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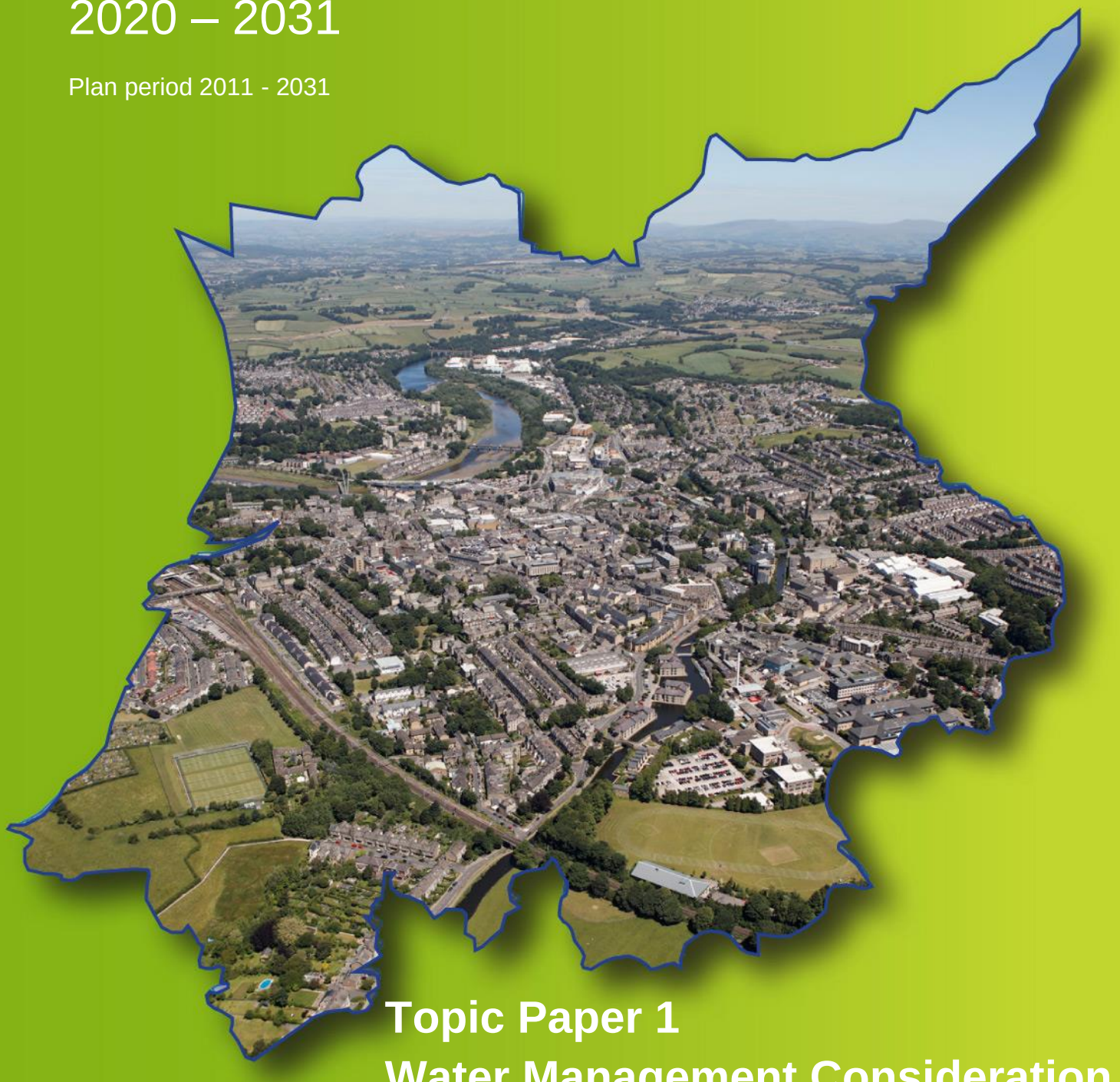
A Local Plan for

Lancaster District

2020 – 2031

Plan period 2011 - 2031



Topic Paper 1
Water Management Consideration of Alternative Policy Approaches

[May 2021]

Shaping a better future

LANCASTER CITY COUNCIL
Promoting City, Coast & Countryside

Contents

1.0 Introduction

This document sets out what alternative policy approaches have been considered in the Climate Emergency Local Plan Review (CELPR).

At the scoping consultation stage, a list of 32 policies that are contained in the adopted Local Plan were highlighted as possibilities for amendments as part of the CELPR. The policies from this list that related to Water Management are as follows:

POLICY NUMBER	POLICY TITLE	POLICY DESCRIPTION	IMPLICATIONS ON CLIMATE CHANGE
DM33	**Development and Flood Risk**	The policy seeks to address the issues associated with flooding and flood risk in new development in accordance with national planning policy.	One of the impacts of Climate Change is the greater occurrence of extreme rainfall events which increase opportunities for flooding which can threaten both life and property. The Policy should be considered for review in the context of National Planning Policy to ensure that the policy is robust and consistent in relation to flood risk matters.
DM34	**Surface Water Run-Off and Sustainable Drainage**	The policy seeks to provide a generic approach towards the role of sustainable drainage within new development to minimise water run-off and provide effective water management on-site via SuDS.	The policy sets a supportive approach towards the delivery of Sustainable Drainage Systems (SuDS) however the policy could be reviewed to consider whether the role of the SuDS hierarchy the promotion of the most sustainable forms of drainage can become a requirement rather than merely something which is encouraged.
DM35	**Water Supply and Waste Water**	The policy identifies the importance of ensuring that new development has adequate and appropriate connections to a water supply and wastewater network.	The demands for water may well increase through changes to the climate and therefore working to secure supplies (in co-ordination with United Utilities) may be part of the Local Plan Review.
DM36	**Protecting Water Resources and Infrastructure**	This policy highlights the importance of protecting water resources and infrastructure which is critical to maintaining an effective water supply and wastewater network.	The demands for water may well increase through changes to the climate and therefore working to protect supplies and deliver infrastructure improvements (in co-ordination with United Utilities) may be part of the Local Plan Review.
DM43	**Green Infrastructure**	The policy sets out and approach to the protection of and improvement of Green Infrastructure within the district.	The policy could be expanded and reinforced to greater promote the role of Green Infrastructure and their networks across the district for the wider benefit of local communities and the environment.

<u>Outcomes of the scoping consultation (held Sept-Nov 2020)</u>

During the consultation, water management emerged as one of the key topics raised by the respondents. In particular, the impact of flooding and drainage and recent weather events that have taken place in the district.

Issues raised related to the increased risk of flooding arising from changing to weather patterns due to climate change and increased development of land in the district. The potential for flooding to be exacerbated by the development of land allocated within the Local Plan was raised by a significant number of respondents. Opinions included a need to ensure that new development prevented rather than simply mitigated flooding, that the mitigation required by the current planning polices does little to protect existing homes and that the responsibility for and maintenance of SuDS features was lacking and ad-hoc.

The enhancement of policies to address flooding and surface water drainage is supported by the majority of respondents, including the Environment Agency, Lead Local Flood Authority and United Utilities. Responses received on behalf of developers were however less positive, with the majority of the opinion that the current policy framework is appropriate, compliant with national policy and no substantial change to the Council's approach is necessary. Concern has been raised that a mandatory requirement for SuDS being would be unsound.

A range of suggestions have been made about how the local plan can address the issues raised. It is important to note that when considering these, policy and legislation must be considered and therefore not all ideas and proposals will be implementable:

- Water management should prevent rather than just mitigate flooding with a requirement for proposals to provide materially significant betterment compared to pre-development rates for any development within a catchment where flood risk from any source exists and to improve flood risk off site for existing properties.
- Prevent development on land where housing downstream will flood.
- Water management should take a natural, holistic flood management approach (SuDS), with developments making space for water and the wildlife that thrives in that environment. The benefits of natural wetland should be incorporated into development and other nature-based solutions, such as ponds should be used to reduce flooding.
- Increase the green and blue space in development to act as water retention areas.
- Include a requirement for grey water retention and recycling.
- Include a new policy addressing energy and water in industrial buildings.
- Policies should include monitoring requirements for the implementation and management of SuDS.
- All SuDS should be offered in the first instance for adoption by UU.
- Standards for water management, maintenance and SuDS should be written into policies and enforced.

- Plans for the management of surface water should be included at the preplanning stage and considered as part of any application.

The Environment Agency encourage strengthening the requirements for flood risk management to consider off-site impacts on the wider catchment and scrutiny in conjunction with the impact from existing or future neighbouring sites. They request that the Council implements a mechanism to enable a developer to deliver or contribute to offsite adaptation measures (e.g. natural flood management upstream of a new development, provision of flood storage in response to land raising, upland peatland restoration at the head of a catchment).

The Environment Agency emphasizes the need to ensure climate change is taken into account for the lifetime of the development, they encourage the provision of more guidance to ensure sufficient emphasis is placed on the Sequential Test to direct development away from flood zones. They also encourage a strengthening of the requirement for SuDS, the use of tighter water consumption standards (adoption of the Building Regulation water efficiency standard) and a requirement for new development to produce a Climate Change Statement that demonstrates a commitment to a broad range of specified climate change mitigation and adaptation measures.

Lancashire County Council as the Lead Local Flood Authority encourage the specification of a higher end allowance to be required in SuDS design, a requirement for 'betterment' to be included to meet the minimum SuDS design standards but to also provide a contribution towards addressing wider drainage issues faced by the community.

United Utilities emphasizes the importance of applying the surface water hierarchy for the discharge of surface water in a rigorous and consistent manner, ensuring that SuDS are considered at the earliest possible stage in the preparation of a design solution, an expectation for new development to utilise the green infrastructure for surface water attenuation, improvements to biodiversity and resulting improvements to the wider water environment and to fully embrace SuDS principles aimed at provision of exemplary SuDS features, in accordance with the CIRIA SuDS manual.

United Utilities request that the Council to adopts the Building Regulations water efficiency requirements and encourage the use of design techniques such as rainwater recycling, green roofs, water butts and permeable surfaces that help to reduce pressure on public water supply and the public sewerage system along with mitigating the impact of potential flood risk both within and beyond a site boundary.

2.0 Policies relating to Water Management

The existing policies in the adopted Local Plan, included within the list of 32 policies subject to the scoping consultation, which relate to Water Management are as follows:

- DM33: Development and Flood Risk;
- DM34: Surface Water Run-Off and Sustainable Drainage;
- DM35: Water supply and wastewater;
- DM36: protecting water resources and infrastructure;
- DM43: Green infrastructure.

These policies are set out below, with their associated supporting text. The proposed new policy changes are illustrated as strikethrough red text and new additional text highlighted in blue.

A discussion of the alternative policies and policy detail is considered is given for each, including information on the SA/SEA/HRA work that is being undertaken as well as how the policies ensure better outcomes in relation to climate change.

How do the policies in this topic paper ensure better outcomes in relation to Climate Change?

One of the most apparent manifestations of climate change is the increased amount of precipitation and the severity of events. Lancaster District has experienced several episodes of flooding in recent years, the most severe relating to Storm Desmond in 2015, which was referred to as unprecedented, but which was followed soon after by further severe flooding in 2017.

During the 2015 Storm Desmond event, over 250 homes and 200 businesses were flooded in Lancaster District with nearly 68,000 properties affected by loss of services such as electricity or sanitation, restricted access, or the gardens/grounds were flooded. A fifth of the properties flooded in Lancashire were in Lancaster District. In November 2017, 658 properties were affected in the Lancaster district out of the total of 982 across Lancashire.

The UK Climate Projections (UKCP) provide the most up-to-date assessment of how the UK climate may change in the future.

UK Climate Projections: Headline Findings (September 2019, Version 2)[1]:

'The most recent decade (2009-2018) has been on average 1% wetter than 1981- 2010 and 5% wetter than 1961-1990 for the UK overall.

Winters in the UK, for the most recent decade (2009-2018), have been on average 5% wetter than 1981-2010 and 12% wetter than 1961-1990. Summers in the UK have also been wetter, by 11% and 13% respectively. However, very long-period natural variations are also seen in the longer observational record. These show periods in earlier parts of the historical record with similar levels of UK summer rainfall to 2009-2018, illustrating the importance of considering long period natural variations.

Total rainfall from extremely wet days (days exceeding the 99th percentile of the 1961-1990 rainfall) increased by around 17% in the decade (2008-2017), for the UK overall. However, changes are largest for Scotland and not significant for most of southern and eastern England.

Hourly precipitation extremes increase in future. The CPM shows increases of 25% [1990 to 2070] in the precipitation associated with an event that occurs typically once very 2 years.'

Mean sea level around the UK has risen by about 17 cm since the start of the 20th century (when corrected for land movement).'

The following headline projections have been made for precipitation by the 2070's relative to the 1981-2000[2]:

- Winter precipitation increases of around 35%.
- Extreme hourly intensity associated with an event that typically occurs once every 2 years increased by 25%.
- Events will be of higher intensity.

This means that we can expect to see more intense rainfall events. During these events, the land has less time to absorb the rainfall leading to increased run-off, especially in the rapid response catchments in the District. There is also likely to be an increase in the frequency and magnitude of extreme water levels around the UK coastline.

In view of the projected changes to precipitation and sea level, the severity of recent climate change related events, and the continuation of other instances of flooding, this topic has been included within

[1] https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp-headline-findings-v2.pdf

[2] https://www.metoffice.gov.uk/pub/data/weather/uk/ukcp18/science-reports/ukcp-infographic-headline-findings.pdf

the scope of the Climate Emergency Review of the Local Plan.

Consideration has been given in the context of existing policies and whether these adequately take climate change into account, to ensure the protection new and existing properties from flooding and ensure the future resilience of new and existing communities. The review also considers whether existing policy is adequate to ensure that surface water drainage schemes are appropriately designed to make the best use of above ground techniques to reduce and mitigate flooding, support biodiversity enhancements, and provide urban cooling and pollution control. In addition, the review revisits policies to consider whether they are adequate in ensuring that such systems are maintained in the long term.

Proposed Local Plan Policies

Policy DM33: Development and Flood Risk

Policy DM33 sets out the Councils approach to addressing flood risk when determining planning applications. The policy provides a clear direction that new development should be located in the areas at lowest flood risk and provides criteria to minimise the risk of flooding.

POLICY DM33: DEVELOPMENT AND FLOOD RISK

Proposals will be required to minimise the risk of flooding to people and property by taking a sequential approach which directs development, including access/egress, play/recreation areas and gardens, to the areas at the lowest risk of flooding. Consideration must ~~should~~ be given to all sources of flood risk.

New development will need to satisfy the requirements of the sequential test and exception test where necessary in accordance with the requirements of national planning policy and any other relevant guidance, including the Council's Flood Risk and Sustainable Drainage Supplementary Planning Document. Where proposals fail to satisfy the requirement of these tests they will be refused.

The functional flood plain (flood zone 3b as identified within the Council's most up-to-date Strategic Flood Risk Assessment) will be protected from new development. New development must not impede the flow of water within flood zone 3b nor should it reduce the volume available for the storage of flood water. Proposals, other than for necessary essential infrastructure or water compatible uses, will only be permitted in the flood plain in exceptional circumstances.

Proposals for new development in areas at risk of flooding from all sources as defined by National Planning Policy and surface water and ground water flooding will be required to meet the following criteria:

I. **Proposals are supported by a Sequential Test, and where necessary Exception Test in accordance with National Planning Policy, other relevant guidance and the Council's Flood Risk and Sustainable Drainage Supplementary Planning Document;**

II. **An Exception Test will be required for sites allocated in the Local Plan, where new data sources with regard to flood risk become available and those sources indicate that flood risk from any source has increased since a site was allocated in the Local Plan;**

~~II.~~ III. **That they are supported by an appropriate site-specific Flood Risk Assessment (FRA) which demonstrates that the proposal meets the requirements of National Planning Policy and accompanying practice guidance;**

~~III.~~ IV. **That safe, suitable and appropriate flood prevention, resilience, adaptation and mitigation measures are agreed, implemented and maintained, including through design and layout, taking Climate Change into account, to ensure that development, including access/egress, play/recreation areas and gardens, is appropriately flood resilient and resistant for its lifetime;**

~~IV.~~ V. **Proposals reduce the existing causes and impacts of flooding by reducing ~~There will be no net increase of flooding beyond the site as a result of development (such as increases in~~ surface water run-off and/or ~~the reduction in~~ increasing the capacity of flood storage areas~~)~~;**

~~V.~~ VI. **There is no adverse effect on the operational functions of any watercourse or existing flood defence infrastructure and opportunities are taken to improve the function of watercourses, such as removing culverts and naturalisation of heavily modified channels;**

VII. **That opportunities are taken to introduce natural flood management techniques on and off the site to reduce flooding;**

~~VI.~~ VIII. **Sites must ~~should~~ be drained on a separate system with foul water draining to the public sewer and surface water draining ~~in the most sustainable way,~~ in accordance with the Sustainable Drainage Hierarchy in policy DM34; and**

~~VII.~~ IX. **All proposals for new development must take account of the Council's most up-to-date Strategic Flood Risk Assessment (or the most up-to-date Council flood risk assessment available) in combination with any other relevant evidence including that of the Lead Local Flood Authority (Lancashire County Council) and the Environment Agency and the Council's Flood Risk and Sustainable Drainage Water Supplementary Planning Document.**

Consideration must be given to the implementation of natural flood management techniques in partnership with the Lune Rivers Trust and other key organisations.

Supporting text:

9.34 Lancaster District is an area that is particularly susceptible to flood risk. The district contains a stretch of coastline along Morecambe Bay which lies off the Irish Sea as well as a number of main rivers. In particular the River Lune, which is liable to flood in extreme weather events. The extreme floods of Storm Desmond in 2015 and more recently the flooding in Galgate and Halton in November 2017, highlighted the risk that remains within the district from flooding.

9.35 Many of the main settlement areas in the district lie within areas that, to varying degrees, are vulnerable to flooding, such as Lancaster along on the River Lune and Morecambe adjacent to Morecambe Bay, and a number of the sustainable settlements identified under Policy SP2 of the Strategic Policies & Land Allocations DPD. There are approximately 400 homes (the number will be updated if necessary, once the SFRA has been completed) in the district with a 1% Annual Probability Event risk of fluvial flooding (from rivers). The number of properties at potential risk from surface water is greater still. There are currently no Critical Drainage Areas within the District. However, the Council will continue to work with the Lead Local Flood Authority and the Environment Agency, to periodically consider the need and appropriateness of this position.

9.36 In light of the risk of flooding that exists within the District the development strategy proposed in the Strategic Policies and Land Allocations DPD seeks to direct the majority of new development to those areas at lowest risk, for example through leaving much of the area falling within higher flood risk zones between Heysham and the River Lune free from development. Since the sites within the Local Plan were allocated, the Environment Agency flood zones and areas at risk of surface water flooding have been updated. It is therefore necessary to ensure that where the risks of flooding have increased, sites are subject to an exception test in accordance with paragraph 162 of the NPPF (paragraph number to be amended following publication of the revised NPPF). Development not allocated within the Local Plan will be subject to a sequential test in accordance with the Government guidance.[3]

9.37 The Council has prepared an updated Strategic Flood Risk Assessment (Level 1) published in ~~November 2017~~ dated (month to be included once complete) 2021 which provides recommendations for managing flood risk within the District. The Assessment also identifies those areas within the functional floodplain (Flood Zone 3b). These areas are required to be kept free from development so that they allow the storage of floodwater at times of flooding in a place which avoids risk to people.

9.38 The Council will seek to ensure that new development does not increase flood risk through

[3] https://www.gov.uk/guidance/flood-risk-assessment-the-sequential-test-for-applicants

steering development to areas at lowest risk. Where this cannot be achieved the Council will expect proposals to include appropriate mitigation measures to effectively deal with flood risk and reduce flood risk elsewhere. One method of how flood risk can be mitigated and reduced is through the use of Sustainable Drainage Systems (SuDS) to manage surface water flows. SuDS can also assist in pollution control through improved filtration and habitat creation within developments.

9.39 It is important that new development proposals, particularly those which are located in, or close to areas which are at risk from flooding are designed to be resilient in terms of their layout, design and construction to ensure that they are adaptable and can withstand potential future flood events and take into account the impacts of Climate Change. New development should take opportunities to include measures which will minimise the risk of flooding on and off a site in accordance with paragraph 157c of the NPPF (paragraph number to be updated following publication of the revised NPPF).

9.40 Development proposals in locations which are vulnerable to flood risk should be accompanied by an appropriate assessment of the risks posed, either directly or in-directly. Flood risk assessments should include clear details of existing drainage arrangements, for example flood risk assessments for brownfield sites should identify existing points of connection for surface water drainage and details of those points of connection. This information is critical to ensure adequate assessment of pre and post development run off rates ~~and therefore~~ to ensure flood risk is ~~not increased~~ reduced on and off site in accordance with paragraph 157c[4] and to ensure consistency with policy SP8 of the LASPDPD.

9.41 New development must consider the Strategic Flood Risk Assessment and any updated Environment Agency Flood Zone Maps that highlight areas at risk and vulnerable to flooding, either from fluvial (river) sources, coastal flooding or surface water flooding. The maps also show variations in the areas of risk, and highlight land in Zone 3 as being at greatest risk from flooding and Zone 1 as being at limited risk from flood events. They are also updated on a regular basis to take into account revised data.

9.42 The National Planning Practice Guidance (NPPG) published by the Government in 20194 sets out a full range of guidance on matters relating to flood risk. Development proposals in areas that are vulnerable to flood risk should take account of the guidance provided in the NPPG, ensuring that matters such as providing a flood risk assessment, and addressing the sequential and exceptions test have been demonstrated through the application process.

[4] paragraph number to be amended following the publication of the revised NPPF) of the NPPF

9.43 Where relevant new development must also consider the Environment Agency's Shoreline Management Plan (SMP)[5] which sets out the recommendations for coastal management over the forthcoming 100 years. Similarly, for local river catchments new development must also consider the relevant Environment Agency's Catchment Flood Management Plans (CFMP)[6] and the North west Marine Plan[7].

Natural flood risk management techniques are encouraged as part of the green and blue infrastructure in new development. These techniques can help reduce run-off, aid biodiversity and the overall design and place making of a site. They will not however be included as part of a SuDS scheme and will not be form part of the calculations made to ensure the run-off from a site is reduced. Natural flood risk management can include measures on and off site to reduce the effects of flooding to the wider catchment.

Policy DM33: Alternative options

The policy remains largely unchanged as the much of wording reflects the requirements for addressing flood risk within the NPPF and the practice guidance. The Council intend to produce a Flood Risk and Sustainable Drainage SPD which will include additional guidance on the sequential and exception tests, the opportunity has been taken to refer to this document within the DPD.

A requirement to ensure that development takes opportunities to reduce existing causes and impacts of flooding and enhance bio-diversity have been included to reflect paragraph 157c (paragraph number to be amended following publication of the revised NPPF) of the NPPF and to ensure consistency with policy SP8 of the SPLADPD.

The incorporation of techniques to improve flood risk and biodiversity arising from natural flood risk techniques, improvements to watercourses and the naturalization of culverts has been included to further improve the plans treatment of biodiversity. The use of such techniques will also help developers meet the requirements of the Biodiversity Net gain which will be introduced when the Environment Bill is enacted.

[5] https://www.gov.uk/government/publications/shoreline-management-plans-smps
[6] https://www.gov.uk/government/collections/catchment-flood-management-plans
[7] https://www.gov.uk/government/publications/draft-north-west-marine-plan-documents

Since the sites within the Local Plan were allocated, the Environment Agency flood zones and areas at risk of surface water flooding have been updated. The assessment carried out as part of the SFRA (2017), which was used to determine whether the development of sites was appropriate and carry out a sequential test, is therefore out of date. The SFRA has been updated and indicates that the flood risk on some allocated sites has increased. It is therefore necessary to ensure that where the risks of flooding have increased, sites are subject to an exception test to ensure that they remain sustainable, they are designed and arranged to ensure development is located outside the areas at risk of flooding and that risks are mitigated. This requirement has been added to the policy to ensure that the risks are fully assessed.

Alternatives that were considered for this policy were:

- Not to amend the policy.

  This option would have failed to reflect the agreed scope of the climate change review of the local plan. It would fail to take the opportunity to improve the way in which the plan addresses flood risk arising from climate change and the biodiversity enhancements achievable through the use of natural flood management techniques.

How does this policy ensure better outcomes in relation to Climate Change?

The revised policy tackles climate change by ensuring that new development does not exacerbate flooding, but rather contributes to reducing flood risk beyond the site. It also seeks to ensure that natural flood risk management techniques are used where appropriate and watercourses are naturalised. These requirements will contribute to improving biodiversity as the planting associated with naturalising watercourses may contribute to carbon sequestration and open naturalised watercourses provide areas of cooling. The policies seeks to ensure development contributes to climate adaptation and mitigation.

Reference has been added to the necessity for an Exception Test where the flood risk has increased since a site was allocated in the Local Plan. This will ensure that where necessary, sites are reviewed in the context of climate change, contribute to wider sustainable development, will be safe for the lifetime of the development taking into account the increased risk of flooding and will contribute to reducing flood risk where possible.

SA/SEA/HRA Considerations (Completed by AECOM):

Alternatives in the context of SA/SEA need to be strategic in nature, meaningful and deliverable. Procedural choices such as 'not amending the policy' are not necessary to test in the SEA, as they simply represent the baseline position.

With regards to meaningful choices in relation to water management policies, no reasonable alternatives have been identified at this stage for this SA Topic. Instead, the SA process has been utilised to provide a broad commentary on the policy amendments and make further recommendations for enhancement where appropriate.

Many of the SA recommendations correspond with feedback and suggestions provided from stakeholders, reiterating the benefits and appetite to be proactive in tackling climate change.

Suggested changes by Lancaster City Council	**SA topics likely to be affected**	**Delivery / potential conflicts**	**City Council Response**
Amendment of Policy DM33 to require enhancement in terms of flood risk management (rather than leading to no net increase in flooding).	Natural Resources - +ve Biodiversity +ve	There will be a need to ensure that areas that benefit / rely upon flooding are not adversely affected. The focus needs to be on areas that involve sensitive receptors.	Additional background text has been included. The focus of policy is to minimise the impact on receptors sensitive to the adverse effects of flooding. Attention will need to be paid to the impact on habitats that rely on flood water. These habitats are addressed by policies SP8, EN7 and DM44.
Amendment of Policy DM33 so that opportunities should be taken to enhance the functioning of watercourses.	Natural Resources +ve Biodiversity +ve	This is not likely to lead to any negative effects on environmental assets, but the arrangements for determining how developments contribute to offsite improvements will need to be clear.	Such contributions would be acceptable where appropriate off-site schemes are available. Contributions however have not been tested for viability.
Amendment of Policy DM33 to ensure that access routes for developments are also resilient to flooding.	Natural resources +ve Transport +ve Communities +ve	There is no reason why access points cannot and should not be made resilient to flooding without affecting scheme deliverability and viability. This has clear benefits across a range of SA topics and is therefore considered to be a 'low cost measure'.	Comments noted.

Further recommendations	SA topics likely to benefit	Delivery and potential conflicts	City Council Response
Where it is difficult to achieve a net improvement in terms of surface water run off and flood storage, it might be beneficial to allow a contribution towards off-site flood protection and resilience works	Natural resources +ve	It is considered that these measures can be introduced without affecting the deliverability or viability of development.	Such contributions would be acceptable where appropriate off-site schemes are available. Contributions however have not been tested for viability.
Application of the drainage hierarchy to support natural / soft measures ahead of hard engineered solutions.	Natural resources +ve Biodiversity +ve	Covered in Policy DM34	Addressed in Policy DM34.
Consider identifying locations that could be suitable for offsite flood mitigation and enhancement (alongside the requirement for biodiversity net gain).	Natural resources +ve Biodiversity +ve	This approach would provide greater certainty and allow for more strategic scale implementation of flood management measures.	Would require a more strategic approach and reviewed evidence base. This might be something explored through future work on Biodiversity Net Gain.

HRA Screening

Policy	Policy Title and Description	Implications on Climate Change	Suggested Changes by the City Council	Screening Outcome	City Council Response
DM33	**Development and Flood Risk** The policy seeks to address the issues associated with flooding and flood risk in new development in accordance with national planning policy	One of the impacts of Climate Change is the greater occurrence of extreme rainfall events which increase opportunities for flooding which can threaten both life and property. The Policy should be considered for review in the context of National	Amendment of Policy DM33 to require enhancement in terms of flood risk management (rather than leading to no net increase in flooding). Amendment of Policy DM33 so that opportunities should be taken to enhance the functioning of watercourses	No Likely Significant Effect. Screened out. This policy is associated with the design of new developments . These are statements of intent and aspirations. The implementation of the suggested changes to this policy is not expected to have any	Comments noted

Policy	Policy Title and Description	Implications on Climate Change	Suggested Changes by the City Council	Screening Outcome	City Council Response
		Planning Policy to ensure that the policy is robust and consistent in relation to flood risk matters.	Amendment of Policy DM33 to ensure that access routes for developments are also resilient to flooding.	implications on European sites and potentially some beneficial effects through, for example, enhancement and Biodiversity Net Gain.	
		Further Recommendations	Where it is difficult to achieve a net improvement in terms of surface water run-off and flood storage, it might be beneficial to allow a contribution towards off-site flood protection and resilience works		Such contributions would be acceptable where appropriate off-site schemes are available. Contributions however have not been tested for viability.
			Application of the drainage hierarchy to support natural / soft measures ahead of hard engineered solutions.		Comments noted, addressed by Policy DM34.
			Consider identifying locations that could be suitable for offsite flood mitigation and enhancement (alongside the requirement for biodiversity net gain).		Potential projects for flood mitigation and enhancement will be considered through the Green and Blue Infrastructure Strategy.

From a HRA perspective, water environments are particularly important where they relate to habitats and species that are protected under European legislation. The use of SuDs which mimic natural drainage patterns and create areas of wetland habitat are therefore beneficial. Also important is the protection and enhancement of water quality.

Policy DM34: Surface Water and Sustainable Drainage

Policy DM34 sets out the Council's approach to surface water and sustainable drainage. It provides developers with a set of criteria and guidance to ensure that sustainable drainage schemes are designed to reduce flood risk and provide multi-functional benefits. The criteria and guidance is intended to support developers and ensure that submissions include the evidence and information required for a scheme to be assessed.

POLICY DM34: SURFACE WATER RUN-OFF AND SUSTAINABLE DRAINAGE

Surface water should be managed sustainably within new development. The Council expects that proposals for all new development will use Sustainable ~~Urban~~ Drainage Systems (SuDS), giving priority to naturalistic solutions incorporated into the soft landscaping of the development.

Applicants must demonstrate that surface water from new development accords with the following ~~in accordance with the Surface Water~~ Sustainable Drainage Hierarchy~~.~~:

i. **Re-use and reduce surface water run-off / rainwater harvesting / green walls/roofs**
ii. **Infiltration such as permeable surfaces, soakaways, unlined ponds, swales and trenches, wetlands etc.**
iii. **Attenuation above ground in ponds or water features for gradual release into infiltration features and if this is not possible to a watercourse.**
iv. **Attenuate surface water via storage in tanks or sealed water features for gradual release into infiltration features and if this is not possible a water course.**
v. **In exceptional cases, controlled discharge to a sewer or other drainage system, via above ground attenuation and if this is not possible underground attenuation.**

Surface water should be managed through the provision of above ground sustainable drainage features with multi-functional benefits as part of an integrated high-quality green and blue environment. All development must incorporate SuDS which have been designed to incorporate the following:

- **Flood risk reduction measures.**
- **The management of surface water in stages as close to the source as possible.**
- **Environmental and biodiversity benefits.**
- **Pollution control, multi-level source control.**
- **Landscape and amenity enhancement.**
- **Where site includes a water course, development must include measures to restore and provide natural flood management, remove and naturalise culverts, create a steady predictable flow, include storage, measures to slow water flow.**
- **Measures of an adoptable standard.**

SuDS must be designed in accordance with 'Ciria C753 The SuDS Manual' or any subsequent replacement guidance and the Council's Flood Risk and Sustainable Drainage SPD. ~~Proposals for all new development should implement sustainable drainage systems, alternatives~~ Below ground attenuation will only be permitted where above ground SuDS have ~~it has~~ been demonstrated to be inappropriate or impracticable~~.~~ and the developer has provided a robust justification for the proposal.

Applicants wishing to discharge to public sewer or highway drain will need to submit clear evidence demonstrating why alternative options are not available.

~~**Sustainable drainage systems should be designed with due regard to the Department for Environment, Food and Rural Affairs technical standards (2015) or any future replacement.**~~

Applicants will be expected to demonstrate that development reduces and manages flood risk by reducing the amount of run-off and discharge from the site through the use of appropriate water reuse and sustainable drainage systems techniques. As a minimum development is required to meet ~~meeting~~ the following run-off rates:

- **On greenfield sites, the peak run-off rate and the run-off volume[A] must not exceed the existing greenfield rates for the same rainfall event[A]. A 40% climate change**

allowance or the upper end allowance for the longest term projection in Table 2, of the 'Environment Agency Flood Risk Assessments: Climate Change Allowances'[B], whichever is the higher (or any updated climate change allowances published by the Environment Agency) and an urban creep allowance of 10% must be applied.

- On previously developed land, the peak run-off rate and run-off volume[A] must not exceed greenfield rates from the development for the same rainfall event[A]. Where this cannot be achieved a 30% reduction of the existing peak run-off rates for the site must be achieved. A 40% climate change allowance or the upper end allowance for the longest term projection in Table 2, of the 'Environment Agency Flood Risk Assessments: Climate Change Allowances'[B], whichever is the higher (or any updated climate change allowances published by the Environment Agency) and an urban creep allowance of 10% must be applied.

Only where evidence is supplied to justify why this level of attenuation is not achievable on a site, will the lower rate be acceptable.

All proposals for residential development of 5 of more units or other development with a site area of 1 hectare or more, or 1,000 square metres of floor space, ~~major development~~ will require the submission of:

- A~~a~~ Sustainable ~~d~~Drainage ~~s~~Strategy. ~~to be submitted.~~ The Sustainable ~~d~~Drainage ~~s~~Strategy must show the type of sustainable drainage system and/or detailed measures proposed~~,~~ and measures to protect flooding and pollution during construction (depending on the type of application). For any development proposal which is part of a wider development site, it will be necessary to ensure the foul and surface water drainage proposals are part of a wider, holistic strategy which coordinates the approach to drainage between phases, between developers, and over a number of years of construction.
- The NW SuDS Pro-forma (included within the Flood Risk and Sustainable Drainage SPD) and the information/evidence required by the Pro-forma.
- A comprehensive Surface Water Lifetime Management and Maintenance Plan which includes ~~how minimum standards of operation are appropriate and~~ ~~that~~ clear arrangements ~~are in place~~ for ongoing management and maintenance over the lifetime of the development.
- Post construction, applicants must provide to the Council certification that the sustainable drainage scheme has been implemented in accordance with the approved scheme.

Further information about the requirements can be found in the Flood Risk and Sustainable Drainage SPD.

A – Peak runoff rate, runoff volume and rainfall events as defined in the Department for Environment, Food and Rural Affairs, Sustainable Drainage Systems, Non-statutory technical standards for sustainable drainage systems, March 2015 - Sustainable Drainage Systems: Non-statutory technical standards for sustainable drainage systems (publishing.service.gov.uk)

B- Table 2: peak rainfall intensity allowance in small catchment (less that 5km^2) or any urban drainage catchments (based on a 1961 to 1990 baseline) - https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Supporting text:

9.44 Surface water flooding occurs where the ground and rivers can no longer absorb heavy rainfall and when man-made drainage systems have insufficient capacity to deal with the volume of rainfall. Typically this type of flooding is localised and occurs very quickly in extreme weather so is difficult to predict and warn against. It is predicted that climate changes will result in more short-duration, high intensity rainfall and therefore surface water flooding is likely to become an increasing problem, particularly within the district's urban settlements.

9.45 Both urban and rural environments can be highly susceptible to surface water run-off. As a result the Council will therefore seek to ensure that new development reduces ~~limits~~ water discharge levels into local sewers and drains to improve capacity in the network. Discharge into sewers and highway drains will only be permitted in exceptional circumstances where the applicant provides evidence the alternatives means within the Sustainable Drainage Hierarchy in policy DM34 cannot be achieved and where the discharge rate is attenuated below the current discharge rates from the site.

Areas within Lancaster district have been the subject of severe flooding and reoccurring incidents. There are areas which are at particular risk of flooding as a result of increased urbanisation and climate change. The plan therefore seeks to manage and 'reduce the causes and impacts of flooding' on and off site through the use of SuDS, in line with the NPPF and planning practice guidance by seeking to ensure development reduces the run-off rates from sites and the higher rate of climate change is used in calculations. Only in exceptional circumstances will a higher discharge rate be permitted and in all cases the development should discharge at a rate lower than the current green/brown field rate for the ~~existing 1:100~~ same storm event with an 'upper end' Climate Change Allowance for the longest term projection in Table 2, of the 'Environment Agency Flood Risk Assessments: Climate Change Allowances', (or any updated climate change allowances published by the Environment Agency) and an urban creep allowance of 10%. This will ensure that opportunities are taken to reduce flooding on and off site and that allowances are made to ensure that the site addresses the impacts of climate change and plans for potential changes to the risk of flooding on a site in the long term. The aim to reduce flood risk accords with paragraph 157c of the NPPF (paragraph number to be amended following publication of the revised NPPF) and ensures consistency with policy SP8 of the SPLADPD. Consideration will also be given to 'strategic SuDS' where a limited number of attenuation and treatment areas are needed around areas of significant planned development.

The focus of the policy and aim to reduce flooding seeks to minimise the impact on receptors sensitive to the adverse effects of flooding. Where sites contribute to the water environment required to sustain habitats such as wetlands, attention will need to be given to the way in which water is managed to ensure that there is not an adverse impact on these habitats.

SuDS are an effective approach to mitigating and reducing flood risk. They can contribute to mitigating potential increases in surface water run-off, sewer flooding and flooding from watercourses. Above ground multi-functional SuDS can deliver wider sustainability benefits, enabling surface water to be collected for use in homes and gardens, adaption to climate change through enhancement and creation of biodiversity and habitats, placemaking and amenity. The use of SuDS can also manage pollution through treatment and reuse of surface water. This reduces pollutants entering watercourses and the amount of wastewater treatment required. The treatment of pollution at source can contribute to meeting the Water Framework Directive quality targets, as well as national objectives for sustainable development. Above ground SuDS can also be more cost effective to maintain and monitor than traditional underground features. The policy sets out a Sustainable Drainage Hierarchy and principals for the design of drainage schemes to ensure that the provide multi-functional benefits.

9.50 ~~SuDS can enhance biodiversity opportunities within new development.~~ Further information about biodiversity opportunities ~~on how this issue~~ can be found on the Natural England's, Environment Agency's and RSPB's websites. Careful consideration should also be given to the impacts of water run-off on designated environmental sites.

Underground conventional piped and tanked storage systems will only be acceptable where the applicant demonstrates that surface water management cannot be achieved through the provision of above ground sustainable drainage features due to ground conditions. Where conventional piped and tanked storage systems are proposed, they should be in addition to above ground SuDS and incorporate the minimum amount necessary to achieve the required run-off rate. Evidence will be required to justify such systems. Further details are provided within the Flood Risk and Sustainable Drainage SPD.

9.51 Surface water must not be discharged into the foul sewer system; United Utilities will not grant permission for such a proposal, except for in exceptional circumstances where it can be proven that there is no other feasible alternative. Equally surface water must not be discharged onto the highway or onto other land without a watercourse nor be discharged in an unrestricted or uncontrolled fashion.

To be effective SuDS need to be an integral part of the design process to ensure that the layout, design of green and blue space and the design of buildings take every opportunity to reuse, infiltrate and attenuate water. SuDS design therefore needs to be take place start of the design process, not once the scheme has evolved. Developers should engage the Local Lead Flood Authority, using their pre-application process to reduce the necessity for amendments and abortive costs.

The NW SuDS Proforma sets out the information and evidence required for the Lead Local Flood Authority (LLFA) to assess the suitability of a drainage scheme. Completion and submission of the Pro-Forma together with the evidence required at the same time as the planning application will prevent delays in the process.

~~9.46 The Council advocates the use of a Surface Water Drainage hierarchy for new development in line with best practice. The hierarchy is as follows:~~

1. ~~Into the ground (infiltration at source);~~
2. ~~Attenuated discharge to a surface water body, watercourse or the sea;~~
3. ~~Attenuated discharge to surface water sewer, highway drain or another drainage system; and as a last resort~~
4. ~~Attenuated discharge to a combined sewer (only in exceptional circumstances where it can be demonstrated that no other options higher up the hierarchy are feasible).~~

~~9.47 In line with the Surface Water Drainage hierarchy, the Council will expect relevant proposals to investigate the suitability and, where appropriate incorporate the following attenuation measures:~~

- ~~Store surface water for later use;~~
- ~~Use infiltration techniques, such as porous surfaces in non-clay areas;~~
- ~~Attenuate surface water in ponds or open features for gradual release into the watercourse;~~
- ~~Attenuate surface water via storage in tanks or sealed water features for gradual release into the watercourse.~~

~~9.48 Where no alternative option exists other than to discharge surface water to a combined sewer, applicants must demonstrate why no alternative exists and submit clear evidence that discharge will be limited to an attenuated rate, including an allowance for climate change. The City Council will liaise with the appropriate bodies to ensure that this is acceptable.~~

When determining whether the peak run-off rate and run-off volume are ~~is~~ achievable, the Council will expect the applicant to demonstrate that they have made the best use of the land available in terms of housing density, flexibility in the design of house types and the provision of multi-functional spaces. On previously developed land, applicants will also be expected to follow the Sustainable Drainage Hierarchy. Thereafter, any proposal based on a proposed reduction in surface water discharge from a previously developed site should be in accordance with the non-statutory technical standards for sustainable drainage produced by DEFRA (or any replacement national standards). In demonstrating a reduction, applicants should include clear evidence of existing positive operational connections from the site with associated calculations on rates of discharge as part of application submission material.

~~9.49 There are clear merits of green solutions to manage surface water, and in the benefits they provide to ecology, local habitat and biodiversity. These approaches outweigh more conventional systems and usually improve the visual amenity of a proposed. Proposals should be designed with this in mind and the areas that are most susceptible to pooling or with the most scope for infiltration / soakaways should be reserved for SuDS features.~~

9.52 Any drainage proposal will be expected to be included as part of a site-wide strategy to avoid piecemeal development and demonstrate how the site delivers sustainable drainage as part of interconnecting phases, and will be provided early on in a development in order not to cause issues whilst a site is partially developed.

9.53 The Council will require evidence to demonstrate that the Sustainable Drainage Hierarchy within Policy DM34 ~~SuDS hierarchy~~ has been followed and to adequately justify if / why higher priority disposal routes cannot be utilised. Land acquisition should therefore ensure that the required rights for the development to discharge have been secured.

9.54 SuDS should be designed to a suitable standard for adoption. SuDS that are not adopted by public bodies will be expected to be supplemented by appropriate maintenance and management regimes for the lifetime of any surface water drainage schemes, which will be secured by planning condition or planning obligation.

To ensure that SuDS provide long term drainage solutions and continue to address flooding and climate change impacts, a Surface Water Lifetime Management and Maintenance Plan will be required. The Surface Water Lifetime Management and Maintenance Plan will be required to include:

- a maintenance schedule, detailing regular, occasional and remedial maintenance activities including recommendations for inspection and monitoring. This should include recommended frequencies, advice on plant/ machinery required and an explanation of the objectives for the maintenance proposed and potential implications of not meeting them;
- clearly defined management arrangements to include for adoption by an appropriate public body or statutory undertaker, or management and maintenance by a Management Company;
- arrangements concerning appropriate funding mechanisms for the on-going maintenance of all elements of the sustainable drainage system (including mechanical components) and will include elements such as
  - (i) on-going inspections relating to performance and asset condition assessments;
  - (ii) operation costs for regular maintenance, remedial works and irregular maintenance caused by less sustainable limited life assets or any other arrangements to secure the operation of the surface water drainage scheme throughout its lifetime; and
  - (iii) means of access for maintenance and easements.

The details should accord with the NW SuDS Pro-Forma. Further detail can be found in the Flood Risk and Sustainable Drainage SPD.

Post construction, applicants must provide to the Council certification that the drainage works have been completed in accordance with the approved scheme, by a third party professional. This will be to ensure that the drainage details and design submitted with the planning application have been constructed in accordance with the submitted and approved documents.

9.55 Further information on best practice examples of SuDS designs can be found ~~within~~ on the Flood Hub website[8] and in the Flood Risk and Sustainable Drainage SPD ~~Planning Advisory Note~~[9] ~~on this matter~~.

Policy DM34: Alternative options

The policy and supporting text have been significantly expanded to ensure that sustainable drainage schemes respond to the effects of climate change by taking opportunities to reduce the impact of flooding and provide multi-functional benefits in accordance with paragraphs 157c and 165d[10] of the NPPF. This amendment will also ensure consistency with policy SP8 of the SPLADPD.

The Drainage Hierarchy has been expanded upon to emphasis the provision of sustainable drainage schemes. The Sustainable Drainage Hierarchy sets out the priority for the provision of drainage schemes, firstly reusing water to minimise the requirement for drainage, then sustainable techniques to infiltrate water and then attenuate using above ground features to ensure that multi-functional benefits are achieved. provided. The use of such techniques can provide a range of benefits mentioned in the amended supporting text.

Criteria for the design of SuDS have been included within the policy to ensure that they provide multi-functional benefits and are integrated with green infrastructure. Appropriate design and integration with green amenity space can minimise the land required for above ground SuDS features and provide enhancements to bio-diversity helping developers meet the requirement for 10% biodiversity net gain.

The revised policy sets an expectation that SuDS will be design in accordance with the recognized standards within the Ciria guidance and the Council's updated Flood Risk and Sustainable Drainage SPD (formally the Surface Water Drainage, Flood Risk Management and Watercourses Planning Advice Note). Setting out the expectations for design will support developers in ensuring that their designs are appropriate.

The most significant change within the policy relates to the inclusion of an expectation that development reduces the rate at which water runs off a site. As a minimum development will be expected to ensure greenfield rates are not exceeded or in the case of brownfield land a minimum of a 30% reduction in runoff rates is achieved. The expectation aims to ensure that new development takes

[8] Planning & Development | The Flood Hub
[9] 9 https://www.lancaster.gov.uk/planning/planning-policy/about-local-plan
[10] Paragraph numbers to be amended following publication of the revised NPPF

the opportunity to reduce flood risk in accordance with paragraph 157c (paragraph number to be updated following publication of the revised NPPF) of the NPPF and ensure consistency with policy SP8 of the SPLADPD. A clause has been included to ensure that the expectation does not prevent sustainable development where a developer can justify why the level of attenuation cannot be achieved.

The opportunity has been taken to provide the climate change allowance developers must incorporate into their drainage calculations.

Flood risk and drainage is as equally important to small sites as those for major development. The opportunity has been taken to reduce the threshold for the provision of a Sustainable Drainage Strategy and the supporting evidence. The threshold accords with the current Council Planning Application Validation Guide. This will ensure that a greater proportion of new development will contribute to reducing flood risk and combating the effects of climate change.

The revised policy expands upon the information which is required to be included within a Sustainable Drainage Strategy and requires the submission of the NW SuDS-Proforma and the evidence noted within it. Requiring the submission of these documents/evidence will ensure that, in most cases, the Lead Local Flood Authority has the information they need to assess whether a drainage scheme is appropriate.

Lastly, a requirement has been added for certification that a drainage scheme has been implemented in accordance with the approved scheme. At present much of the drainage proposed is placed underground and is not visible, this make inspection and determining whether a scheme has been implemented correctly problematic. The provision of certification will ensure that schemes are implemented in accordance with the approved plan. Together with the requirements for more above ground SuDS this should prevent future issues arising.

Alternatives that were concerned for this policy were:

- Not to amend the policy.
  This option would have failed to reflect the agreed scope of the climate change review of the local plan. It would fail to take the opportunity to improve the way in which the plan addresses flood risk arising from climate change and the biodiversity enhancements achievable through the use of natural flood management techniques.

- Retain the existing SuDS hierarchy within the background text.

  The Sustainable Drainage Hierarchy is an important tool to ensure that surface water is discharged in the most sustainable way. It has therefore been included into the text of the policy to provide greater weight within the plan. The hierarchy has been amended to prioritise the re-use and sustainable discharge of surface water incorporating multi-functional benefits.

- Retain generic reference to the provision of SuDS without emphasis on the multi-functional benefits which can be achieved.

  The Government's aims to improve biodiversity and to achieve this the Environment Bill will require biodiversity net gain on all sites. The provision of above ground SuDS can help developers towards achieving this requirement and to improve place making, amenity and pollution control. Retaining the existing reference to the provision of SuDS would fail to take the opportunity to require SuDS schemes which provide multi-functional which meet the aims of a cross section of policies within the NPPF and this Local Plan.

  The existing policy includes a requirement for the provision of SuDS and this is supported by paragraph 163[11] of the NPPF and the 2014 Written Ministerial Statement. The requirement is therefore not unsound as stated by a respondent to the Climate Change Review scoping exercise.

- Include a lower or higher Climate Change Allowance

  The Climate Change Allowance reflects the upper end allowance within Table 2 of the Environment Agency Flood Risk Assessments: Climate Change Allowances. The requirement is consistent with the NW SuDS Pro Forma and will ensure development plans for long term changes to climate change.

- Include a specific run-off rate

  The existing policy does not specify an appropriate run-off rate or run-off volume from sites. Including a run-off rate and run-off volume will ensure that all developments contribute to reducing the causes and impacts of flood risk. The achievable run-off rate and run-off volume will differ between sites and the SFRA does not provide an appropriate singe figure. Specifying a specific lower rate below greenfield rate may inhibit the provision of further reduction on

[11] paragraph number to be updated following publication of the revised NPPF

sites where this is possible and it is necessary to reduce flooding on the site and beyond. The policy therefore requires a betterment in run-off rates and run-off volume which will be determined on a site specific basis, with the minimum provision of greenfield rates for greenfield land and greenfield rates for previously developed land with a minimum reduction of 30%.

- Not adopt NW SuDS Pro-forma

  The SuDS Proforma has been produced by North West Regional Flood and Coastal Committee and provides a consistent approach to the submission of supporting information. It specifies the minimum amount of evidence which must be submitted, and this should help reduce delays caused when additional information has to be requested. It will help more sustainable drainage systems to meet the design specification necessary for adoption by United Utilities, in accordance with the sewerage sector's Design and Construction Guidance. If the Pro-forma was not to be adopted by the Council, an opportunity would be lost to ensure adequate information is submitted with an application at the outset.

How does this policy ensure better outcomes in relation to Climate Change?

The revised policy expands upon the drainage hierarchy to emphasise the use of above ground sustainable drainage techniques which are integrated into the blue green infrastructure of a site. Above ground techniques tackle climate change by providing multi-functional benefits including enhanced biodiversity, potential for carbon sequestration, pollution control, absorption of heat and the provision of cooling. They can also be simpler to maintain and manage and more cost effective to operate than underground techniques.

Disposing of water into sewers exacerbates flooding in areas where they are at capacity. This situation is likely to be exacerbated further by the increased intensity of rainfall occurring as a consequence of climate change. The revised policy emphasises the requirement that water is managed without recourse to discharging to sewers other than in exceptional circumstances. This will ensure that additional pressure is not placed upon the sewers.

The revised policy seeks to tackle the impacts of climate change by including the run-off rate and run-off volume development is expected to achieve. These rates will ensure that new development contributes to reducing flooding on and off site. The revised policy will also ensure that new development takes account of appropriate storm events, climate change allowances, urban creep and any future climate change data and technical standards which may amend these allowances.

The revised policy expands upon the information required to be submitted with a planning application, for management and maintenance and adds a requirement for a post construction certification. These aspects of the policy aim to tackle climate change by ensuring the Council and Local Lead Flood Authority have sufficient information to assess applications, ensure SuDS are maintained and managed to reduce and mitigate flooding throughout their lifetime and to ensure that SuDs are installed in accordance with an approved scheme.

SA/SEA/HRA Considerations:

Alternatives in the context of SA/SEA need to be strategic in nature, meaningful and deliverable. Procedural choices such as 'not amending the policy' or 'amending background text' are not necessary to test in the SEA, as they simply represent the baseline position.

Whilst there are policy choices that could have implications, the choice essentially comes down to the trade-off between higher standards in relation to water management and how this affects viability.

With regards to meaningful choices in relation to SUDs, no reasonable alternatives have been identified at this stage for this SA Topic. Instead, the SA process has been utilised to provide a broad commentary on the policy amendments and make further recommendations for enhancement where appropriate.

Suggested changes by Lancaster City Council	SA topics likely to be affected	Delivery / potential conflicts	City Council Response
A clearer hierarchy is established with regards to the inclusion of SuDS in developments. A naturalistic approach is favoured and prioritised.	Biodiversity +ve Natural resources +ve Climate change adaptation +ve	The suggested measures could lead to increased costs on certain developments. This could make some sites less viable, but the measures will ensure that flood risk is better managed. Trade-offs may need to be made.	Comments noted.
Below ground solutions are only to be included where above ground solutions are not practical.			
Detailed targets for surface water run off rates are established, with improvements sought were possible.			
Increased detail relating to the requirement for a Sustainable Drainage Strategy, including post construction verification.			

No further recommendations are made at this stage.

HRA Screening

Policy Number	Policy Title and Description	Implications for Climate Change	Suggested Changes by Lancaster City Council	Screening Outcome	City Council Comments
Policy DM34	Surface Water Run-Off and Sustainable Drainage. The policy seeks to provide a generic approach towards the role of sustainable drainage within new development to minimise water run-off and provide effective water management on-site via SuDS	The policy sets a supportive approach towards the delivery of Sustainable Drainage Systems (SuDS) however the policy could be reviewed to consider whether the role of the SuDS hierarchy the promotion of the most sustainable forms of drainage can become a requirement rather than merely something which is encouraged	A clearer hierarchy is established with regards to the inclusion of SuDS in developments. A naturalistic approach is favoured and prioritised. Below ground solutions are only to be included where above ground solutions are not practical Detailed targets for surface water run off rates are established, with improvements sought were possible. Increased detail relating to the requirement for a Sustainable Drainage Strategy, including post construction verification.	No Likely Significant Effect. Screened out. This policy is associated with the design of new developments. These are statements of intent and aspirations. The implementation of the suggested changes to this policy is not expected to have any implications on European sites and potentially some beneficial effects through, for example, setting targets for run-off rates and careful design of SuDS.	Comments noted.

Policy DM35: Water Supply and Waste Water

Policy DM35 sets out how the Council will consider the demand for water related infrastructure when considering proposals and includes the hierarchy for the disposal of waste water.

POLICY DM35: WATER SUPPLY AND WASTE WATER

Development proposals must take into account the demand for off-site water and wastewater service infrastructure. In particular, developers will be required to demonstrate that there is adequate waste water capacity on and off the site to satisfactorily serve the development.

New development must demonstrate adherence to the National Planning Practice Guidance (water supply, wastewater and water quality) for sewerage infrastructure, this includes the following prioritised foul water discharge hierarchy:

- **A. Connection to the public sewer;**
- **B. A package sewerage treatment plant; or lastly**
- **C. The provision of septic tanks.**

The Council will support development proposals where:

- **I. Sufficient infrastructure capacity already exists; or**
- **II. Extra capacity can be provided in time to serve the development.**

~~**Water efficiency measures should be incorporated into the development. The design of non-residential building development should enable achievement of the BREEAM 'Excellent' standard.**~~

Proposals in the Arnside & Silverdale AONB should have due regard to the content of Policy AS12 of the Arnside & Silverdale AONB DPD.

Supporting text:

9.56 Adequate water supply, surface water drainage, foul drainage and sewerage treatment capacity must be available to serve all new development.

9.57 Shortages and gaps in capacity may affect the timing, delivery, and design of development. Water supplies are limited in some places, sewerage capacity varies locally, and some Treatment works will require significant upgrading before the end of the plan period. The Council will continue to work with United Utilities to ensure that these matters are addressed.

9.58 New development must demonstrate adherence with the National Planning Practice Guidance in relation to the hierarchy of provision of sewerage infrastructure, firstly via connection to the public sewer, secondly via a package sewerage treatment plan and lastly via the provision of a septic tank.

9.59 Large-scale schemes, particularly the strategic sites identified in the Strategic Policies & Land Allocations DPD, may have a major impact on the infrastructure capacity, whereas smaller schemes can cumulatively have the same effect. For major development proposals, contact should be made with Lancashire County Council as Lead local Flood Authority early in the planning process in order to assess the surface water drainage requirements and flood risk of the development both on and off site.

All developers are also encouraged to contact United Utilities as early as possible before submitting a planning application to establish the following:

- The water supply infrastructure demand of the development both on and off the site and whether this can be met;
- The wastewater infrastructure demand of the development both on and off the site and whether this can be met; and
- The surface water drainage requirements and flood risk of the development both on and off site.

9.60 In some circumstances an assessment may be required to ascertain whether the proposed development would lead to an unacceptable overloading of existing infrastructure. Where there is an identified capacity problem, the Council may require the developer to fund appropriate improvements that must be completed prior to the occupation of the development.

9.61 ~~Pressure on water supplies can be addressed in part by water efficiency measures to reduce average consumption. This is important because consumption is high and needs to be reduced.~~ More than a thousand people in the district rely upon private water supplies (i.e. non-mains water). Development close to these supplies will be carefully considered to ensure the continued quality of the supply. Any proposal that seeks to commence a new supply, or brings back into use a formerly used supply, must notify the Council.

~~9.62 Domestic water consumption can be considerably reduced by building new homes to high water efficiency standards. Appropriate measures to improve water efficiency include, but are not limited to dual flush toilets, low flow bathroom and kitchen fittings, low water consumption appliances, grey water and water recycling systems, water butts and other on-site water retention systems.~~

Policy DM35: Alternative options

Reference to water efficiency has been removed from policy DM35 and included within policy DM30: Sustainable Design within the Design of Development section of the DMDPD. The proposed policy seeks to adopt the Building Regulations optional requirement G2: Water Efficiency in accordance with the NPPF and the national Planning Practice Guidance.

The reference to BREEAM has been removed from policy DM35, expanded upon and included within policy DM:30 Sustainable Design.

The opportunity has been taken to ensure it is clear, that the discharge hierarchy within the policy refers to foul water discharge only. Reference has also been added to the need for development to take into account wastewater service infrastructure. Neither addition significantly alters the content of the policy.

Alternatives that were concerned for this policy were:

- Retention of the existing policy

  The existing policy fails to address the pressures on water demand and supply highlighted by the Environment Agency and United Utilities. It also does not contribute to reducing the amount of water required to be disposed of or reduce the costs of bills for occupiers.
  The reference to BREEAM is not located within the most logical part of the plan given its much wider assessment of sustainable design.

- Additional of the optional Building Regulation Requirements for Water Efficiency to the policy.

  Whilst the water efficiency requirement is relevant to this policy, it is considered more appropriate for the standard to be included alongside other sustainable design standards at policy DM30 within the Design of Development section of the DMDPD. This will ensure that all relevant design standards are located together for easier reference and implementation.

- Expansion of the requirement for BREEAM within the policy

  BREEAM provides a much wider function in assessing the sustainability of new development. It assesses management, health and well-being, energy use, transport, water, materials, waste, land use and ecology, pollution, and innovation to ensure that new development is sustainable

in the short and long term. Confining BREEAM to policy DM35, would not make the best use of this assessment and certification scheme in ensuring new commercial development achieves high levels of sustainability.

How does this policy ensure better outcomes in relation to Climate Change?

The revisions to the policy aim to tackle climate change by relocating water efficiency standards into the sustainable design policy, DM30. That policy includes additional requirements for water efficiency in homes. Improving water efficiency tackles climate change by reducing water use, thereby the pressure on resources and as a consequence the volume of wastewater and associated emissions within the water and wastewater processes. Reducing the volume of wastewater being discharged into sewers, will ensure that flooding arising from sewer overflow is minimised.

SA/SEA/HRA Considerations (Completed by AECOM)

Though the policy has been amended, the deleted content is still included within the Plan, under a different policy. Alternatives relating to plan structure and content are not relevant in terms of the SA/ SEA process. Therefore, no appraisal or policy recommendations are considered necessary for Policy DM35.

HRA Screening

Policy Number	Policy Title and Description	Implications for Climate Change	Suggested Changes by Lancaster City Council	Screening Outcome	City Council Comments
Policy DM35	**Water Supply and Waste Water** The policy identifies the importance of ensuring that new development has adequate and appropriate connections to a water supply and wastewater network.	The demands for water may well increase through changes to the climate and therefore working to secure supplies (in co-ordination with United Utilities) may be part of the Local Plan Review.	Reference to water efficiency has been removed from policy DM35 and included within policy DM30: Sustainable Design	No Likely Significant Effect. Screened out. This policy is associated with the design of new developments . This is a statement of intent and aspiration. The implementation of the suggested change to this policy is not	Comments noted.

Policy Number	Policy Title and Description	Implications for Climate Change	Suggested Changes by Lancaster City Council	Screening Outcome	City Council Comments
				expected to have any implications on European sites. Although water efficiency is important for responding to climate change it has not been proposed for deletion but for inclusion in an alternative policy.	

Policy DM36: Protecting Water Resources, Water Quality and Infrastructure

Policy DM36: sets out the criteria for assessing the impact of proposals upon water quality and provides support for the investment into water infrastructure.

POLICY DM36: PROTECTING WATER RESOURCES, WATER QUALITY AND INFRASTRUCTURE

New development must:

- **Not have a detrimental impact on surface water and groundwater quantity and quality caused by contaminated surface water run-off into nearby waterways;**
- **Include multi-level source control within SuDS schemes to prevent ground and water pollution arising from water run-off;**
- **Not have a detrimental impact on the quality and standard of bathing water in the locality;**
- **Consider effective and efficient disposal of wastewater; and**
- ~~**Seek to increase water availability and**~~**p Protect and where possible, improve the quality of rivers, ~~or~~ groundwater ~~where possible~~ and the standard of any bathing waters in the locality or downstream of the development.**

~~**The development or expansion of water supply or waste water facilities will normally be permitted, either where needed to serve existing or proposed development, or in the interests of long term water supply and waste water management.**~~

The Council will be supportive of infrastructure investment which responds to the needs of the district, facilitates the delivery of wider sustainable development and the meeting of environmental objectives by water and sewage undertakers, subject to the detail of the scheme and the consideration of other policies within the local plan.

Supporting text

9.63 New development must consider the impact on wastewater infrastructure, and there may be a need to co-ordinate new development through a phased approach to allow improvements to wastewater infrastructure. It must also consider the location of the point of connection to the wastewater infrastructure for new development to reduce flood risk and impact on watercourses. The Council will work with key partners such as the Environment Agency, the Canal and Rivers Trust and United Utilities in order to improve and protect water resources and water quality.

9.64 The EU Water Framework Directive came into force in December 2000 and established a strategic framework for managing the water environment. It requires a management plan for each river basin to be prepared every six years based on detailed analysis of the impacts of human activity on the water environment and the incorporation of measures to improve water bodies where required.

9.65 The Environment Agency is responsible for the implementation of the Water Framework Directive

and in 2015 it updated the series of River Basin Management Plans for England and Wales. The North West plan identifies a range of challenges that need to be tackled to achieve the objectives of the Water Framework Directive. The Marine Management Organisation (MMO) are in the process of revising the Marine Strategy for the North West Coast.

9.66 The Council can contribute towards tackling the challenges highlighted in the North West River Basin Management Plan and where appropriate the Marine Strategy, by ensuring that the design, layout and needs of new development consider solutions to these challenges so that water quality does not deteriorate in the future.

~~9.67 Drinking water is becoming a more valued resource so the Council will ensure that new development delivers high standards of water efficiency by including measures to avoid wastage including:~~

- ~~Water saving devices and water efficient fixtures and fittings;~~
- ~~Rainwater and greywater recycling (water butts or more complex collection and treatment systems);~~
- ~~Landscaping and gardens that don't require much water; and~~
- ~~Sustainable Drainage Systems (SuDS).~~

Infrastructure is key to the delivery of sustainable development, economic growth and meeting development needs. The Council will support the principle of investment in infrastructure and support statutory undertakings in improving the supply and wastewater infrastructure and environmental improvements.

Policy DM36: Alternative options

United Utilities has requested that the Council includes reference to support for its future investment in infrastructure in order to be able to expediently respond to the needs of Lancaster district. The policy has been amended to reflect the wording requested by United Utilities. Support is however, dependent upon the detail of a scheme and the consideration of other policies within the Local Plan. No other alternative options are considered an appropriate response.

An additional criterion has been included within the policy to cross reference with policy DM34 and the ways in which the appropriate use of SuDS and prevent pollution. No other alternative was considered appropriate.

How does this policy ensure better outcomes in relation to Climate Change?

The revised policy tackles climate change by seeking to ensure new development addresses the potential for pollution and reduced water quality arising from an increase in the intensity of rainfall events. The inclusion of multi-level source control to prevent pollution and measures to improve water quality will protect environmental quality from the pressures arising from such events. The policy also includes revised wording providing support for infrastructure investment which will address increased demands for water, disposal of water and flood management issues arising from climate change.

SA/SEA/HRA Considerations (Completed by AECOM):

No alternatives have been identified. The changes proposed are relatively minor, as summarised below. In terms of further recommendations, none have been identified at this stage.

Suggested changes by Lancaster City Council	SA topics likely to be affected	Delivery / potential conflicts	City Council Response
Cross reference to the role of SUDs in managing pollution.	Natural resources +ve	This is a minor change that is likely to improve clarity in relation to the application of SUDs.	Comments noted.

No further recommendations are made at this stage.

HRA Screening

Policy Number	Policy Title and Description	Implications for Climate Change	Suggested Changes by Lancaster City Council	Screening Outcome	City Council Comments
Policy DM36	**Protecting Water Resources and Infrastructure** This policy highlights the importance of protecting water resources and infrastructure which is critical to maintaining an effective water supply and	The demands for water may well increase through changes to the climate and therefore working to protect supplies and deliver infrastructure improvements (in co-ordination with United Utilities) may be part of the	Cross reference to the role of SUDs in managing pollution.	No Likely Significant Effect. Screened out. This policy is associated with the design of new developments . This is a statement of intent and aspiration. The implementation of the suggested change to this	Comments noted.

Policy Number	Policy Title and Description	Implications for Climate Change	Suggested Changes by Lancaster City Council	Screening Outcome	City Council Comments
	wastewater network.	Local Plan Review.		policy is not expected to have any implications on European sites	

Policy DM43: Green and Blue Infrastructure

Policy DM43: Alternative options

Please see the Green-Blue Infrastructure – Considerations of Alternative Policy Approaches for details.