

Derby City Local Plan, Part 1: Core Strategy

Water and Flooding Position Statement

August 2015

1. Introduction

- 1.1 This position statement provides an update to the Derby HMA Joint Water Issues Paper which was produced to support the Preferred Growth Strategy consultation, in October 2012. Primarily, this document focusses on the impact of flooding in the City and sets out the approach the Council undertook in allocating sites for housing and employment. It also sets out our understanding of potable water and sewage treatment based on discussions with the Environment Agency, Severn Trent Water and the Council's Land Drainage Team.
- 1.2 Unlike the previous Paper which summarised information for the Derby Housing Market Area, this position statement focusses solely on the City and the Derby Urban Area.
- 1.3 This position statement also discusses how the Council has accorded with the EU directives and national legislation and the National Planning Policy Framework and justifies our approach in certain policies.
- 1.4 Section 2 provides a brief review of the legislation, both European and national, which the Local Plan accords with.
- 1.5 Section 5 briefly sets out the work the Council has undertaken to understand the impact of flooding in the City.
- 1.6 Section 4 considers the impact of flooding in the City, focussing on the allocated sites and considering how the Sequential and Exception Tests were implemented in this process.
- 1.7 Section 5 briefly considers Sustainable Urban Drainage Systems and how the Local Plan reflects national planning guidance and good practice.
- 1.8 Section 6 of this paper examines issues relating to water supply while Section 7 deals with waste water and sewerage treatment. In both instances, ongoing discussions with the Environment Agency and Severn Trent Water ensured that solutions could be developed to address the problems at an early stage in the process.
- 1.9 The information summarised in the Paper has also been used to inform the Sustainability Appraisal and the Infrastructure Delivery Plan.



Derby City Council



2. Context

- 2.1 This section provides a regulative context which the Local Plan is required to accord with.
- 2.2 The Water Framework Directive is a European Union directive which commits European Union member states to achieve good qualitative and quantitative status of all water bodies (including marine waters up to one nautical mile from shore) by 2015.
- 2.3 The Directive aims for 'good status' for all ground and surface waters such as rivers and lakes in the EU. The ecological and chemical status of surface waters is assessed according to the following criteria:
- Biological quality (fish, benthic invertebrates, aquatic flora)
 - Hydromorphological quality such as river bank structure, river continuity or substrate of the river bed
 - Physical-chemical quality such as temperature, oxygenation and nutrient conditions
 - Chemical quality that refers to environmental quality standards for river basin specific pollutants. These standards specify maximum concentrations for specific water pollutants. If even one such concentration is exceeded, the water body will not be classed as having a "good ecological status"
- 2.4 The Water Framework Directive stipulates that groundwater must achieve "good quantitative status" and "good chemical status" by 2015. Groundwater bodies are classified as either "good" or "poor".
- 2.5 The National Planning Policy Framework (NPPF) recognises that planning plays a key role in minimising the impact of climate change. Paragraph 94 states that *"Local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change and water supply and demand considerations"*.
- 2.6 The NPPF, paragraph 99, states that *"Local Plans should take account of climate change over the longer term, including factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure"*.
- 2.7 The NPPF, paragraph 100, states *"Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere. Local Plans should be supported by Strategic Flood Risk Assessment and develop policies to manage flood risk from all*

sources, taking account of advice from the Environment Agency and other relevant flood risk management bodies, such as lead local flood authorities and internal drainage boards. Local Plans should apply a sequential, risk-based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change, by:

- *Applying the Sequential Test;*
- *if necessary, applying the Exception Test;*
- *safeguarding land from development that is required for current and future flood management*
- *using opportunities offered by new development to reduce the causes and impacts of flooding; and*
- *where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to facilitate the relocation of development, including housing, to more sustainable locations”.*

2.8 The Planning Practice Guidance advises on how planning can ensure water quality and the delivery of adequate water and wastewater infrastructure¹. It notes that *“early discussions between local planning authorities and water and sewerage companies, so that proposed growth and environmental objectives are reflected in company business plans, will help ensure that the necessary infrastructure is funded through the water industry’s price review”.*

2.9 The Planning Practice Guidance also recognises that early and on-going discussions with the Environment Agency, catchment partnerships and water and sewerage companies will help to identify water supply and quality issues along with the infrastructure required to support new development. In addition, discussions with these bodies will help to meet the Duty to Co-operate.

2.10 The Derby City Local Plan, Part 1: Core Strategy’s Spatial Vision states, in paragraph 3.7, that:

“Derby will be more resilient to the impacts of climate change and new development will contribute to reducing carbon emissions and energy use. The ‘Our City Our River’ programme will have been implemented creating a new river corridor that offers leisure and regeneration opportunities with improved visibility and access to the river, combined with new and realigned flood defences reducing overall flood risk in Derby”.

2.11 To help meet the plan’s Vision the following spatial objectives have been included in paragraphs 3 and 14 respectively:

¹ <http://planningguidance.planningportal.gov.uk/blog/guidance/water-supply-wastewater-and-water-quality/>

“To reduce Derby’s impact on climate change by promoting more sustainable forms of development, especially through the location and design of new development, the promotion of low carbon technologies, renewable forms of energy, recycling, the careful use of resources and minimising waste”.

“To enhance the River Derwent corridor as the city’s key environmental, cultural, ecological and historic asset, creating a more attractive and welcoming riverside area for Derby residents and visitors, recognising and enhancing the biodiversity value of the River to the City and working in partnership with the Environment Agency to implement the ‘Our City, Our River’ Masterplan to improve overall flood protection to surrounding areas”.

2.12 Finally, the Local Plan includes a number of policies which will ensure that the Plan accords with the relevant European and national requirements to reduce water consumption, improve water quality and reduce the risk of flooding.

- Policy CP2: Responding to Climate Change sets out how the Council will respond to the impact of climate change. This reflects not only national planning policy but also local projects and issues. It states that the Council will use the sequential test when considering proposals for development, ensure that development is flood resilient, that the Council will implement the ‘Our City Our River’ (OCOR) scheme and that development incorporates Sustainable Drainage Systems (SuDS). The policy also seeks to ensure that, where appropriate, development meets the requirements of the Water Framework Directive; this aspiration is included in a number of subsequent policies throughout the Local Plan.
- Policy CP16: Green Infrastructure is the Plan’s overarching policy to ensure the protection, enhancement and increase Green Infrastructure across the City. This aspiration will also assist the City in adapting to, and mitigating against, the impact of climate change.
- Policy AC7: The River Derwent Corridor provides the policy framework for the long-term regeneration of the River Derwent corridor.
- Policy AC8: Our City Our River sets out the policy framework which will help to deliver the flood alleviation scheme along the River Derwent.
- Policy MH1: Making it Happen provides the policy framework to ensure that the Council can ask for the necessary infrastructure to support new development across the City (including water, sewerage, surface water drainage and flood defences).

2.13 A number of site-specific policies also contain criteria which, when development occurs, seek to mitigate the impact of flooding.

2.14 To accord with national planning policy, policies in the Local Plan should be supported by robust and up-to-date evidence. To assist in the development of the Local Plan the Council undertook the following studies:

- Derby Housing Market Area Water Cycle Study (January 2010). The study examined issues regarding water resources, wastewater treatment, water quality, sewerage and flood risk across the HMA. The study identified constraints and provided recommendations to either resolve these issues or identify future work.
- Derby City Preliminary Flood Risk Assessment. The Preliminary Flood Risk Assessment (PFRA) is a high level assessment of flood risk arising from surface water, groundwater, ordinary (not main) watercourses, and canals.
- Level 1 Strategic Flood Risk Assessment. Undertaken by the Council's Land Drainage Team, this study examined the risk of flooding from major rivers and watercourses.
- Level 2 Strategic Flood Risk Assessment. Building on the work undertaken as part of the SFRA1, this study considered in more detail the risk of flooding at three sites around the City – North Riverside, Castleward and the Derwent Triangle.

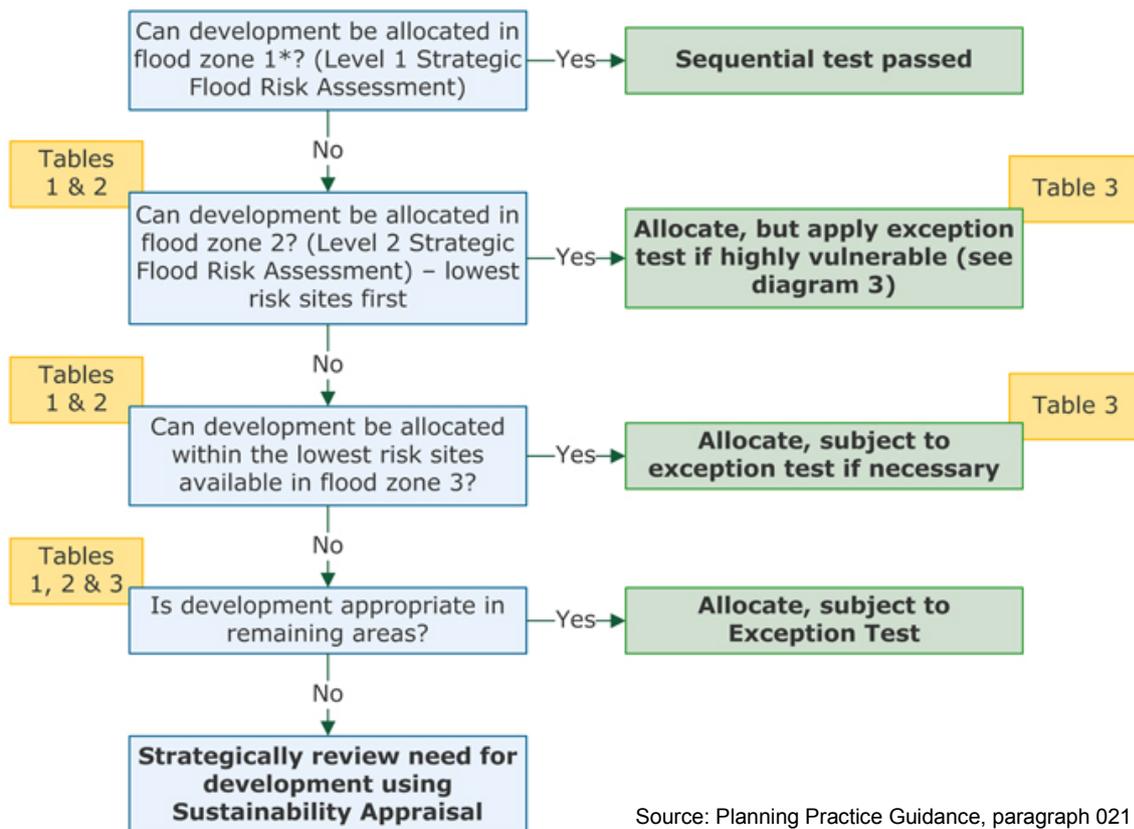
3. Flooding and Drainage

- 3.1 Flood risk to people and property can arise from various different sources, including fluvial (from rivers), tidal, surface water run-off (or pluvial), sewers & drains, culverted watercourses, groundwater, as well as through breaching/overtopping of flood defenses and from artificial sources such as canals and reservoirs. The risk of flooding can never be totally removed, however through good planning, management and use of sustainable flood mitigation and drainage approaches, the risk and consequences of flooding in many areas can be reduced.
- 3.2 In planning for new housing growth the vulnerability of sites to flooding is a key consideration. Many people think of flooding as simply flooding from rivers or other watercourses but 'fluvial' flooding as it is sometimes known only accounts for around a half of all reported incidents of flooding in homes and businesses.
- 3.3 Many flood events are increasingly coming from other sources such as run-off from land (sometimes known as 'pluvial flooding'), groundwater flooding or sewer flooding. These flood events can often occur in locations previously unaffected by flooding.
- 3.4 Derby City Council's Land Drainage Team has undertaken a Level 1 Strategic Flood Risk Assessment (SFRA1) in-line with national guidance and good practice. The methodology and the findings of the assessment were agreed by the Environment Agency.
- 3.5 Using data from a variety of sources, the SFRA1 identifies areas of the City at risk of flooding. It should not be interpreted as showing areas that will flood.

- 3.6 The SFRA1 provides an up-to-date evidence base for the Derby City Local Plan, Part 1: Core Strategy, informing both the site selection process, the Sustainability Appraisal, the Infrastructure Delivery Plan and it will also be used to assist in the determination of future planning applications.
- 3.7 The Study includes:
- A description and discussion of the flood risks within the City from the major rivers and watercourses and includes the extents of flooding zones and protection levels available to parts of the City centre.
 - The risks from the River Derwent are discussed in some detail as this is the source of the primary flooding risk to much of the City. The flood risk warning measures are also discussed.
 - Other watercourses have been modelled and discussed within the report including the Littleover, Markeaton, Chaddesden, Hell and Cuttle brooks – all of which have the potential to inundate significant numbers of properties.
 - Additional risks to the City have been included and discussed including the sewer systems, overland flows and risks from new development areas overloading the existing drainage infrastructure.
 - An assessment of the impact of climate change, existing flood risk measures and their standard of protection
- 3.8 It should be noted that, although the Council didn't publish the SFRA1 until the autumn of 2013, the findings of both the original and the updated study were utilised at an early stage of the plan preparation process and informed the Sustainability Appraisal.
- 3.9 As the findings of the SFRA1 began to emerge, the Council considered that it was appropriate to undertake a more detailed Level 2 Strategic Flood Risk Assessment for three potential regeneration areas namely North Riverside, Castleward and the Derwent Triangle; the latter two are allocations in the Local Plan.
- 3.10 In 2011, the Council published a Preliminary Flood Risk Assessment which provides a high-level assessment of flood risk from sources such as surface run-off, groundwater, ordinary water and artificial water bearing infrastructure such as sewers and canals. It concluded that, although Derby has a recognised history of flooding, it does not feature in any of the nationally determined Indicative Flood Risk Areas.
- 3.11 Currently, the Council is working on an Integrated Urban Drainage Model (IUD) which will help to understand flood risk across the City, and in particular, the impact of surface water flooding.
- 3.12 In addition to the IUD, further work will be undertaken through the application process to understand the risk of flooding on certain development sites which will help inform the mitigation measures required.

4. The Sequential & Exceptions Test

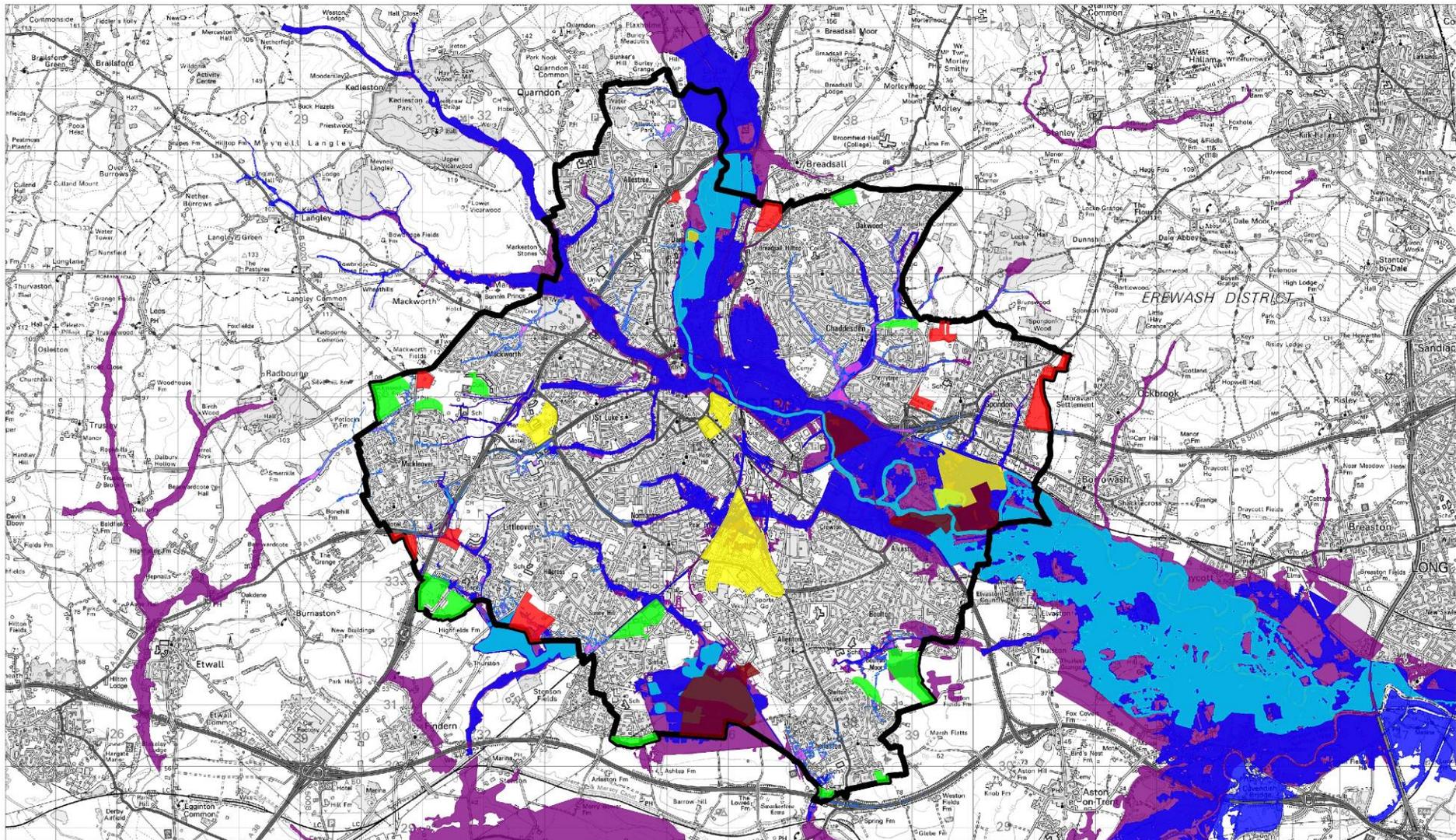
- 4.1 The aim of the Sequential Test is to steer new development to areas with the lowest probability of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding.
- 4.2 If, following application of the Sequential Test, it is not possible or consistent with wider sustainability objectives for the development to be located in zones with a lower probability of flooding the Exception Test can be applied.
- 4.3 The Exception Test is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.
- 4.4 Planning Practice Guidance states that, essentially, the two tests require proposed development to show that it will provide wider sustainability benefits to the community that outweigh flood risk, and that it will be safe for its lifetime, without increasing flood risk elsewhere and were possible reduce flood risk overall.
- 4.5 Planning Practice Guidance provides a useful flowchart (see below) which sets out the process for applying the sequential test in the preparation of a Local Plan.



Undertaking the Sequential Test

- 4.6 Derby, like other local authorities in the Country, has a challenging housing target to meet. Through working with our HMA partners, some of Derby's need has been decanted to Amber Valley and South Derbyshire. However, the Council is committed to find suitable land to accommodate 11,000 dwellings and 199 hectares (gross) of new employment land within its administrative boundary; a boundary which is tightly drawn around the City.
- 4.7 The Council's desire to promote urban regeneration has resulted in a strategy which continues to prioritise brownfield land for development. However, the amount of deliverable and viable brownfield land in the City is not sufficient to meet its assessed need or to ensure a degree of flexibility to bring forward development over the plan period. This has resulted in the allocation of a number of sites across the City; some of these sites have been highlighted in the Council's Level 1 SFRA as being at risk from flooding.
- 4.8 With regard to the Council's strategy of promoting urban extensions, the Sustainability Appraisal, page 66, noted that they:
- “provide better access to higher order services and facilities within the City and will provide better access to public transport and, in many cases, help to facilitate walking and cycling to existing nearby facilities. It may also serve to reduce journey lengths by car. The City is also the focus of economic activity within the HMA and thus urban extensions provide better access to a large number of jobs (both in terms of existing employers and those which will come forward on strategic employment sites). The strategy will also help to provide a critical mass of development that will be more able to deliver the infrastructure needed to mitigate the impacts of growth. The scale of growth will allow the new neighbourhoods to be more sustainable through the development of new education and community facilities, where needed, or will allow the expansion of existing facilities”.*
- 4.9 In respect of the plan's employment allocations, the Sustainability Assessment noted that, in the City, there are a limited number of sites that could be allocated to deliver the required level of employment growth. It was noted that, essentially, it was a choice between allocating sites or not.
- 4.10 Through undertaking the process, six sites have been allocated for development which contains areas which are shown in our SFRA1 to be at a higher risk from flooding.
- 4.11 Once the Sequential Test had been completed, the next stage in the process required the carrying out of the Exceptions Test to show that development will provide wider sustainability benefits to the community that outweigh the risk of flooding.

- 4.12 Planning Practice Guidance, paragraph 102, sets out the Exceptions Test; both elements must be passed before a site is allocated or development is permitted.
- it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and
 - a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall.
- 4.13 The map overleaf indicates the allocated and discounted housing sites, the allocated employment sites and the regeneration areas in relation to the SFRA1 flood zones.



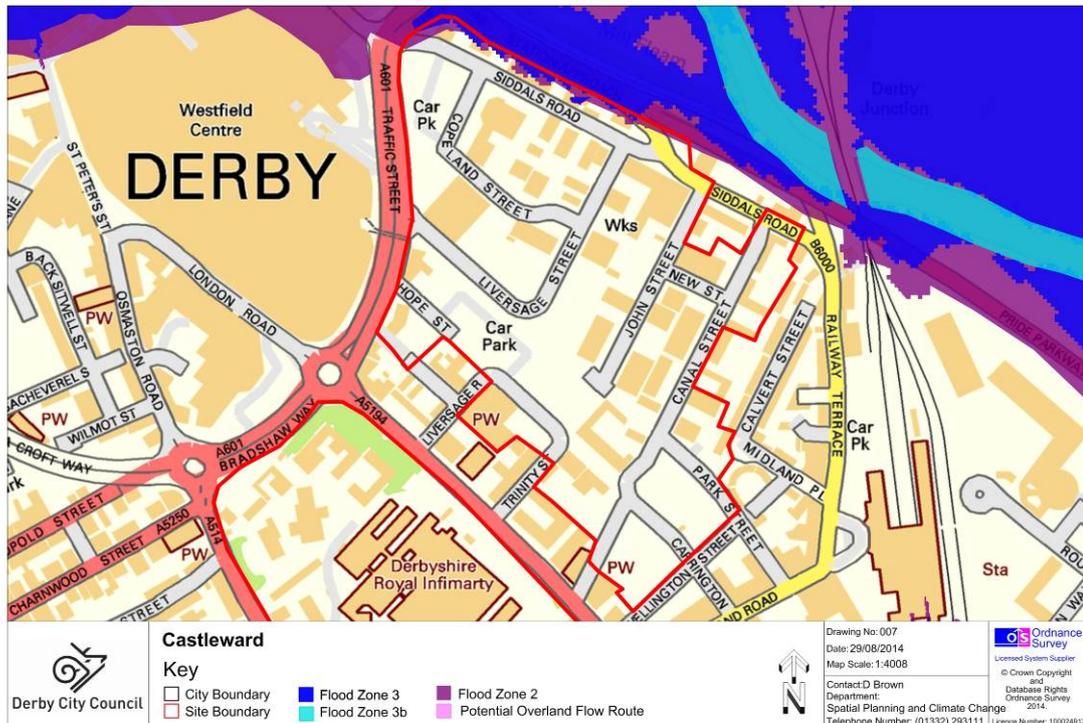
Key	
	City Boundary
	Allocated Housing Sites
	Housing Sites not allocated
	Regeneration Sites
	Allocated Employment Sites
	Flood Zone 3
	Flood Zone 3b
	Flood Zone 2
	Potential Overland Flow Route

Drawing No: Insert Drawing No.
 Date: 10/10/2014
 Map Scale: 1:85933
 Contact: D Brown
 Department:
 Spatial Planning and Climate Change
 Telephone Number: (01332) 293111

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- 4.14 The following discusses each of the allocations highlighted in the Council's SFRA1 as being at risk of flooding. All maps included in this Position Statement are taken from the Council's adopted Level 1 Strategic Flood Risk Assessment.

Castleward: Policy AC6



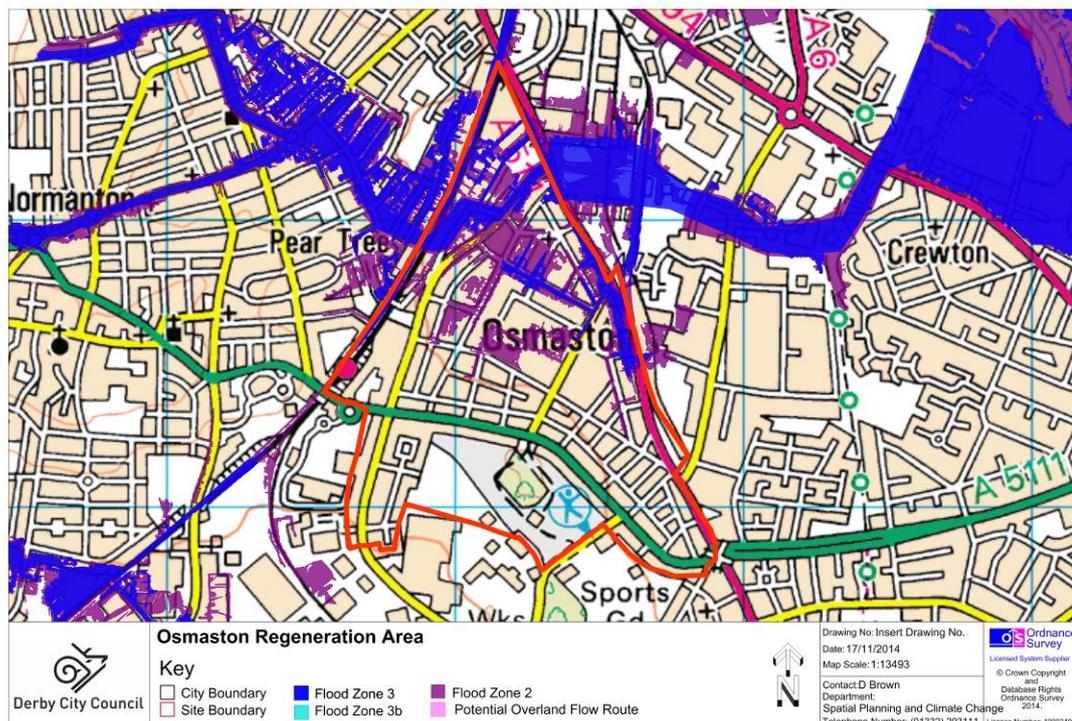
- 4.15 Castleward, along with the former Derbyshire Royal Infirmary (Policy AC6), provides an opportunity to create a sustainable residential development in the heart of the City. Together both sites will provide a minimum of 1,200 dwellings and supporting community facilities.
- 4.16 The Council's emerging SFRA1 indicated that an area of Castleward was situated in Flood Zone 2. As this was a key regeneration project for the Council, it was decided to undertake a Level 2 Strategic Flood Risk Assessment prior to the commencement of the masterplanning process. It should be noted that the latest iteration of the Council's SFRA1 (shown on the map above) has refined the Flood Zones, pulling back the area at risk of flooding to the northern boundary of the site.
- 4.17 The SFRA2² states that Castleward area is not in Flood Zone 3, the functional floodplain. It goes on to assert that Castleward is not at risk from fluvial flooding in a 1 in 100 year event including allowance for climate change. However, it did note that a 1 in 1000 event (0.1% AEP) causes significant flooding in the area, affecting Station Approach, Canal Street and Park Street; flood water also flows on to the railway near the London Road junction.

² <http://www.derby.gov.uk/environment-and-planning/planning/local-development-framework/#water-and-flooding>

Reiterating the findings of the EA, the SFRA2 noted that the area was susceptible to surface water flooding.

- 4.18 Outline planning permission already exists for the Council's preferred development partner Compendium Living to develop 800 new dwellings, a new primary school and supporting facilities. The first phase of this scheme is already under construction. The Environment Agency raised no objections but requested that a surface water drainage scheme is implemented as part of the development.
- 4.19 As part of the Phase 1 application, a discussion about the various types of SuDS features which could be utilised throughout the development. It indicates that Filter Strips, Infiltration Basins, Filter Drains and Perforated Pipes, Infiltration Devices, Pervious Surfaces and Green Roofs are suitable.
- 4.20 In conclusion, Castelward is a major mixed use regeneration priority for the Council. The Council has undertaken a Level 1 and Level 2 Strategic Flood Risk Assessment and the applicants have produced a Flood Risk Assessment. Therefore, the Council considers that the requirements of the NPPF and the NPG have been met in allocating this site.

Osmaston Regeneration Area: Policy AC14

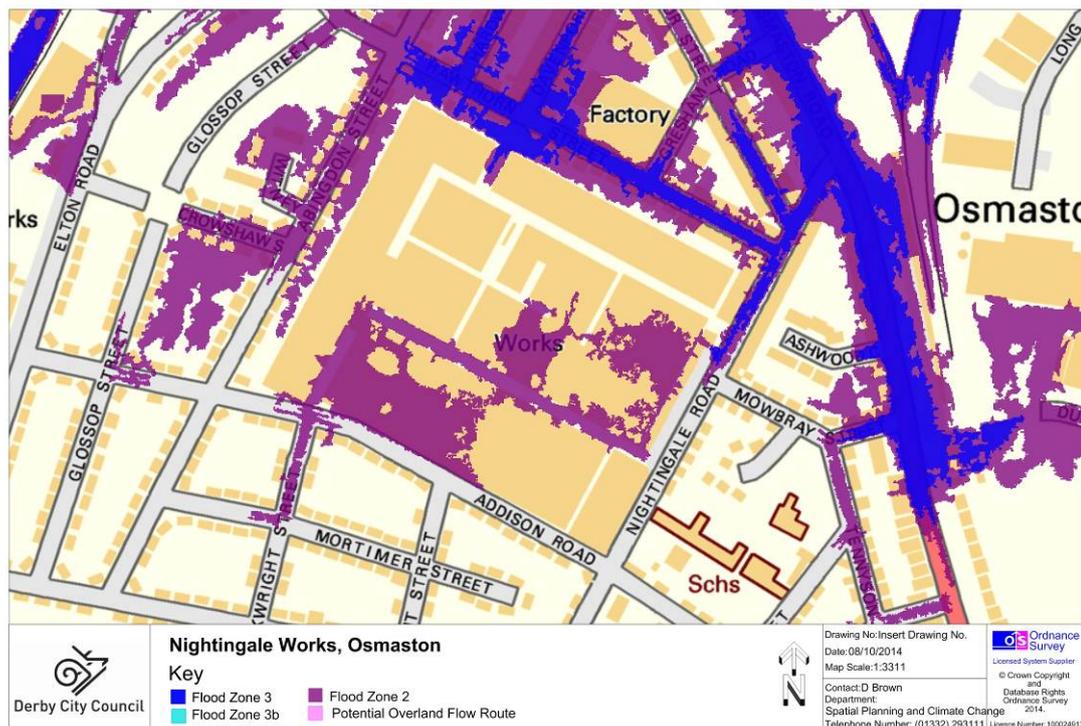


- 4.21 The Osmaston Regeneration Area comprises a number of existing and cleared employment sites within a residential neighbourhood known broadly as the 'Osmaston Triangle' which was established around the former Rolls-Royce factory as a Council Estate and now includes a mix of housing tenures.
- 4.22 It should be stressed that Osmaston is a key regeneration priority for the Council and the development proposed in the area, including the

redevelopment of the Nightingale Works, which is discussed later, will bring wider benefits to the whole community.

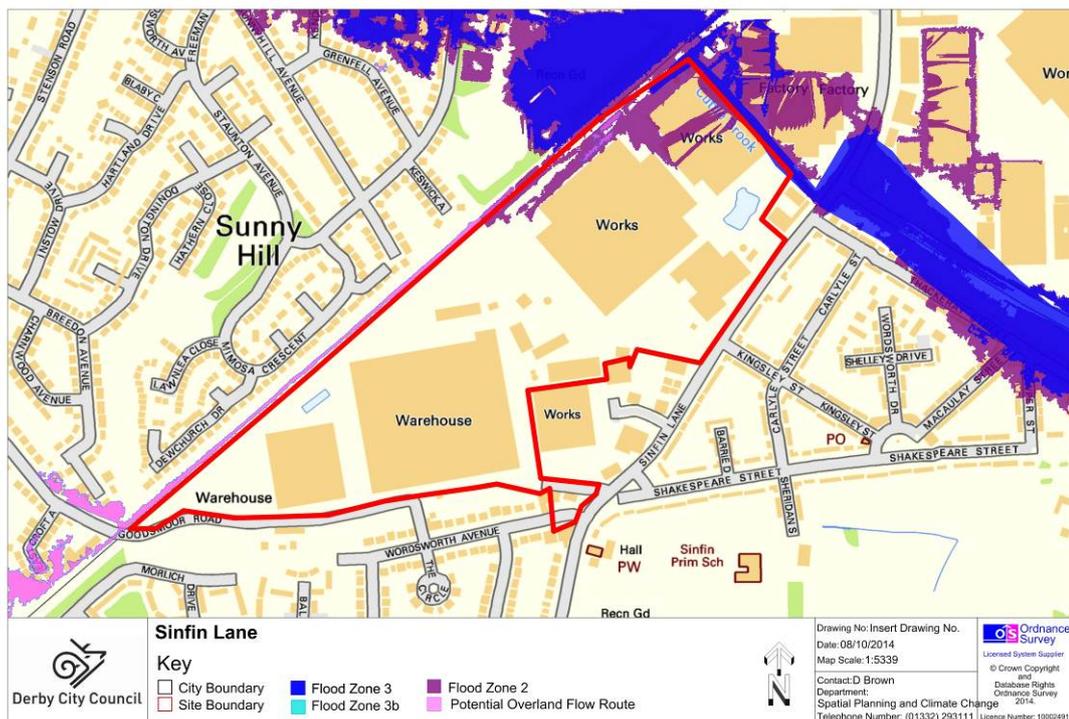
- 4.23 The Environment Agency's Flood Map for the area indicates that there is no flood risk in Osmaston. However, the Council's SFRA1 shows that there is a significant risk of flooding to the north of the regeneration area.
- 4.24 To address this conflict a number of Flood Risk Assessments have been undertaken to support historic applications in the area. It is this approach will be carried forward to determine the impact of flooding in future developments.
- 4.25 Of note is the recent application for 95 dwellings at Glossop Street; the methodology taken, as the site lies within Flood Zones 2 and 3, indicates the approach which will be followed should future development occurs to the north of the regeneration area.
- 4.26 The Flood Risk Assessment submitted to support the application (DER/12/12/01519) recognises the disparity between the Environment Agency's flood risk maps and the Council's SFRA1. The FRA indicates that flooding could arise from the Cotton Brook and recommends a number of mitigation measures such as raising the floor levels, raising electricity supplies above ground floor level and designing external levels to allow water to pool.
- 4.27 A further Flood Risk Assessment was carried out to support an application for a Gypsy/Traveller Site (DER/04/08/00610) after discussions with the EA indicated that the site fell on the limits of Flood Zone 2. Following work undertaken in conjunction with the EA it was concluded that the site fell within Flood Zone 1 and that it was suitable for all types of development.

Nightingale Works



- 4.28 Currently, the focus for development in Osmaston is on the Nightingale Works. This is a large brownfield site which the Council considers to be essential to kick-start the wider regeneration of the area and its redevelopment will meet the Local Plan's vision and spatial objectives.
- 4.29 This is an 8.9 hectare site located in the middle of a residential area. Redevelopment of this site is essential to ensure that the site does not remain derelict in the long term. It is unlikely that, given the locality and modern business requirements, that this site could remain as an employment use. Therefore, the best, viable, option is to provide houses on this site which would help meet the City's housing target.
- 4.30 The main Nightingale Road Rolls Royce works site has now been cleared ready for development and a masterplan is now in place to deliver new housing and public realm works. It is envisaged that this brownfield site will deliver 387 dwellings thus significantly helping to meet the 600 new dwellings which is envisaged to be constructed in the area.
- 4.31 There is a contradiction between the Environment Agency's Flood Maps and the Council's SFRA1. The EA's plans indicate that the site lies within Flood Zone 1 however, the EA does point out that there is a 'low' risk of surface water flooding on the site; the Council's SFRA1 places the same area in Flood Zone 2. Discussions with the authors of the Council's SFRA1 about this issue indicated that the discrepancy can be attributed to differing models used both organisations.
- 4.32 The Environment Agency has no modelling of the culvert therefore consider that there is no flood risk. However, the Council consider that flooding from the Cotton Brook would be fluvial flooding as it is classed as a Main River. The only reliable modelling available is the updated Flood Maps for Surface Water which reflects the flood from sewers normally, but as Cotton Brook is the main surface water sewer in the area, the Council believes this gives a reasonable indication of risk in the area from the Cotton Brook. The area is very flat and therefore the exact flood route difficult to establish however depths will be relatively shallow. In developing the SFRA1 Officers took the view that the Cotton Brook posed a flood risk in the area and that people should be made aware of this.
- 4.33 Further investigations with regard to the risk of flooding will be carried out as part of the masterplanning process and it is considered that, through this process, the risk of flooding in the area can be better understood and mitigated against.
- 4.34 In conclusion, this site is a regeneration priority for the Council and helps meet the aspirations of the Local Plan. What is consistent is that there is a small part of the site which is at risk of flooding and this should not hinder the redevelopment of this site. Further work needs to be undertaken to assess the actual severity of flooding in order to determine what mitigation measures can instigated.

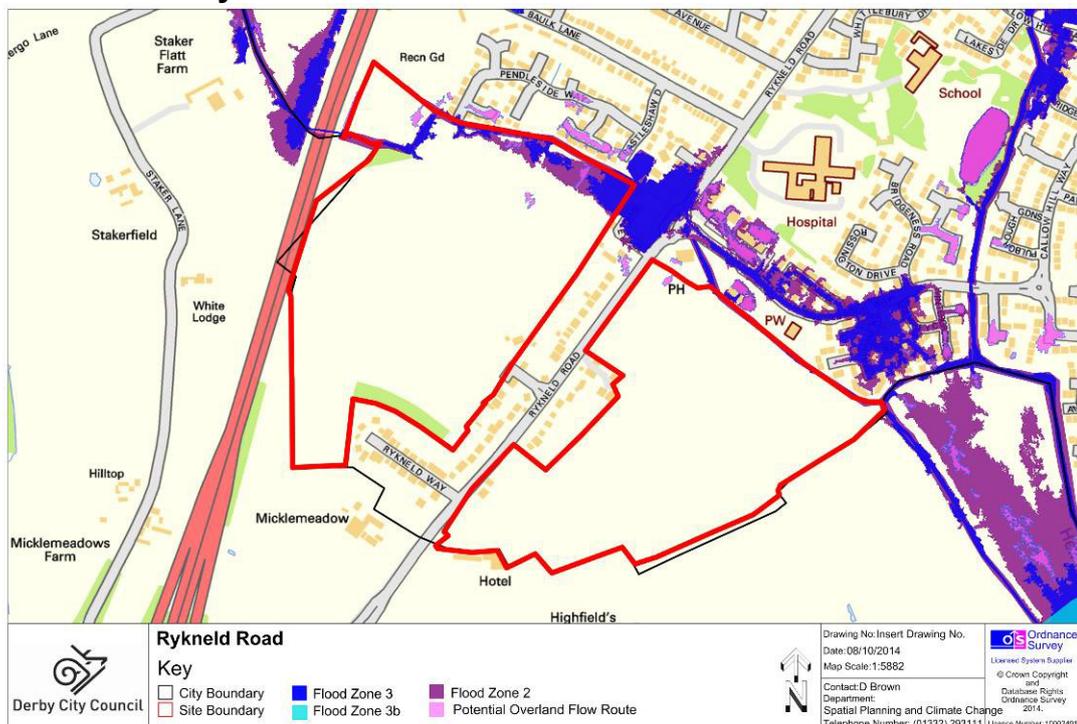
Sinfin Lane: Policy AC17



- 4.35 This 22 hectare allocation could provide a minimum of 700 dwellings as a sustainable allocation in Sinfin. It is one of the Local Plan's regeneration areas, bringing forward a site which could help meet the Council's housing target on a brownfield site.
- 4.36 The Environment Agency's Flood Maps identifies that the site does not lie in a Flood Zone but certain parts of the site is at risk from surface water flooding, primarily located around the large warehouses.
- 4.37 The Council's SFRA1 indicates that Flood Zone 2 encroaches into the northern part of the site and indicates that the railway line is a potential overland flow route. In both cases however, it should be noted that the area at risk of flooding is relatively small when compared to the entire site.
- 4.38 An outline application for development of the site (DER/02/12/00266) was registered by the Council in March 2012, before the Council published its Level 1 SFRA.
- 4.39 The Flood Risk Assessment submitted to support the outline application supports the EA's findings by placing the site wholly in Flood Zone 1. The FRA continues by indicating that the north of the site '*is situated at a higher elevation; however, whilst the levels fall towards the railway line, there is a topographically low area to the north-west that would serve to intercept any urban runoff prior to reaching the railway line and this site. It is therefore concluded that this flood source would not impact on the proposed development*'.

- 4.40 The FRA supporting the outline application also includes a Surface Water Management and a Foul Water Management Strategy.
- 4.41 As a Statutory Consultee, the Environment Agency was invited to submit comments regarding this development. In summary, the EA did not raise any objections to the development in relation to flood risk.
- 4.42 Although Policy AC17 does not expressly require the provision of flood mitigation measures, the Council consider that the requirements of Policy CP2: Responding to Climate Change will ensure that the impact of flooding is considered as part of the application process.
- 4.43 In conclusion, this site is a regeneration priority for the Council and helps meet the aspirations of the Local Plan. The site is a former employment site which does not meet modern requirements and, as such, provides an ideal opportunity for the regeneration of a brownfield site. The Environment Agency's Flood Maps and the Council's SFRA1 indicate that there is a risk of flooding on the site but there is some debate as to the severity. It should be noted that, in both instances, the area at risk of flooding is minimal. An outline application has been submitted for the site which includes a Flood Risk Assessment; this assessment indicates the appropriate measures required to mitigate the risk of flooding. Therefore, the Council considers that the requirements of the NPPF and the NPG have been met in allocating this site.

Ryknel Road: Policy AC20

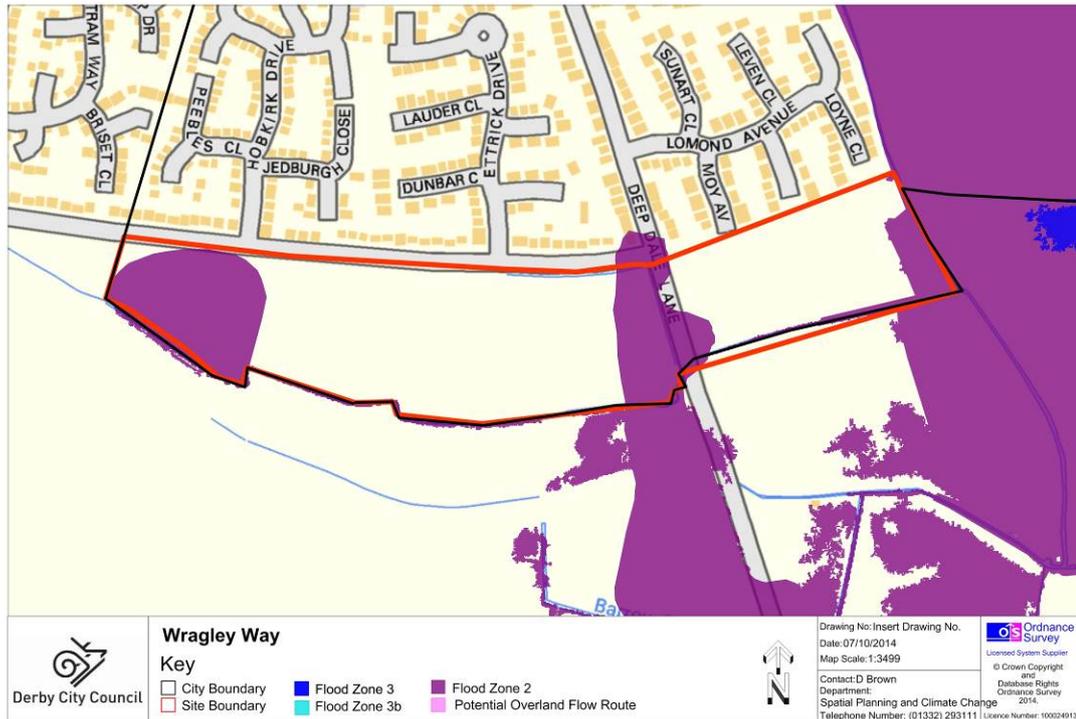


- 4.44 The Rykneld Road allocation forms part of a larger cross-boundary development. This is a long-standing allocation as both sites were originally allocated in the City of Derby Local Plan Review which was adopted in January 2006; a subsequent Supplementary Planning Document setting out

the framework for development was published in 2008. It is expected that the two sites within the City will contribute a minimum of 900 dwellings.

- 4.45 The Holly Brook, which is a tributary of the Hell Brook, runs along the northern boundary of the allocation.
- 4.46 The Environment Agency's Flood Maps indicates that there is a risk of surface water flooding along the brook. In certain areas, the risk of surface water flooding is considered by the EA to be 'high'.
- 4.47 Consistent with other sites, the Council's SFRA1 places the same areas of Flood Zones 2 and 3.
- 4.48 However, both plans indicate that the risk of flooding comprises a small part of the site and the Council considers that this should not prohibit the development of this significant cross-boundary allocation.
- 4.49 An outline planning application was submitted in January 2011 (DER/01/11/00023) however a decision has yet to be made. This application is for a mixed use development comprising of residential development business units (Use Class B1), retail foodstore (Use Class A1), community facilities (Use Classes D1 and D2), commercial uses (Use Classes A1, A2, A3,A4 and A5), primary school (Use Class D1) and formation of vehicular accesses to Rykneld Road and Hollybrook Way.
- 4.50 The Flood Risk Assessment submitted to support the application was based the Environment Agency's flood maps as the Council's SFRA1 had yet to be published. The FRA noted that the EA's findings and suggested that the site had a less than a 1 in 1000 annual probability of flooding, meaning that it lies within Flood Zone 1. The FRA continues by recognising that there may be a risk of flooding as a result of development and consideration should be given to the design of the development so that potential flood damage is minimised.
- 4.51 Initially, the Environment Agency raised objections to the development due to the absence of a Flood Risk Assessment. However, it should be noted that, in their final correspondence with the Council, the Environment Agency stated that permission should only be granted following the imposition of certain conditions to reduce the risk of flooding from the Holly Brook.
- 4.52 Policy AC20 has been formulated using the information from the SFRA1 and recognises that there is a flooding issue on this site and criterion (i) requires the provision of appropriate flood mitigation measures.
- 4.53 In conclusion, this is a long-standing allocation in the City which now forms part of a wider cross-boundary development. Both the Environment Agency's Flood Maps and the Council's SFRA1 note that there is a small area to the north of the allocation which is at risk from flooding, although there some debate as to the severity. The Applicant's Flood Risk Assessment notes that there may be a risk of flooding development and that further consideration should be given to the design to minimise flooding.

Wragley Way: Policy AC18

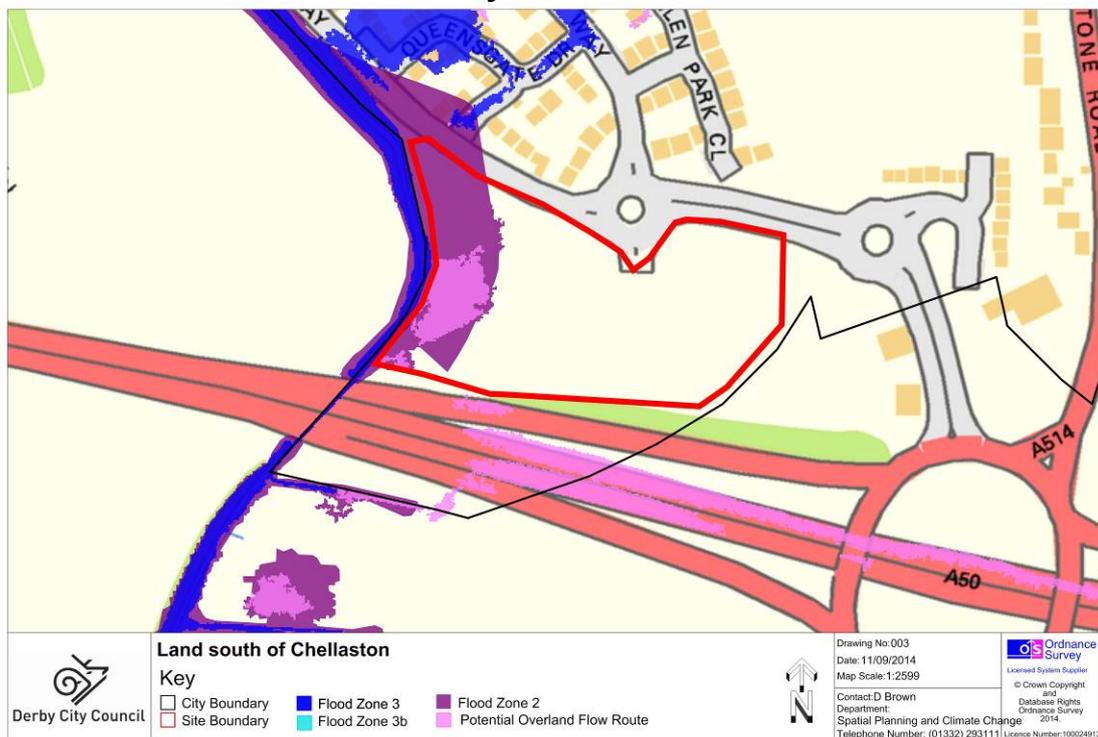


- 4.54 This site forms part of a larger, cross-boundary allocation. Land within the City will deliver a minimum of 180 dwellings and the South Derbyshire allocation will deliver 1820 dwellings. The delivery of this sustainable urban extension to the City will ensure that the necessary infrastructure can be delivered.
- 4.55 The Environment Agency's Flood Maps indicate there are two areas at risk of flooding on this site; one area is located along the eastern edge of the site along Deep Dale Lane, while the second is further west. In both cases the Environment Agency classes the risk of flooding as 'low'. In addition, the EA's Flood Maps show that there is a 'low' risk of surface water flooding again to the west of the site and along Wragley Way which forms the sites northern boundary.
- 4.56 The Council's SFRA1 backs up the EA's findings but places both areas at risk of flooding, in Flood Zone 2.
- 4.57 Based the EA's Flood Maps and the Council's SFRA1 indicate that the area at risk of flooding is small when compared to the overall allocation.
- 4.58 An outline planning application has been submitted to the Council (05/13/00596) which was granted conditionally on 12 December 2013.
- 4.59 The applicant's Flood Risk Assessment submitted to support the application recommends that, in response to the flooding issues along Deep Dale Lane, *mitigation in the form of raised finished floor levels have been recommended to ensure the safety of the development. As such, finished floor levels should*

be set no lower than 40.92m AOD to provide a 300mm freeboard above the modelled flood level. Providing a nominal threshold level into the dwellings will ensure any residual risk from pluvial runoff, groundwater extrusion or sewer flooding will be adequately addressed. It should be noted that the Environment Agency considered the hydrological methodology adopted was appropriate and, with regards to surface water drainage, had no objections, subject to relevant conditions being added.

- 4.60 Policy AC18 has been developed using the information garnered from the Council's SFRA1. It recognises that there is a flooding issue on this site and criterion (e) requires the implementation of appropriate flood mitigation measures as part of the development.
- 4.61 In conclusion, the allocation of this site will help to bring forward a significant cross-boundary development which will help meet the City's housing requirements and provide the quantum of development to bring forward the necessary infrastructure to support the development. Both The EA and the Council have noted in their respective assessments that there is a risk of flooding on the site, albeit a small area of the overall allocation. A Flood Risk Assessment submitted as part of the outline planning application has been informed by the Environment Agency's Flood Maps and proposes a number of mitigation measures to reduce impact of flooding. Therefore, the Council considers that the requirements of the NPPF and the NPG have been met in the allocation of this site.

Land to the South of Chellaston: Policy AC24



- 4.62 Land to the South of Chellaston (Policy AC24) is part of a larger, cross-boundary development which, when combined with the allocation in South Derbyshire, will provide around 750 new homes; it is expected that the City

element, which is a minor part of the overall scheme, will provide around 100 homes.

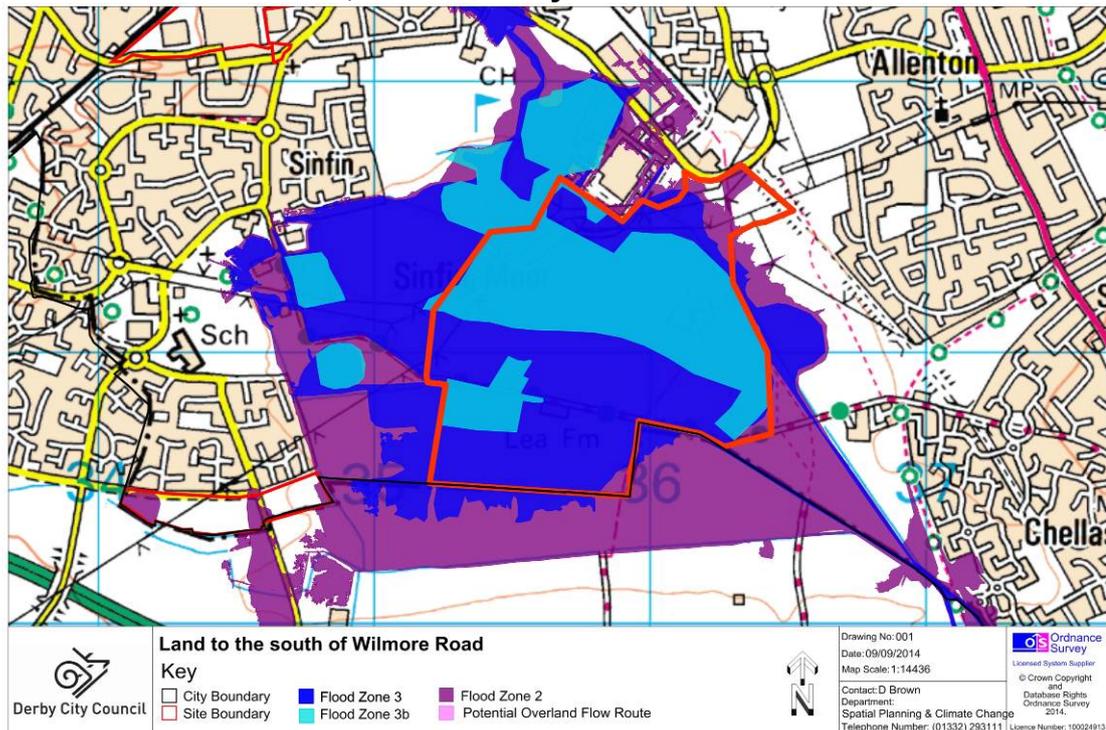
- 4.63 The Cuttle Brook runs along the western boundary of the allocation.
- 4.64 The Environment Agency's Flood maps indicate that a minor part of the site, along the western boundary, has a 'low' probability of flooding. In addition, the EA's maps also indicate there is a risk of surface water flooding in the same area.
- 4.65 The Council's SFRA1 backs up the EA's findings by indicating that a small area to the west of the site lies within Flood Zone 2 and is also affected by a potential overland flow route.
- 4.66 An application (DER08/13/00941) has been submitted but a decision has yet to be reached.
- 4.67 The Sustainability Appraisal highlighted a number of constraints affecting the site but it concluded by stating that development of this site will be part of a larger, cross-boundary development and the Council will ensure that the necessary infrastructure including new primary and secondary school provision, comprehensive flood mitigation measures and links to nearby facilities are provided.
- 4.68 In conclusion, the allocation of this site will help to bring forward a cross-boundary development which, in turn, will help meet the City's housing requirements and provide the quantum of development to bring forward the necessary infrastructure to support the development. Both The EA and the Council have noted in their respective assessments that there is a risk of flooding on the site, albeit a small area of the overall allocation. A Flood Risk Assessment submitted as part of the outline planning application has been informed by the Environment Agency's Flood Maps and proposes a number of mitigation measures to reduce impact of flooding. Therefore, the Council considers that the requirements of the NPPF and the NPG have been met in the allocation of this site.

to people. It is therefore considered that flood risk from this source can be successfully mitigated through the site's surface water drainage strategy.

Comparison of the results of the two models with the Environment Agency's Fluvial Flood Zones at the site shows that larger disconnected areas of flooding shown in Flood Zone 2 are likely to be a result of surface water flooding. Areas near to Thulston Brook at the Site's northern boundary are likely to be from fluvial sources.

- 4.71 The SFRA1 indicates that Boulton Moor West (Policy AC23) is partially affected by flooding along the course of the Thulston Brook and further south into the site. Records indicate that the most extensive flooding occurred in 1977 and the SFRA1 is based on the Environment Agency's records from that time. Discussions with the Council's Land Drainage Team suggest that recent flooding in the area may be due to a combination of factors including local topography, poor maintenance of the brook, surface water run-off and elevated ground water levels.
- 4.72 The issue of flooding was also raised by the Environment Agency when they submitted comments on the draft Local Plan. They suggested that a comprehensive Sequential Test is undertaken to make it clear that alternative sites have been considered. The issue of flooding on the site was also raised by a member of the public.
- 4.73 Dialogue between the Council and the site promoters indicate that the current flooding issues can be managed through alleviation measures incorporated into the development itself and by and utilising the remaining Green Wedge. In addition, the Council's Land Drainage Team consider that alleviation measures put in place as part of development could help to address flooding issues experienced in the wider area.
- 4.74 In terms of the Sequential Test, the Council considers that there are a limited number of sites in the City, the other being Castleward which is also allocated, which can deliver around 800 dwellings. This is also recognised in the Sustainability Appraisal which also highlighted a number of constraints affecting the site but it concludes by stating that development of this site will be part of a larger, cross-boundary development (part of which in South Derbyshire already has Planning permission) which, due to the quantum of development, will provide substantial social and community benefits to the new community including a new district centre, a new primary school, contributions to secondary school provision and improvements to the remaining Green Wedge.
- 4.75 In conclusion, the Environment Agency's Flood Maps and the Council's SFRA1 indicated that, in respect of Boulton Moor west, there were substantial areas on the site at risk of flooding. Further work undertaken to support the planning application refined our understanding

Land South of Wilmore Road, Sinfin: Policy AC15



- 4.76 With regard to the employment allocation to the south of Wilmore Road (Policy AC15), this has been a long-standing allocation carried forward from the existing adopted Local Plan. The site was first highlighted as a potential major employment site in the 1980 Derbyshire Structure Plan. This was subsequently followed by specific allocations in the 1994 Southern Derbyshire Local Plan and successive Local Plans adopted by the City Council. Further, the policies in the City of Derby Local Plan Review 2006 relating to the site were saved in 2009.
- 4.77 The allocation covers 86.8 hectares and will provide a new high quality business park accommodating B1, B2 and B8 uses which will significantly help meet the City's employment needs over the plan period. Its location, close to existing employers, will help underpin and create links with local automotive, aerospace, rail and energy sectors.
- 4.78 As indicated by the map above, the site itself lies entirely within Flood Zones 3 and 3b.
- 4.79 The Council considers that, given the constraints imposed by its administrative boundary there are no suitable sites of this size which is capable of providing strategic employment growth with links to existing manufacturing facilities and, with the construction of a new link road with direct access to the strategic road network.
- 4.80 In response to our Part 1 consultation, the Environment Agency highlighted that this allocation is located in an area of flood risk and noted that the supporting text justified why there are no suitable, alternative sites. However, they state that it would be helpful if a comprehensive flood risk Sequential

Test could be applied to make it clear that alternatives have been considered. The Council considers that the following paragraphs provide the necessary information to satisfy the Environment Agency's request.

- 4.81 Outline planning permission (DER/11/10/01385) has been given for development on the site and full planning permission has been conditionally granted for the construction of the link road.
- 4.82 The applicants submitted a Sequential Test to support the planning application. The following is a summary of the eight sites considered which were thought to be large enough to accommodate the type of development proposed.

Name	Flood Zone	Constraints to Delivery
Land at Cross Hill	1	Not appropriate given protection of open spaces and proximity to existing residential properties.
Mickleover Golf Course	1	The land is mainly used as a golf course and accommodates areas designated as a green wedge and wildlife site. The site is bounded by residential properties and is inappropriate for large scale commercial development.
Land South of Mackworth		A number of environmentally sensitive uses and allocations which protect the openness of the land are likely to affect the ability to assemble a sufficient mass of land to accommodate the scale of commercial development proposed. There may be transport implications depending on the timing of the implementation of the T2 improvements.
Markeaton Park	1 and 3	This is the site of an existing public park which is protected for its open character. It also accommodates a crematorium, allotments and playing fields. The land contributes to the open space provision for the whole of the City and is inappropriate for large scale commercial development.
Allestree Park	1 and 3	The site is an existing public park protected for its open character. To the north and east are green belt and

Name	Flood Zone	Constraints to Delivery
		a World Heritage Site also lies to the East. Residential areas sit to the west. Given these adjacent uses, commercial development of the scale proposed is considered inappropriate.
Land East of Cherrytree Hill	1 and 3	The site is protected as green wedge. It accommodates two schools and residential properties sit to its south. It is considered unacceptable for large scale commercial development.
Land East of Spondon	1 and 3	The land is protected for its openness in order to prevent coalescence with neighbouring built up areas. It is unsuitable for large scale commercial development.
Boulton Moor	1 and 2	The site is allocated as green wedge. Part is covered by the Boulton Moor SSSI and the Noel Baker Community School. Large scale commercial development may impact upon the SSSI and amenity of residential properties to the north and west. It is considered unsuitable for large scale commercial development.

4.83 The report concluded that there were no alternative sites situated in an area of lower flood risk that were suitable, viable or available to accommodate the development.

4.84 The Flood Risk Assessment also demonstrated that:

...the site is affected by flooding during the 20 year event due to overtopping of the right bank of the Cuttle Brook and Meadow Drain. It is anticipated, from previous modelling of the system, that this resulting encroachment of floodplain is caused by the additional inflow from the Combined Sewer Overflow, which is outfalling at a rate consistent with a 40 year return period event. The 1 in 20 year event was observed to remain within channel throughout the model if the CSO input was omitted. Therefore, the site is not considered to be within the functional floodplain.

As expected, the extent of flooding across the site for higher return period (lower probability) events increases.

However, for the lower return period (higher probability) events, the depth of flooding across the site is relatively minimal with a large proportion of the flooding less than 100mm. There are only small isolated low points across the site where these values are exceeded.

On review of the 100 year plus climate change results, the northern area of the site is again only affected by shallow sheet flow, but there is a larger volume of ponding adjacent to the left bank (northern embankment) of the Main Drain, where depths experienced are in the order of 250mm. This is consistent with anecdotal feedback on observed flooding locations.

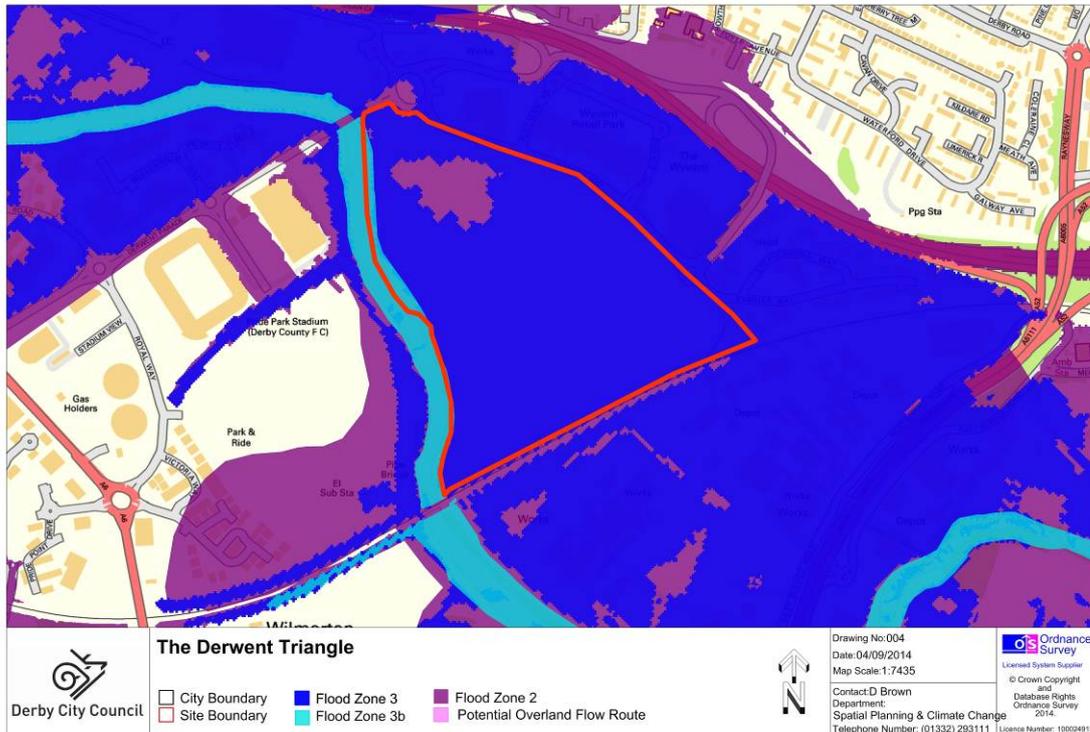
In the southwest of the site, the overland flows from the Cuttle Brook and Meadow Drain re-enter the system by flowing into the Main Drain over the left bank, that in turns results in flooding being experienced on the right bank of the Main Drain (southern side). This flooding is not experienced on the right bank of the Main Drain for events less than 100 year simulation.

- 4.85 Correspondence from the EA dated 3 November 2001 stated that *“it is for the LPA to apply and be satisfied that the sequential test has been undertaken in an open and transparent way in accordance with PPS25. The Environment Agency therefore has no comment on the validity of your Sequential Test results”* the email concludes that *“Irrespective of the Sequential Test, the sites if approved, will be located within floodplain, therefore we request that your Sequential Test results are made available for public inspection...On this basis we will remove our objection on Sequential Test grounds”*.
- 4.86 The Flood Risk Assessment shows that without flood mitigation, the development has the potential to reduce floodplain storage, increase the risk of flooding downstream and consequently affect the wider catchment. The proposals involve provision for a flood mitigation strategy which reduces the water level in the Cuttle Brook to such an extent that it removes the existing flooding via the creation of three flood storage areas. It is intended that the new alignment of the Brook will enhance the watercourse. The employment of SuDS has been considered and there is an intention to include within the development detention and infiltration basins to reduce surface water runoff from the development. The Environmental Statement concludes that there will be a positive impact following mitigation in the reduction of flood risk to the catchment as a whole.
- 4.87 It is indicated that the flooding mitigation measures will have positive ecological benefits. It is also indicated that the allocated employment land to the south of the site will need to provide its own mitigation at the time of any future planning application. The drainage arrangements within the Highway, which includes swales, will be maintained by the City Council which is the Highways Authority, while the on-site flood alleviation measures will be maintained by a management company set up with the developers.

The draft policy states that the site is allocated for employment generating uses (B1, B2 and B8). Planning Policy Guidance sets out the sequential approach for locating development and provides the water compatible uses

for each flood zone. Table 2 provides the classification of uses based on their vulnerability while Table 3 provides a matrix comparing flood vulnerability and flood zone, setting out which use is appropriate to each flood zone. The uses proposed in the policy are classed as “less vulnerable” and are considered to be appropriate for Flood Zones 3 and 2.

The Derwent Triangle: Policy AC11



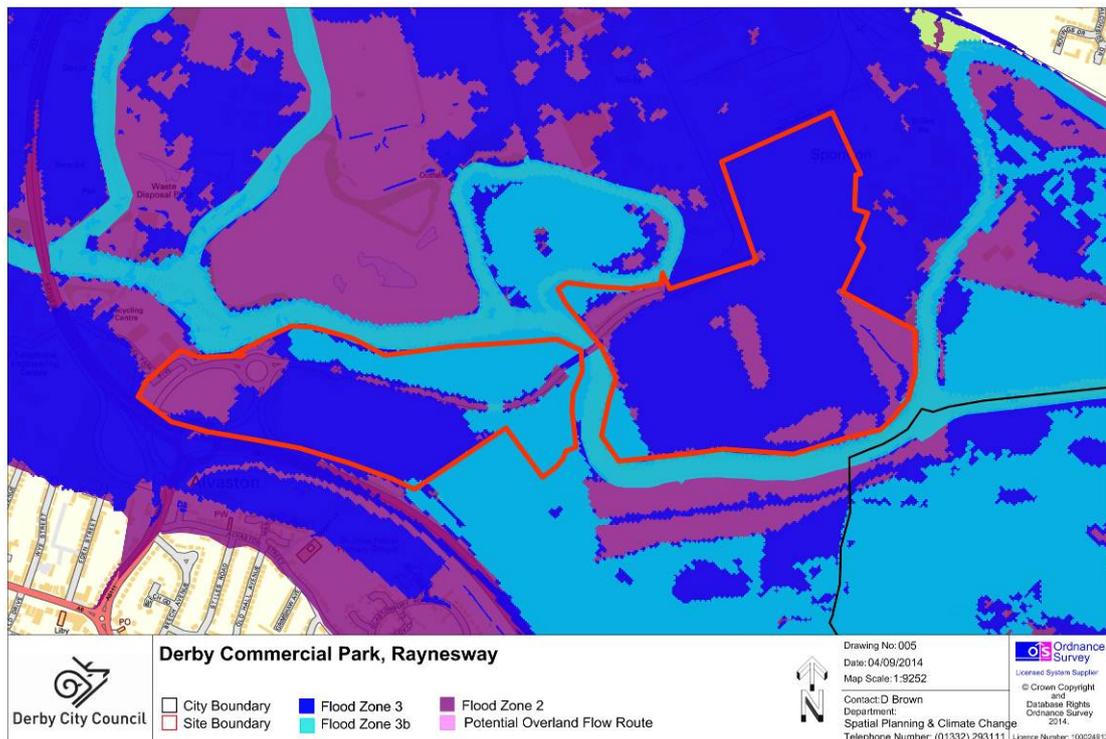
- 4.88 The Derwent Triangle (Policy AC11) is a long-standing allocation carried forward from the City of Derby Local Plan Review. The site was previously used for mineral extraction and has now been filled and raised by the landowner, priming the site for redevelopment; an application for the continuation of tipping non-toxic waste to raise ground levels was granted in October 2014. It is recognised by the Council as a significant brownfield regeneration opportunity and a logical extension to the Wyvern Business Park and Pride Park.
- 4.89 It should be noted that development of this site will help to deliver the Our City Our River masterplan and effectively remove this site from the functional floodplain.
- 4.90 The Environment Agency’s Flood Maps indicates that this site is generally at a ‘medium’ risk of flooding with certain areas at ‘low’ risk.
- 4.91 The Council’s SFRA1 was undertaken prior to the work undertaken by the landowner and shows that the site lays within Flood Zone 3 with a small area to the north of the site situated in Flood Zone 2.

- 4.92 It should be noted however, that the flooding scenarios provided in the SFRA2 were based on the current flood defences, taking into account the work undertaken by the landowner to raise the ground levels on-site.
- 4.93 The Council's SFRA2 examined the impact of flooding on this site in more detail and noted that *"the Derwent Triangle Area does not flood in the 4% AEP fluvial flood event – however it does flood during the 1.33% AEP fluvial flood event. The modelling exercise has confirmed that the area is within the Flood Zone 3 (at risk of flooding in the AEP 1% flood event)"*. The report also noted that during more extreme flood events, the whole area is inundated but the flood hazard is moderate.
- 4.94 The study also noted that, although the risk of flooding is considered to be primarily from fluvial flooding, there is the potential for surface water flooding near the sites south-eastern boundary. It also notes that the site has the potential to include SuDS and recommends that their inclusion is examined as part of any development proposal.

The SFRA2 recommends that "if further development is proposed within this built up area, then it is recommended that detailed post scheme modelling is carried out to determine the flood risk in detail and assess any mitigation options. A Drainage Strategy Plan should be developed for future drainage on the site to ensure that drainage is developed in a strategic and sustainable manner rather than a piecemeal approach".

- 4.95 Policy AC11 states that the site is allocated for employment generating uses (B1, B2 and B8) and that alternative uses will only be considered if six criteria are met. When compared with the Planning Policy Guidance Flood Zone and Flood Risk Tables, uses proposed in the policy are classed as "less vulnerable" and are considered to be appropriate for Flood Zones 3 and 2.
- 4.96 Through the consultation on the draft Local Plan, the Environment Agency registered their support for the policy but requested that criterion (e) should be amended to stipulate that any flood mitigation measures are consistent with the OCOR masterplan.
- 4.97 In conclusion, the site is a long-standing allocation for employment use in the City. The Environment Agency Flood Maps and the City Council's SFRA1 and SFRA2 indicate that the site is at a high risk of flooding. The landowner has permission from the Council to continue to tip non-toxic waste on the site to raise the ground levels and prime the site for development. In addition the site forms part of the Our City Our River masterplan which, when implemented, will effectively remove the site from the functional floodplain. The Local Plan states that the site will be a logical extension to the Wyvern Business Park and Pride Park, containing B1, B2 and B8 uses; uses which are considered to be less vulnerable and appropriate to Flood Zones 3 and 2.

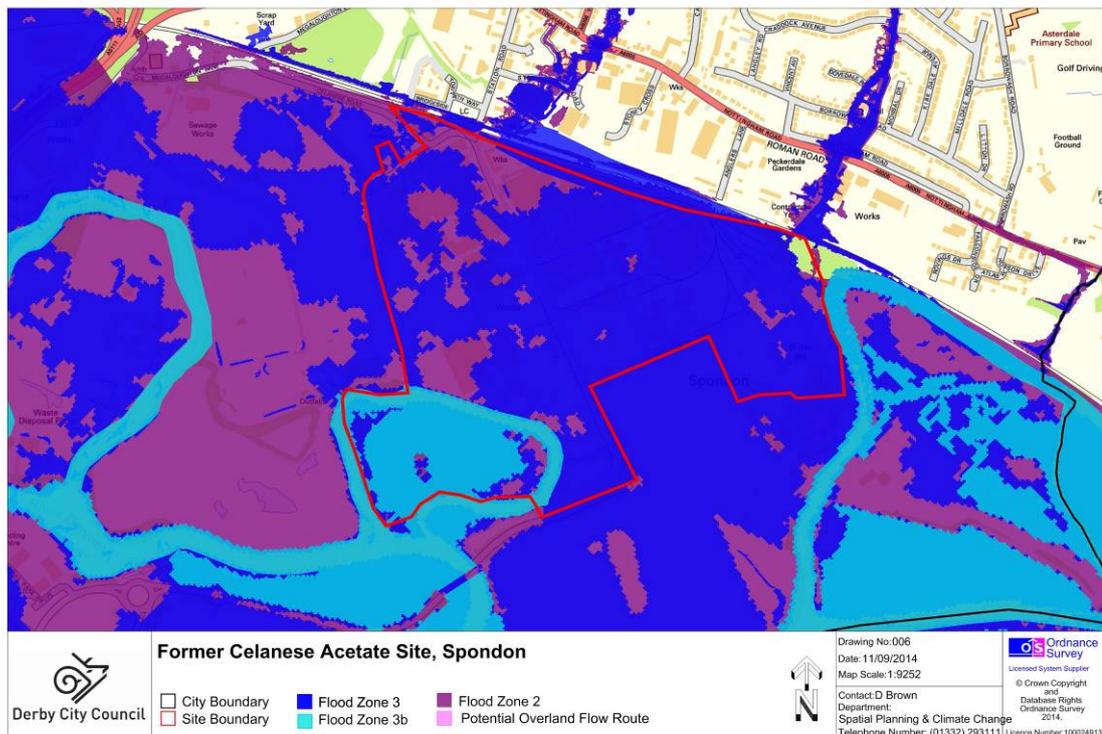
Derby Commercial Park, Raynesway: Policy AC12



- 4.98 The Derby Commercial Park (Policy AC12) is a long-standing allocation carried forward from the City of Derby Local Plan Review. The allocation will provide 64.7 hectares of employment land at the southern end of Raynesway. The policy reiterates the planning application by stating that the amount of developable land is actually 42 hectares once the flood alleviation measures have been accounted for.
- 4.99 The site is recognised by the Council as a significant brownfield regeneration opportunity providing excellent transport links to the A50 and the M1. Outline planning permission exists for the area to be developed as a flagship storage and distribution park and an additional application seeking an extension of time has recently been received (DER/10/14/01377). A number of detailed applications have also been permitted including a single unit of in excess of 120,000sqm; one of the largest single industrial / distribution facilities in the Midlands with detailed planning permission.
- 4.100 The flood alleviation measures, comprising of a wetland habitat, are now in place which effectively removes the risk of flooding on the site.
- 4.101 The EA's Flood Maps indicate that the site is at risk of flooding with areas nearer to the river at a 'higher' risk.
- 4.102 The Council's SFRA1 indicates that the site is situated in Flood Zones 3, 3b and 2 and, unlike the Derwent Triangle, is not part of the Our City Our River Masterplan.

- 4.103 Policy AC12 states that the site is allocated for employment generating uses (B1, B2 and B8) and that alternative uses (B1a) will only be considered if six criteria are met. When compared with the Planning Policy Guidance Flood Zone and Flood Risk Tables, uses proposed in the policy are classed as “less vulnerable” and are considered to be appropriate for Flood Zones 3 and 2. The uses proposed in the policy are classed as “less vulnerable” and are considered to be appropriate for Flood Zones 3 and 2.
- 4.104 The Environment Agency registered their support for the policy through the draft Local Plan consultation but suggested an amendment to criterion (c) and that an additional criterion is added which referred to comprehensive flood alleviation measures. In both cases, the Council amended the policy accordingly.
- 4.105 To conclude, this is a long-standing allocation for employment. A number of applications have been approved by the Council, most notably an outline application for the whole site and a further application for a large warehouse located to the west of the site. Prior to construction of the warehouse, the necessary flood mitigation measures were constructed which effectively removed the risk of flooding from the site. The Council considers that the work undertaken through the application process ensures that the requirements of the NPPF and the NPG have been met and that the requirements of the Sequential and Exceptions Test have been accorded with.

Former Celanese Acetate Site, Spondon: Policy AC13



- 4.106 The former Celanese Acetate Site (Policy AC13) provides a significant brownfield regeneration opportunity in the City which, the Council considers, will help to achieve the aims and objectives of the Local Plan.

- 4.107 The site, covering approximately 72 hectares, was a chemical factory producing acetate materials, material used for cigarette filters and man-made fibres for nearly 100 years. The majority of the operations at the site ceased in November 2012 apart from acetate film production which continues to operate from approximately 3 hectares of the site.
- 4.108 At the present time the Council is uncertain as to the future use of the site however, the policy states that less vulnerable uses would be acceptable on the site. The policy continues to state that the Council will continue to work with the landowner to identify an appropriate comprehensive redevelopment scheme for the site. It should be noted that the employment uses suggested in the policy are considered to less vulnerable in this flood zone and therefore appropriate.
- 4.109 The site is constrained by a number of factors; most notable in this instance is the risk of flooding. However, it is recognised that the site has a number of benefits including the fact that it is a brownfield site in close proximity to Spondon Railway Station. Redevelopment of the site may also provide an opportunity to remove the Spondon Sluices which currently span the river and act as a barrier to the migration of fish.
- 4.110 It should be noted that this site is not part of the Our City Our River masterplan. However, it is envisaged that any flood alleviation measures proposed as part of the redevelopment of this site will incorporate the principles of OCOR. The Council is also exploring measures to secure funding from D2N2 (the Local Enterprise Partnership) to help facilitate the construction of new defences. Policy AC13 recognises the need to incorporate flood alleviation measures and, in criterion (e) states:
- (e) *proposals would provide satisfactory flood and environmental mitigation taking account of the impacts of the Our City Our River (OCOR) programme*
- 4.111 Commenting on the draft Local Plan, the Environment Agency supported the inclusion of the policy and welcomed in particular criterion (f) which seeks to ensure that any development contributes to the wider green infrastructure network.
- 4.112 To conclude, the Council considers that, in undertaking its site selection process, it has met the Sequential and Exceptions Tests. It should be recognised that Derby is tightly constrained by its administrative boundary and the opportunities to allocate sites large enough to meet both its housing and employment targets is challenging. It is recognised that a number of the allocations contained in the Local Plan are, to some extent, at risk of flooding. In undertaking the site selection process, the Council also took account of a number of additional constraints such as Green Belt, the impact on the historic environment (including the Derwent Valley Mills World Heritage Site and the form and function of the City's Green Wedges), the impact on the

strategic and local road network and the impact on local services. The sites that are allocated provide:

- the opportunity to kick-start further regeneration projects in the City
- the opportunity to bring forward larger cross-boundary developments
- the necessary alleviation measures to address existing flooding on-site
- the quantum of development to provide the necessary infrastructure to meet the community's needs

5. Sustainable Drainage Systems

- 5.1 Policy CP2 sets the Plan's overarching strategy for responding to climate change and includes a criterion to ensure that the surface water run-off is dealt with in a sustainable manner. In addition, each site-specific policy contains a criterion requiring developers to incorporate Sustainable Urban Drainage Systems (SuDS) in their development.
- 5.2 In order to reduce the effects of additional growth, new development will need to deal with surface water (that water which falls as rain on buildings, hard standing or other impermeable surfaces) separately to foul water (waste water we generate when we use the toilet, shower or washing machines in our homes). In order to achieve this storm water run-off will be collected and stored on site and allowed to drain away into the ground or at a controlled rate to a local watercourse. By adopting Sustainable Drainage Systems (or SuDS) as they are sometimes known, new development can contribute to groundwater recharge and help support sustainable flows in receiving watercourses. More significantly, however SuDS can help water companies manage and make the most efficient use of their infrastructure.
- 5.3 Under the Floods and Water Management Act, SuDS Approval Bodies (SAB) will decide where surface water is discharged. Both the City Council, as a Unitary Authority, and the County Council will be designated as SABs.
- 5.4 However, at the time of writing this position statement, the relevant part of the Act has not been enacted and the Government are also undertaking a consultation seeking people's views on bringing the approval of SuDS under the remit of Local Planning Authorities. Transitional arrangements are in place however; from April 2014 schedule 3 of the Floods and Water Management Act will be applied only to 'works' which constitute major planning applications as set out in The Town and Country Planning (Development Management Procedure) (England) Order 2010. For existing Outline Consents in place on 31 March 2014 all reserved matters will have to be discharged by 31 March 2015. After April 2015 Schedule 3 and the SuDS National Standards will apply to all works which are not exempt and a new Drainage Application will have to be made.
- 5.5 Irrespective of the outcome of the Government's consultation the Local Plan, Policy CP2, criterion (p) states that the Council will "*require developments to be designed and laid out to incorporate sustainable drainage systems (SuDS)*"

and to ensure that water run-off is directed to areas where it does not cause harm to people or property”.

6. Water Supply

- 6.1 The Council is committed to delivering sustainable development which helps reduce the impact on natural resources. One aspect of this strategy is put measures in place which will assist Severn Trent’s strategy of reducing the amount of water abstracted as demand increases over the plan period.
- 6.2 This section will look at the issues faced by Severn Trent Water and how the Council have been working in partnership with the water authority and the Environment Agency to ensure that the Local Plan will help to reduce demand for fresh water over the plan period.
- 6.3 The Derby Housing Market Area Water Cycle Study³ (WCS), paragraph 4.3.1, noted that the Environment Agency (EA) has recognised that future trends indicate a decline in water availability within the Humber River Basin District, in which the Derby HMA lies. In addition, the WCS noted that demand for fresh water will increase over the plan period.
- 6.4 The WCS continued by stating that there is no further surface water available for large-scale abstraction during periods of low flow in several areas. There are only limited water resources available for further large scale abstraction and the EA has stated that in order to accommodate sustainable growth more efficient use of water resources is needed including restoration of sustainable abstraction.
- 6.5 It is the responsibility of water companies to provide water for almost all homes and businesses in the City.
- 6.6 Severn Trent has recently published a new Water Resources Management Plan⁴ (WRMP). This document considers the new issues which have arisen since 2010 and sets out how the company will supply water in a sustainable way over the next 25 years.
- 6.7 Derby lies within the “Strategic Grid Zone”, the largest water resource grid in Severn Trent’s area and it is this zone which faces the greatest pressures over the next 25 years. These pressures are a result of an increasing population, the impact of climate change and the loss of a number of abstraction licences.
- 6.8 Originally, in the draft WRMP it was considered that there would be a loss of up to 75 Mega Litres per day (Ml/d) following changes to the operation of the River Wye and Elan Valley reservoirs. However, further work undertaken with Natural Resources Wales has identified further ways to minimise these impacts. Through this work and other measures such as reducing both

³ <http://www.derby.gov.uk/environment-and-planning/planning/local-development-framework/#water> and flooding

⁴ <http://www.severntrent.com/future/plans-and-strategy/water-resources-management-plan>

leakages and demand plus reducing household demand, Severn Trent has reduced the impacts of these changes to around 40 MI/d.

- 6.9 Policy CP2: Responding to Climate Change recognises that the conservation and management of water as a resource is also an important factor for consideration in new developments and developers should implement schemes which make the most efficient use of water and have regard to the water hierarchy. The implementation of the policy will, therefore, ensure that new development contributes to Severn Trent Water's water efficiency measures by implementing the Water Hierarchy.
- 6.10 The Infrastructure Delivery Plan identifies Severn Trent's plan to improve water resilience by duplicating the existing Derwent Valley Aqueduct to increase capacity. Treated drinking water flows from the Bamford Water Treatment Works in North Derbyshire to Hallgates Service Reservoir near Leicester, serving more than 590,000 customers in Nottinghamshire, Derbyshire and Leicestershire.
- 6.11 In conclusion, climate change, a reduction in abstraction and an increase in demand over the plan period will reduce the amount of fresh water available for businesses and residents. Severn Trent has highlighted this issue in their Water Resource Management Plan and the issue was highlighted at an early stage in the plan-making process through the publication of the Derby Housing Market Area Water Cycle Study. The Infrastructure Delivery Plan includes necessary projects to reduce water consumption and the improve supply while Policy CP2 promotes sustainable construction measures which will help to reduce consumption.

7. Wastewater Treatment and Sewerage

- 7.1 This section will look at the issues faced by Severn Trent Water and how the Council have been working in partnership with the water authority and the Environment Agency to ensure that measures to treat the City's waste water and sewerage are addressed in a sustainable manner.
- 7.2 The Derby Housing Market Area Water Cycle Study, paragraph 5.1.2, highlighted two issues regarding sewerage in the City. Firstly, south of the River Derwent, there is capacity issues in the existing network such that it will be difficult for Severn Trent Water to accommodate additional flows from any new development. Secondly, because the treatment works is located north of the river, it will also be difficult to connect any new infrastructure to the works, as crossing the River Derwent will incur extra costs and logistical issues; for example for new sewers. The Council's SFRA1 also noted the limited capacity of sewers in Derby City creates a potential source of flooding in many areas. To a lesser degree, backing up of the River Derwent in sewers during high river levels can also potentially lead to sewers overtopping.
- 7.3 Issues over sewer flooding during extreme weather events was also highlighted a number of times by respondents in response to our consultation exercises.

- 7.4 The Environment Agency, through the draft plan consultation, made a number of representations highlighting the existing problem with the lack of capacity in the foul sewer network in the southern part of the City. This issue was raised in comments made for the allocations at Infinity Park (Policy AC15), at Sinfin Lane (Policy AC17), at Wragley Way (Policy AC18), at Rykneld Road (Policy AC20) and at Boulton Moor (Policy AC23).
- 7.5 Severn Trent, through on-going discussions with the Council, are aware of the Council's growth strategy and are developing projects to accommodate future development. In the City, they consider that the best option would be to utilise the waste water treatment works at Raynesway. Severn Trent recognises that, although the treatment works has capacity to deal with increased waste water, the capacity of the sewer network in the south of the City is severely constrained. This issue, arising from the historical use of combined sewer network where storm water and foul water drain into the same combined sewer network, has resulted in the capacity of the network being exceeded during extreme weather events.
- 7.6 As a result, Severn Trent is exploring ways to improve the existing sewer network to increase capacity and reduce the risk from flooding.
- 7.7 In their response to the Draft Part 1 Core Strategy, Severn Trent noted that they have a statutory obligation to accommodate new development to ensure the additional flows do not increase sewer flood risk and/or environmental impact and so will provide additional capacity as and when it is required to fulfil this duty. They also noted the Core Strategy's timeframe and stated that they may need to phase improvements to keep customer's bills to a minimum. They continued by affirming that they will work with developers as and when sites come forward to ensure there is both local sewerage capacity in the immediate vicinity of the development (depending on where the developer wishes to connect), as well as addressing the strategic capacity within the main trunk sewers.
- 7.8 Severn Trent recognise that the City's sewerage network has some capacity in the short-term but, as development of the large cross-boundary sites occurs to the south and south-west, additional capacity will have to be created. Increasing capacity will make sure that the sewerage networks overflows continue to operate within their current consent limits and ensure that the risk of flooding from the sewer network is reduced.
- 7.9 Severn Trent is also developing a 'South Derby Strategy' which aims to disconnect an existing catchment serving the Sinfin area from a point upstream of the overflows which will release capacity for new development. As this Sinfin catchment is pumped, they are currently undertaking modelling assessments to identify where is the best place to connect these pumped flows back to the existing sewer network, without impacting on flood risk or increasing operation of existing overflows. Recent discussions indicate that Severn Trent is still formulating a preferred option but they acknowledge that a solution needs to be provided in the near future.

- 7.10 Correspondence from Severn Trent in January 2014 indicated that they have set aside £1.9 million in their investment programme to provide long-term sewerage capacity to accommodate the planned growth to the south of Derby.
- 7.11 It is worth noting that the Environment Agency, at the draft plan stage, raised concerns over Severn Trent's initial proposals for addressing the sewerage issues to the south of the City, primarily the impact on water quality. However, these concerns were allayed following Severn Trent's revision to their strategy contained in their representation to the Part 1 Core Strategy.
- 7.12 This information has been included in the Council's first Infrastructure Delivery Plan (IDP). The IDP will be updated as Severn Trent develops their understanding of the issues and the solutions required.

8. Conclusion

- 8.1 The aim of this position statement was to provide a narrative about our understanding of water and flooding issues in the City. It also clarifies how the Council undertook the Sequential and Exceptions Test in the allocation of its strategic employment and housing sites to ensure that the most appropriate solution was found during the site selection process.
- 8.2 In addition, this statement also sets out how the Council worked with both the Environment Agency and Severn Trent Water to make certain that the policies in the Local Plan promote the sustainable use of natural resources, ensure reduce the risk of flooding and to ensure that water quality is improved.
- 8.3 Discussions with the Environment Agency and in particular Severn Trent Water have made certain that the necessary infrastructure will be provided to support new development.
- 8.4 In conclusion, the Council considers that the work undertaken in partnership with the Environment Agency, Severn Trent Water and its own Land Drainage Team has resulted in a 'sound' Local Plan.

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Polish

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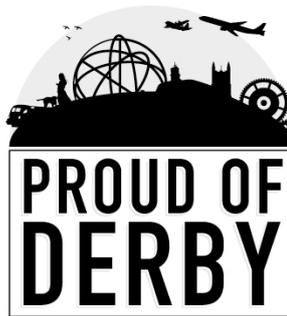
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Punjabi

ਇਹ ਜਾਣਕਾਰੀ ਅਸੀਂ ਤੁਹਾਨੂੰ ਕਿਸੇ ਵੀ ਹੋਰ ਤਰੀਕੇ ਨਾਲ, ਕਿਸੇ ਵੀ ਹੋਰ ਰੂਪ ਜਾਂ ਬੋਲੀ ਵਿੱਚ ਦੇ ਸਕਦੇ ਹਾਂ, ਜਿਹੜੀ ਇਸ ਤੱਕ ਪਹੁੰਚ ਕਰਨ ਵਿੱਚ ਤੁਹਾਡੀ ਸਹਾਇਤਾ ਕਰ ਸਕਦੀ ਹੋਵੇ। ਕਿਰਪਾ ਕਰਕੇ ਸਾਡੇ ਨਾਲ ਟੈਲੀਫੋਨ 01332 640807 ਮਿਨੀਕਮ 01332 640666 ਤੇ ਸੰਪਰਕ ਕਰੋ।

Urdu

یہ معلومات ہم آپ کو کسی دیگر ایسے طریقے، انداز اور زبان میں مہیا کر سکتے ہیں جو اس تک رسائی میں آپ کی مدد کرے۔ براہ کرم 01332 640807 منی کام 01332 640666 پر ہم سے رابطہ کریں۔



Derby City Council