

There has been no full account taken of the updated 100% Paris Agreement targets, to which the UK Government is a signatory (Climate Vol 6 Chapter 14 Climate) This is a serious omission, as evidenced by the recent Heathrow Court of Appeal decision. As targets are set to be increased, over 100 road widening and capacity increasing schemes in the UK, ensure that we will not meet 100% carbon reduction targets.

Vol 6 14.7.9 pg16 Vol 6 Climate - "The UK road infrastructure is already being affected by severe weather events, specifically through flooding and - changes to extreme weather event frequency and severity"

14.3.28 "Projected changes to average climatic conditions, as a result of climate change, and an increased frequency and severity of extreme weather events have the potential to impact the ability of the surrounding natural environment to adapt to climate change"

14.10.22 pg27 Vol 6 Chapter 14 Climate, states" The ICCL assessment has not identified the potential for significant combined impacts of future climate change and the Scheme on identified receptors in the surrounding environment." Yet, to date, the East Midlands has received 141% increased rainfall, the River Derwent has been high since November 2019 – (see Derby city river gauge <https://www.gaugemap.co.uk/#!Detail/162/173/2019-03-01/2020-03-31>) and is already impacting the identified receptors, as well as people in Allestree, Derby City and workers at the RR reactor; all of whom will be receptors, on the receiving end of the increased water run-off/rainfall from the scheme. They have not been identified as receptors and we believe this is a gross omission.

Derby Evening Telegraph - Markeaton Park floods 20/2/2020

<https://www.derbytelegraph.co.uk/news/local-news/live-updates-derbyshire-roads-flooded-3867352>
and <https://www.derbytelegraph.co.uk/burton/we-need-38-tonnes-hobnobs-3867779> (extract below)

"The A38 between Barton under Needwood and Branston was closed over two days after five million litres of water turned the usually busy dual carriageway into a boating lake. And there was nowhere for the water to be pumped to in the soggy conditions, so it was a case of waiting for it to clear"

REP4;10 pg 4 2.4.3 Both Markeaton Brook and Mackworth Brook (see Allestree flood risk map) are connected to a significant watercourse diversion The Northern Relief Culvert, upstream of Markeaton Lake...serves as flood relief downstream of Markeaton Lake by diverting peak flows directly to River Derwent

2.4.4 "Lake culvert & Middle Brook culvert flow beneath A38, before joining Markeaton brook further downstream"

2.5.4 ...**'forming an important source of base flow to rivers'**

3.1.2 pg 6 ..."that the Secretary of State be satisfied that flood risk will not be increased elsewhere..."

3.1.3 "Consider risk of all forms of flooding"... "Take impacts of climate change into account..."

Pg 9 3.8.4 Environment Agency (EA) emphasised that "surface water run-off should be controlled to existing rates or less" The 'existing rate' has gone up considerably since November 2019. February rainfall levels are at 141% of the average rainfall for February.

4.3.3 The email sent to EA, from HE, was on 8/11/19 – the day that the River Derwent flooded the city centre and Rolls-Royce workers were evacuated from the nuclear site next to the River Derwent in Alvaston, Derby (see Alvaston flood map) Photos of Derby city centre flooding, are at <https://derbyfoe.com/2019/11/08/derby-floods-8-11-2019/>

4.5.1 Groundwater is known to flood in areas underlain by major aquifers and 4.5.2, 4.5.3 the underlying geology is permeable. Markeaton Park groundwater flooding occurred 20/2/20 -(Derby Evening Telegraph link above)

4.5.6 "The risk of groundwater flooding is considered to be high." A 40% climate change event is mentioned, yet 141% rainfall event has already occurred throughout February

4.10 The risk of increased surface water run-off, from the scheme, to surrounding areas, is considered to be high"

Exception Test 2B "The development must demonstrate that it provides wider sustainability benefits to the community, that outweigh flood risk"

HEALTH STUDY AREA APP 146 6.2 The poorest and most deprived Derby wards, - Normanton, Rosehill, Peartree, Sinfin, Osmaston are omitted. Markeaton Park is a city park and valuable open space for people from those wards lacking in Public Open Space Standards.

London parks are estimated to save the NHS £370 million yearly, through health benefits. (Cities:Natures New Wild BBC2) Questions have been sent to the National Health Service (NHS) regarding the value of parks and recreation, to the health of Derby people. To date we have not received replies and hope to present this information at a later date.

APP 172 Table 1.13 Nitrogen dioxide predicted annual mean concentrations with scheme; out of 243 receptors, 62 show slight or medium improvements while 181 are imperceptible or worsened, including Kingsway NHS Hospital site. Q 25 How does this improve 'sustainability benefits' for Derby City, as one of the UK Government's designated 'Clean Air Zones'?