

Derbyshire County Council & Derby City Council

Level 1 Minerals Strategic Flood Risk Assessment Update

Updated Planning Policies and Climate Change Chapter

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Quality information

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1. Policy Context

Since the Derbyshire County Council and Derby City Council Level 1 Minerals Strategic Flood Risk Assessment (SFRA) was completed in 2012, there have been further updates to national and local planning policies. This section provides an updated summary of policies which will inform the 2022 Level 1 SFRA Update being undertaken by AECOM.

1.1 National Planning Policy

1.1.1 National Planning Policy Framework 2021

The National Planning Policy Framework (NPPF) was initially published in March 2012 together with accompanying Technical Guidance. The NPPF revoked most of the previous Planning Policy Statements (PPS) and Planning Policy Guidance, including PPS25: Development and Flood Risk Practice Guide. The NPPF was updated in July 2021¹ and advises how the planning process can take account of the risks associated with flooding.

The overall approach is broadly summarised in NPPF Paragraph 167:

“When determining any planning applications, local planning authorities [LPA] should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment (and the sequential and exception tests, as applicable) it can be demonstrated that:

- a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;*
- b) the development is appropriately flood resistant and resilient such that, in the event of a flood, it could be quickly brought back into use without significant refurbishment;*
- c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;*
- d) any residual risk can be safely managed; and*
- e) safe access and escape routes are included where appropriate, as part of an agreed emergency plan.”*

The NPPF consists of a framework where LPA's can produce local and neighbourhood plans that reflect the needs and priorities of their communities. The NPPF and supporting guidance also require LPA's to undertake SFRA's and use their findings to inform strategic land use planning within the county. This may include the application of the Sequential Test which seeks to steer development towards areas of lowest flood risk prior to consideration of areas at greater risk.

Section 17 of the NPPF also seeks that LPA's should

“encourage the prior extraction of minerals, where practical and environmentally feasible [...], and set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment”.

“encourage safeguarding or stockpiling so that important minerals remain available for use’

“provide for the extraction of mineral resources of local and national importance, but not identify new sites or extensions to existing sites for peat extraction;”

¹ National Planning Policy Framework (2021). Retrieved:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

Accessed: 12/01/22

“not normally permit other development proposals in Mineral Safeguarding Areas if it might constrain potential future use for mineral working”

“planning permission should not be granted for the extraction of coal unless: the proposal is environmentally acceptable, or can be made so by planning conditions or obligations; or if it is not environmentally acceptable, then it provides national, local or community benefits that clearly outweigh its likely impacts”

1.1.2 National Planning Practice Guidance 2021

The Technical Guidance accompanying the NPPF was since replaced by a series of Planning Practice Documents referred to as the Planning Practice Guidance (PPG) in March 2014. This includes the PPG: Flood Risk and Coastal Change document which has since been updated in August 2021². This document further advises how the risks of flooding and coastal change should be addressed in the planning process.

“Waste and mineral planning authorities need to take account of flood risk when allocating land for development. They should prepare their plan policies with regard to any available Strategic Flood Risk Assessments. The location of Mineral Safeguarding Areas and site allocations, in particular in relation to sand and gravel workings which are often located in functional floodplains, need to be identified. It is possible to explore benefits, such as restoring mineral working located in flood risk areas to increase flood water storage which can also enhance the natural environment. Partnership working on joint Strategic Flood Risk Assessments offer the best opportunity to identify and realise these opportunities.”

As per Paragraph 009 of the PPG, LPA's should use the SFRA to:

- *“Determine the variations in risk from all sources of flooding across their areas, and also the risks to and from surrounding areas in the same flood catchment;*
- *Inform the sustainability appraisal of the Local Plan, so that flood risk is fully taken into account when considering allocation options and in the preparation of plan policies, including policies for flood risk management to ensure that flood risk is not increased;*
- *Apply the Sequential Test and, where necessary, the Exception Test when determining land use allocations;*
- *Identify the requirements for site-specific flood risk assessments in particular locations, including those at risk from sources other than river and sea flooding;*
- *Determine the acceptability of flood risk in relation to emergency planning capability; and*
- *Consider opportunities to reduce flood risk to existing communities and developments through better management of surface water, provision for conveyance and of storage for flood water.”*

² Planning Practice Guidance: Flood Risk and Coastal Change. Retrieved: <https://www.gov.uk/guidance/flood-risk-and-coastal-change#full-publication-update-history> Accessed: 12/01/22

1.2 Local Planning Policy

Derbyshire County Council is responsible for the minerals and waste planning within its administrative area, who devolves the responsibility of non-minerals and waste planning policies amongst the eight district and borough councils within the area. Derby City Council as a Unitary Authority are responsible for all planning matters within their administrative boundary and the Peak District National Park Authority are responsible for all planning matters within the National Park. A summary of the local plans amongst the county, city, district and borough councils within Derbyshire's administrative boundary are outlined in **Table 1**.

Table 1 – Local Plans adopted by the County / City / Borough / District Councils and the Peak District National Park Authority covering the geographical area of Derbyshire.

County / City / Borough / District Councils	Planning Policy	Timeframe
Derbyshire County Council	Minerals Local Plan	2002 – Present
	Waste Local Plan	2005 – Present
Amber Valley Borough Council	Local Plan	2021 - 2038
Bolsover District Council	Local Plan	2020 - 2033
Chesterfield Borough Council	Local Plan	2018 - 2035
Derbyshire Dales District Council	Local Plan	2017 - 2033
Erewash Borough Council	Core Strategy (supported by Saved Policies 2005)	2014 – 2028
High Peak Borough Council	Local Plan	2016 – 2035
North-East Derbyshire District Council	Local Plan	2014 – 2034
South Derbyshire District Council	Local Plan Part 1	2011 – 2028
	Local Plan Part 2	2017 – 2028
Derby City Council	Minerals Local Plan	2002 – Present
	Waste Local Plan	2005 – Present
	Local Plan Part 1 Strategy	2017 – 2028
	City of Derby Local Plan Review Saved Policies	2006 – Present
Peak District National Park Authority	Core Strategy (supported by Development Management Policies 2019 – 2026)	2011 – 2026

As of December 2021, Derby City Council's cabinet approved work on starting a new local plan which will cover the period to 2040. However, until the new plan is adopted, the following policies apply:

- The Adopted Mineral Local Plan (2002) and Waste Local Plan (2005);
- The Derby City Local Plan, Part 1 (2017); and
- The City of Derby Local Plan Review (2006).

1.2.1 Derby and Derbyshire Minerals Local Plan (2002)

The Minerals Local Plan was adopted in April 2000 and updated in November 2002³ which provides guidance on planning applications for the extraction of minerals and associated works within the administrative boundary of Derby and Derbyshire, outside the Peak District National Park. The Local Plan highlights the supply of minerals required whilst ensuring the environment and communities are protected.

Please note, Derbyshire County Council and Derby City Council are working together to prepare an updated Minerals Local Plan which will cover the period to 2038. Until the New Minerals Local Plan is adopted, the following policies have

³ Derby and Derbyshire Minerals Local Plan. Retrieved: [Derby and Derbyshire Minerals Local Plan - part one](#) Accessed: 13/01/22

been retrieved from the 2002 updated version. The current adopted development plan also comprises the saved policies of the 2000 adopted Minerals Local Plan (with alteration to coal policies adopted in 2002).

- **Policy MP1 – The Environmental Impact of Mineral Development**

“Proposals for mineral development will be permitted provided that their impact on the environment is acceptable having regard to: the effect on the quality and quantity of water resources including the ecology of water courses and wetlands, and on water supply and flood protection interests.”

- **Policy MP3 – Measures to Reduce Environmental Impact**

“The Environment Agency is concerned with the possible impact of mineral working on water resources, flood defences [...]. Mineral working may reduce groundwater levels, disturb natural drainage patterns, reduce the capacity of the floodplain and pollute local water resources. Mineral working proposals and associated schemes for reclamation and after-use which seriously damage these interests will not normally be acceptable.”

- **Policy MP4 – Interest of Acknowledged Environmental Importance**

“Proposals for mineral development will not be permitted where irreparable or unacceptable damage would result to interests of acknowledged environmental importance, and in particular where [...] development would adversely affect the quality and quantity of water resource, water supply, land drainage or flood protection interests, or create water pollution problems.”

- **Policy MP10 – Reclamation and After-Use**

“Proposals for mineral development will be permitted only where satisfactory provision has been made for the reclamation and after-use of the site as soon as practicable. In granting planning permission for mineral development conditions will be imposed, as appropriate, in respect of the following: measures are designed to enhance the natural environment [...] improvement of watercourses.”

Supplementary planning guidance has been prepared for the after-use of sand and gravel sites and although not part of the development plan it is a material consideration in assessing planning applications.

1.2.2 Derby and Derbyshire Minerals Local Plan, Supplementary Planning Guidance on the After-Use of Sand and Gravel Sites

The Supplementary Planning Guidance (SPG)⁴ has been prepared by Derby City Council and Derbyshire County Council and accompanies the Minerals Local Plan, in guiding on the after-use of sand and gravel sites in the Trent, Lower Derwent and Lower Dove Valleys.

The SPG sets out a framework of principles aimed at securing preferred pattern of after uses for worked out sand and gravel sites. Due to the location of sand and gravel deposits within the river [] raises a number of water related issues in conjunction to Policy MP10, and therefore, supplementary guidance has been provided. The Derby and Derbyshire Minerals Local Plan through Policy MP4 recognises the need to protect the quality and quantity of water resources and flood protection interests from the impact of mineral extraction and reclamation.

As outlined in Chapter 5 of Water Issues, in the Supplementary Planning Guidance on The After-Use of Sand and Gravel Sites, concludes that *“where appropriate, the opportunity should be taken to create wetlands to provide water storage and militate against flooding. All reclamation schemes will need to protect the quality and quantity of water resources, water supply and land drainage and flood protection interest from any adverse impacts.”*

⁴ Derby and Derbyshire Minerals Local Plan. *Supplementary Planning Guidance on The After-Use of Sand and Gravel Sites* (2004). Retrieved: [After-use of sand and gravel sites \(derbyshire.gov.uk\)](https://www.derbyshire.gov.uk/after-use-of-sand-and-gravel-sites) Accessed: 13/01/22

1.2.3 Derby City Local Plan – Part 1, Core Strategy (2017)

The Core Strategy is part of Derby City Local Plan which was adopted in January 2017⁵ and sets the overall strategic direction for planning in the administrative area of Derby City over the period 2011 to 2028. Saved policies from the City of Derby Local Plan Review in 2006 are also included. It is important to note that there are a few mineral resources within Derby City and therefore it is unlikely that proposals for mineral working will come forward within the City boundary.

- **Policy CP2 – Responding to Climate Change [Flood Risk Management]:**

“... when considering compliance with the sequential test, the council will take account of alternative sites and where appropriate, apply the exception test in line with national policy.”

‘Ensure development is flood resilient and resistant... and the development will not lead to an increased flood risk of flooding elsewhere.’

‘Ensure that where appropriate, development meets the objectives of the Water Framework Directive’

‘Ensure that development takes account of the need to provide access to watercourses’

1.2.4 City of Derby Local Plan Review (2006)

A former Derby City Local Plan adopted in 2006⁶ has saved policies within which are still enacted as part of the Part 1, Core Strategy 2017. Flood related policies including Policy GD3 have been revoked and as such, no further policies have been extracted or reviewed from the Local Plan Review as part of this SFRA.

1.2.5 Preliminary Flood Risk Assessment (2011)

As required by the Flood and Water Management Act (2010), the LLFA are required to prepare a Preliminary Flood Risk Assessment (PFRA) which seeks to provide a high-level overview of flood risk from local flood sources, namely surface water, groundwater and Ordinary Watercourses. An assessment of the probability and harmful consequences of past and future flooding are also undertaken.

As the LLFA, Derbyshire County Council prepared a PFRA⁷ in 2011 which collated and evaluated historic and future flooding, identifying significant flood risk areas within DCC administrative area in order to inform and develop a Local Flood Risk Management Strategy to manage flooding in Derbyshire. The most significant flood events occurred in 2000, 2002 and 2007 which were a combination of fluvial and surface water sources. A map of historical flood events shows a cluster of events predominately within Amber Valley, North East Derbyshire, Chesterfield and Bolsover District and Borough Councils.

As the LLFA, Derby City Council also prepared a PFRA⁸ which reported a high-level assessment of flood risk arising from surface water, groundwater, ordinary watercourses and canals within Derby City. Whilst Derby has a long history of flooding, sources were predominantly experienced from fluvial and pluvial sources.

⁵ Derby City Local Plan – Part 1 – Core Strategy – Retrieved:

https://www.derby.gov.uk/media/derbycitycouncil/contentassets/documents/environmentandplanning/planning/localplan/evidencebase/Core-Strategy_ADOPTED_DEC-2016_V3_WEB.pdf Accessed: 13/01/22

⁶ City of Derby Local Plan Review (2006). Retrieved:

https://www.derby.gov.uk/media/derbycitycouncil/contentassets/documents/environmentandplanning/planning/localplan/part1/CDLPR_2017.pdf Accessed: 13/01/22

⁷ Derbyshire Preliminary Flood Risk Assessment (2011) Retrieved:

<https://www.derbyshire.gov.uk/environment/flooding/prfa/preliminary-flood-risk-assessment.aspx> Accessed: 13/01/22

⁸ Derby City Council Preliminary Flood Risk Assessment (2011) Retrieved: [Microsoft Word - Item 20 - Appendix 2.doc \(geosmartinfo.co.uk\)](#) Accessed: 31/01/22

1.2.6 Humber River Basin District Flood Risk Management Plan

The Environment Agency is required to prepare Flood Risk Management Plans (FRMPs) for all of England covering flooding from Main Rivers, the sea and reservoirs.

As such, the Humber River Basin District FRMP⁹ was published in March 2016 and sets out the proposed measures to manage flood risk from all sources in the Humber River Basin District from 2015 to 2021. This document draws on existing reports and plans which have been prepared in the past and sets out how Risk Management Authority's will work with communities to manage flood and coastal risk.

The Humber FRMP sits alongside the Humber River Basin Management Plan which includes information on the following:

- Current state of the water environment;
- Pressures affecting the water environment;
- Environmental objectives for protecting and improving the waters;
- Programme of measures, actions needed to achieve the objectives; and,
- Progress since the 2009 plan.

1.2.7 Derbyshire County Council Local Flood Risk Management Strategy (LFRMS)

The Derbyshire County Council Local Flood Risk Management Strategy (LFRMS) was published in July 2015¹⁰, which outlines how local flood risk is managed within Derbyshire and sets out the roles and responsibility of flood risk management partners. There are five key objectives outlined within the Local Strategy. These are as follows:

1. *To further develop an understanding of the flood risk to Derbyshire and the impacts of climate change working collaboratively with all other Risk Management Authorities and relevant groups / bodies to ensure a co-ordinated response to flood risk management for Derbyshire.*
2. *To continue to work with all relevant bodies to ensure appropriate and sustainable development in Derbyshire.*
3. *To aim to reduce the level of flood risk to the residents of Derbyshire.*
4. *To continue to prioritise limited resources effectively to support communities most at risk in Derbyshire.*
5. *To continue to help and support the local communities of Derbyshire to manage their own risk.*
6. *To continue to help protect and enhance the natural and historic environment of Derbyshire.*

1.2.8 Derbyshire County Council Flood Response Policy (2020)

A key action from the Derbyshire County Council LFRMS in 2015¹¹ was to 'Publish a Flood Response Policy'. As such this Policy aims to outline the operational framework within the Council to make best use of resources for flood conditions, create more resilient communities and improve the local's awareness of flood risk. The Policy document outlines key roles and responsibilities in three scenarios; when flooding is predicted, before flooding occurs and after flooding.

1.3 Water Legislation

1.3.1 Flood and Water Management Act 2010

The Government commissioned Sir Michael Pitt to undertake a review of flood risk management in response to the severe flooding across large parts of England and Wales in summer 2007 which led to the production of the Pitt Review – Learning

⁹ Humber River Basin District FRMP (2016) Retrieved: <https://www.gov.uk/government/publications/humber-river-basin-district-flood-risk-management-plan> Accessed: 13/01/22

¹⁰ Derbyshire County Council LFRMS (2015). Retrieved: <https://www.derbyshire.gov.uk/environment/flooding/strategy/local-flood-risk-management-strategy.aspx> Accessed: 13/01/22

¹¹ Derbyshire County Council Flood Response Policy. Retrieved: <https://www.derbyshire.gov.uk/site-elements/documents/pdf/environment/flooding/flooding-response-policy.pdf> Accessed: 13/01/22

Lessons from the 2007 flood. Subsequent progress reviews outlined the need for changes in the way the UK is adapting to the increased risk of flooding and the role different organisations have to deliver this function.

The Flood and Water Management Act 2010¹² designated Unitary Authorities and upper tier Local Authorities as Lead Local Flood Authorities (LLFAs). Both Derbyshire County Council and Derby City Council are designated as the LLFA for their respective administrative areas and have responsibility to lead and co-ordinate local flood risk management. This includes having lead responsibility for managing local flood risk such as surface water runoff, groundwater, land drainage ditches and Ordinary Watercourses, and maintaining a register of flood risk assets.

The Flood and Water Management Act also formalises the flood risk management roles and responsibilities for other organisations including the Environment Agency, Water Companies, Internal Drainage Boards and National Highways. The responsibility to lead and co-ordinate the management of tidal and Main River fluvial flood risk remains that of the Environment Agency. The role of Sustainable Drainage Systems Approval Body was initially given to LLFA's allowing them to be responsible for adopting and maintaining SuDS, however Schedule 3 has not been enacted and the use of SuDS in new development is instead enforced by LPAs.

1.3.2 The Water Framework Directive

The EU Water Framework Directive (WFD) (2000/60/EC) establishes a framework for the protection and improvement of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. The Directive came into force on 22nd December 2000.

The WFD requires the UK to classify the current condition of key waterbodies (giving a 'Status' or 'Potential') and sets objectives to either maintain their condition or improve where a waterbody is failing minimum targets. The chemical quality status attainable by a watercourse is either 'Good' or 'Fail' and the ecological quality status attainable ranges from 'High' to 'Bad'. The target for all watercourses should be to achieve at least 'Good' chemical status. Any activities that could cause deterioration within a nearby waterbody or prevent the future ability of a waterbody to reach its target status, must be mitigated to reduce the potential for harm and allows the aims of the WFD to be realised.

To ensure the development does not result in deterioration in the status of a waterbody, development can contribute towards attainment of WFD objectives as well as other environmental benefits. Restoration of minerals sites may provide such opportunities within Derbyshire and Derby.

¹² Flood and Water Management Act 2010. Retrieved: https://www.legislation.gov.uk/ukpga/2010/29/pdfs/ukpga_20100029_en.pdf
Accessed: 12/02/22

2. Climate Change

2.1 Context

The Environment Agency published updated climate change guidance in October 2021¹³ to support the NPPF. The guidance indicates that climate change is likely to increase river flows, sea levels, rainfall intensity, wave height and wind speed. As such, these climate change allowances should be used to demonstrate how flood risk will be managed so that the development remains safe throughout its lifetime, taking climate change into account.

2.2 Peak River Flow Allowances by River Basin District

The peak river flow allowances show the anticipated changes to peak flow by management catchment. The range of climate change allowances are based on percentiles. A percentile is a measure used in statistics to describe the proportion of possible scenarios that fall below an allowance level. The 50th percentile is the point at which half of the possible scenarios for peak flows fall below it and half fall above it.

- Central allowance is based on the 50th percentile;
- Higher central is based on the 70th percentile; and
- Upper end is based on the 95th percentile.

In addition, three primary epochs are used:

- '2020s' (2015 to 2039);
- '2050s' (2040 to 2069); and
- '2080s' (2070 to 2115).

Table 2 shows how the appropriate climate change allowances for fluvial should be used with regards to the vulnerability of the development and category of flood risk.

Table 2 – Assigning Appropriate Climate Change Allowance Categories (Fluvial)

	Water Compatible	Less Vulnerable	More Vulnerable	Highly Vulnerable	Essential Infrastructure
Flood Zone 2	Central Allowance	Central Allowance	Central Allowance	Central Allowance	Higher Central Allowance
Flood Zone 3a	Central Allowance	Central Allowance	Central Allowance	Development Not Permitted	Higher Central Allowance
Flood Zone 3b	Central Allowance	Development Not Permitted	Development Not Permitted	Development Not Permitted	Higher Central Allowance

Having determined a suitable allowance category, DCC, can confirm the corresponding percentages for increase in river flow that should be assessed. This is dependent on the site location and management catchment but as an example the River Derwent Humber Catchment has been selected, refer to **Table 3**

¹³ Environment Agency (2021) Flood risk assessments: climate change allowances. <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>. Accessed 13/01/2022.

Table 3 - Peak River Flow Allowances for the River Derwent Humber Management Catchment

Allowance Category	Central	Higher	Upper
2020s	13%	18%	29%
2050s	17%	23%	38%
2080s	29%	39%	63%

2.3 Peak Rainfall Intensity Allowances for the Proposed Development

The predicted increase in the frequency and intensity of storm events could increase the volumes of rainfall to enter the surface water and foul drainage network. **Table 4** shows the anticipated changes in peak rainfall intensity in small catchments less than 5 km².

Table 4 - Peak Rainfall Intensity Allowances for the Proposed Development

Applies across all of England	Total Potential Change Anticipated for '2020s' (2015 to 2039)	Total Potential Change Anticipated for '2050s' (2040 to 2069)	Total Potential Change Anticipated for '2080s' (2070 to 2115)
Upper End	10%	20%	40%
Central	5%	10%	20%

The drainage system should be designed to ensure there is no increase in the rate of runoff discharged from the site for the upper end allowance.