – but does not set out actual values for these, acknowledging that this allows for policy flexibility until further evidence and guidance become available.

In turn, the NPPF requires planning policies and decisions to avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development and to mitigate and reduce noise to a minimum. It is recognised that development will often create some noise and that a balance is needed to ensure that existing business should not have unreasonable restrictions put on them because of changes in land use since they were established.

The London Plan states that boroughs should have policies to reduce the adverse impact of noise through the appropriate location of noise producing and noise sensitive uses – that is, uses such as homes, hospitals and day centres - and that any particularly tranquil areas may be afforded extra protection. Development proposals should seek to reduce noise by minimising the existing and potential adverse impacts of noise on, from and within the vicinity of development. New noise sensitive development should be separated from major noise sources wherever practicable through distance, screening or internal layout in preference to sound insulation.

The [Mayor's Housing SPG](#) sets out baseline standards for how noise should be managed in new residential development, highlighting the need to consider elements of design that enable the home to become a comfortable place of retreat. The SPG advises, for example, that developments should avoid single aspect dwellings that are exposed to noise levels which affect quality of life and that the layout of dwellings should seek to limit the transmission of noise to sound sensitive rooms.

The [Draft Sustainable Design and Construction SPG](#) also outlines practical measures that can be taken to minimise noise being produced and through both

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engineering solutions, design and layout and management activities. Where noise sensitive uses are proposed, applicants should consider a range of design measures to help mitigate any impacts.

In Bromley, the main problems with noise arise from transportation (road and rail), commercial operations (plant such as air conditioning, kitchen ventilation and extraction), industrial activity and from licensed premises. Planning has a role alongside environmental protection legislation to help locate activities appropriately and ensure adequate standards are proposed in new development to minimise future noise problems and reduce existing ones.

Draft Policy - Air quality

Developments which are likely to have an impact on air quality or which are located in an area which will expose future occupiers to pollutant concentrations above air quality objective levels will be required to submit an Air Quality Assessment.

Developments should aim to meet “air quality neutral” benchmarks in the [Air Quality Neutral Report](#).

In the designated Air Quality Management Area:

- Developments should incorporate Ultra Low NOx boilers
- Biomass boilers should be avoided unless emission standards can be met.

The NPPF states that planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account Air Quality Management Areas and the cumulative impact of air quality from individual sites. Planning policies should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.

The London Plan requires that boroughs should have policies that seek reductions in pollutants and take account of the findings of air quality reviews and assessments, particularly where Air Quality Management Areas have been designated. The [Mayor's Air Quality Strategy](#) and the [Draft Sustainable Design and Construction SPG](#) set out that developments are to be at least “air quality neutral”, aiming to meet the benchmark standards in the [Air Quality Neutral Report](#).

The Borough periodically reviews and assessed air quality within its area. National air quality objectives (AQOs) have been designated for:

- Nitrogen dioxide (NO₂)
- Particulates
- Carbon monoxide
- Benzene
- 1,3-Butadiene
- Sulphur dioxide
- Lead
- Ozone

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Following extensive air quality modelling Bromley, like many other local authorities, declared an air quality management area (AQMA) in 2007. The AQMA covers the North and North West of the borough and is in response of predicted exceedance in nitrogen dioxide levels. In 2010 Bromley subsequently published an Air Quality Action Plan detailing actions to tackle the air quality exceedances. The Action Plan is currently being reviewed and an Updated Screening Assessment is being undertaken to establish future plans for the AQMA.

The main cause of air pollution problems in Bromley arise from traffic, domestic heating and cooking (boilers, gas cookers, stoves), restaurants and commercial cooking and heating, industrial emissions and construction.

Draft Policy – Ventilation and odour control

Proposals for restaurants and cafes (Class A3), drinking establishments (Class A4) and hot food takeaways (Class A5) should include details of an adequate ventilation system to prevent the escape of fumes to the outside whilst minimising noise, vibration and visual impact.

Fumes and smells from food and drink premises can create a nuisance to neighbours and should be controlled through effective ventilation systems. Conditions will be applied to any permission involving potential emissions to ensure that adequate standards may be achieved.

Draft policy - Light pollution

Lighting in new development, including flood lighting, should be at an appropriate level so as to minimise impact on amenity whilst ensuring safe and secure places. Lighting should:

- be the minimum required for the proposed purpose
- have no adverse effect on residential amenity through glare or hours of operation
- not be visible from the wider area
- have no adverse impact on road safety, landscape or nature conservation

Light pollution – artificial light which intrudes on areas not intended to be lit – can be a nuisance and a public health issue. From street lighting to floodlighting, a range of measures can reduce problems of glare and light spillage without compromising safety. The NPPF states that, through good design, planning policies and decisions should limit the impact of light pollution on local amenity, intrinsically dark landscapes and nature conservation.

Sustainable design and construction

Draft Policy - Sustainable design and construction

All developments should, in addition to the general design principles set out in Policy X (general design), demonstrate that the principles of sustainable design

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and construction set out below have been integrated as appropriate and have been taken into account in the design process of the proposal.

The London Plan sets out the general principles of sustainable design and construction which cover a range of elements which should be taken into account in the early stages of design:

- Minimise carbon dioxide emissions
- Avoid internal overheating and contributing to the heat island effect
- Use of natural resources, including water, efficiently
- Minimise pollution (including air, noise and run-off)
- Minimise the generation of waste and maximising reuse and recycling
- Avoid impacts from natural hazards including flooding
- Ensure developments are comfortable and secure for users
- Secure sustainable procurement of materials
- Promote and protect biodiversity and green infrastructure

The Council expects that applying these principles alongside other policies in the plan, will result in development that demonstrates a fully integrated approach to design and sustainability.

In cases of the refurbishment or redevelopment of particularly sensitive buildings such as those which are statutorily listed, guidance from English Heritage should be sought to ensure the principles are followed as far as possible without causing unnecessary harm.

Applications for major development proposals should include information about how each of the principles have been addressed in a stand-alone statement or within other appropriate documentation. However the majority of planning applications in Bromley are for non-major developments, and not all the principles may be relevant nor solutions practical. For these smaller developments, which cumulatively can have significant impacts, it is proposed to develop a checklist of the principles and possible solutions. These would be publicised and made available for applicants to demonstrate that they have taken the issues into account albeit it in a more proportionate way that is relevant to the scale of development.

Draft policy - Carbon reduction, decentralised energy networks and renewable energy

Major developments should aim to reduce their carbon emissions above the building regulations and in accordance with the levels set out in the London Plan. The energy requirements and carbon emissions of proposed developments should be assessed and a clear reduction strategy proposed in line with the energy hierarchy.

The carbon reduction should be met on site unless it can be demonstrated that it is not feasible. In exceptional circumstances any shortfall may be met off site only where an alternative proposal is identified and achievable.

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Major development proposals should investigate the potential for connecting to an existing decentralised heat or energy network or developing a site-wide network where feasible. The potential for renewable energy should be assessed with major developments aiming to incorporate on-site technology to contribute to 20% of the overall carbon reduction where feasible.

The London Plan sets out a stepped approach towards zero-carbon development whereby targets for carbon emissions gradually increase up until 2031. Currently, major developments are expected to achieve a 40% reduction in carbon dioxide emissions over the 2010 buildings regulations, where feasible, and this should be ideally made on-site. The strategic aim is to consider all potential carbon dioxide emissions including those which are not covered by the Building Regulations (“unregulated emissions”) such as that from electrical equipment and portable appliances, thus highlighting how much of a contribution can be made from efficient equipment and good management practices.

The production and submission of an energy assessment and energy/ carbon reduction strategy is already part of the planning application process for major developments. Ideally the Mayor’s energy assessment guidance should be followed but there is flexibility in the format as long as the key elements are included (set out in Policy 5.2. of the 2011 London Plan). As part of a planning permission, a condition would normally be imposed to require the submission of a final energy strategy – before commencement - which reflects the actual, rather than theoretical situation. This also allows for some flexibility for essential changes which may come about during the final design stages, although these must be agreed with the Local Planning Authority.

The energy hierarchy sets out a very simple approach:

1. Be lean: use less energy, reduce demand
2. Be clean: supply energy efficiently,
3. Be green: use renewable energy

By encouraging more sustainable design and construction principles, taking opportunities for sustainable refurbishment and wide education on reducing energy use, “being lean” is the first and most important step on the hierarchy.

In terms of “being clean”, even fossil fuels can be better used – gas rather than centrally produced electricity or local decentralised energy networks can make a significant difference compared to older technology and infrastructure. In a Borough such as Bromley, the possibilities for significant decentralised energy networks (i.e. local production and distribution of energy and waste heat) are currently relatively limited due to the relatively low density patterns of development and lack of uses for excess heat in appropriate locations. However, there are areas such as the larger town centres where opportunities to establish energy networks are being promoted and “energy centres” are starting to form part of major development schemes.

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The London Plan currently sets out the expectation that all major developments will seek to reduce carbon emissions by at least 20% through on-site renewables. In many cases, the contribution of renewable energy on site can be a relatively simple and cost-effective solution to reducing carbon emissions, especially on some smaller development schemes. Ideally, renewable technologies are fully integrated into being an efficient and effective decentralised heating and energy system on-site rather than considered an “add on”. The majority of new developments and some refurbishments are capable of including renewable energy technology successfully with the key being to look at the options early in the design process. Should the government and the Mayor of London proceed with ideas to off-set carbon emissions in other ways, including payment in lieu, this may become more common.

As for general sustainable design and construction principles, there may be particular sensitive buildings, particularly those which are statutorily listed, where the visible elements of renewable energy infrastructure may cause harm. In these cases, English Heritage advice should be sought to achieve the best possible solution. In future this may include looking for off-site solutions or payment in lieu as outlined above.