

# **Nottingham Trent University, Richard Pickford et al – Written evidence (RSK0093)**

1.1. This submission builds on research and partnerships developed by Associate Professor Rowena Hill from Nottingham Trent University supported by colleagues from the Department of Psychology and Nottingham Civic Exchange pre and post Covid-19 pandemic.

## 2. Executive Summary

2.1. This submission focusses on the argument to widen the assessment of risk to incorporate the interaction and cascade of impacts in aggregation rather than in isolation. Steps to successfully widen the assessment, planning and management of risk is considered, including a review of practitioners perspective that emergencies are increasing in frequency and complexity, are becoming protracted in length, more cascade impacts are resulting from risks, and consequentially the capability of critical infrastructure is being significantly challenged. We have highlighted throughout the response to the questions how the capability is threatened and how the risk assessment process can be developed to alleviate or address some of these challenges.

## 3. Submission

3.1. This position is built from our time supporting the C19 National Foresight Group between March 2020 and January 2021 and as researchers in the civil contingencies and emergencies arena prior to this role.

3.2. In response to Question 1 regarding the most significant extreme risks the UK faces, our research from IOR 2 (pages 69 -60) suggests the need for a complete paradigm shift in risk assessment.

3.3. "Delegates putting forward this view suggested that due to society living differently, with increased connectivity and globalisation, the nature of emergencies had changed. According to this view, emergencies are becoming increasingly societal wide (Covid-19, EU Transition, Climate Emergency) and so the definition used to define, quantify, plan and mitigate risk needs to change to accommodate elongated, ubiquitous incidents with a potential associated increase in incidents that are nationwide".

3.4. The frequency and length of time the emergency management structures have been stood up and in operation across the UK were perceived to be increasing before the pandemic. This means either our definition of a significant risk needs re-evaluating as it is too low in threshold, our resources are too low to respond (triggering a major incident at a lower level of complexity or challenge), or our world is becoming more complex with interaction between and cascade of consequences from risks is becoming the most significant risk (in scale, nature or complexity of managing the impacts). Our research suggests that even before the pandemic, the vulnerability for the UK was not going to be from one specific risk. The system is challenged during complex incidents which

have been occurring at a greater rate. This complexity occurs when a threat covers an area broader than a county geographical footprint, causes a cascade of

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further risks or threat which aggregates on top of the original risk, is systemic in its impact across different service provision of areas of society, or is an elongated event lasting longer than a few weeks or months. The impact of these events is not from the absolute or relative risk of one threat or risk, but the risk to critical infrastructure and capability following the consequences of the risk. The layering of consequences becomes more impactful, having a cascade effect of resource drain and reduced capability. This was further demonstrated during the pandemic. Currently the NSRA and the Civil Contingencies Act (CCA) and associated frameworks are built to assess and manage risk and threat in relative isolation. However, as we have seen in the Covid-19 pandemic, each additional level of risk adds to the complexity and makes the system more unstable and vulnerable to structural failure and stress. i.e. systemic wide flooding, EU Transition and Covid-19 pandemic. This was further demonstrated with D20, December 2020 being the month when winter pressures, EU Transition and Covid-19 pandemic would all be dealt with by the same set up structures and infrastructure at once. The aggregation of the interaction between, or cascade effects from, identified risks needs a framework to consider and scope the consequences quickly for the planning and management to be more effective, rather than the risk assessment being limited to a likelihood/severity prediction of risks in isolation. In this way the risk assessment needs to develop from a more isolated matrix to consider the integration of those risks with each other and/or the cascade of impacts from each of those risks in isolation or integrated with each other within the matrix. Whilst the structures enacted by the implementation of the CCA through a major incident being declared is successful in managing these isolated risks/threats and 'docking' with the national level coordination of resources, this is significantly challenged in a national emergency. This is because the principles of subsidiarity and coordination of mutual aid, on which the CCA is predicated, is not facilitated. Our evidence from the pandemic suggests that subsidiarity (lowest level of decision-making and highest level of coordination of resources) was inverted. The decision-making was drawn to the national level and the coordination of resources was not able to be coordinated at a national level and so it was pushed to a local level. This results in a challenge to the assigned decision-making flow and placement of decision-making power in the management of the pandemic.

3.5. In response to Question 2, our research has established that the management of emergencies is challenged by the differing geographical footprints at which different sectors operate. Health in particular have a different size of geography to most other emergency, essential or statutory responders. With most sector and services operating at County level, and health operating at regional level, there is a challenge to the alignment of those structures which manage that emergency. Until this is resolved, there will always be a

misalignment throughout all emergency responses (nearly all of which need a health response to the direct event, or the immediate consequences of it).

3.6. In response to Question 3, we see room for improvement in the governance and the degree to which the risk assessment process is open to scrutiny and the input of experts. The national emergency of the pandemic has clearly

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evidenced structural challenges of emergency management and resilience within England and this scales up further to the docking and sharing between the four nations. This can be seen clearly in our first, second, third IOR reports, our report on managing local health protection areas and our Managing the First 230 Days report, as well as our latest report regarding LRF Learning. The Civil Contingencies Act 2004 works reasonably well at county or regional level. Our research has shown that a UK wide national emergency overwhelms this legislation and framework very quickly (IOR 2) and this impacts on the nature and consequences of the risks identified through the NSRA process. The NSRA process itself is eroding in its transparency and ability to be scrutinised. As researchers in this area, but more compellingly as UK citizens, we cannot access this assessment in its latest version. For scrutiny, trust, warning and informing and education of the public this is a significant limiting factor and should be addressed. Our research has also suggested that the challenge of how the current process is carried out is limiting. The experts consulted are a cadre of professionals and experts in the area of risk within which they operate. The cadre needs to be expanded to include experts in how emergency planning and resilience is managed to usefully inform and provide an evidence base to the consideration of aggregate, concurrent events.

3.7. Our research informs Question 4, as it has shown that across the UK those at local level would like a full consideration of the level of assurance of the resilience structures and standards (see associated evidence for Recommendations 1.3, 1.4, 1.5, 2.5, 2.6 from IOR1, 5.1, 5.3, 5.4, 5.5, 5.6 from IOR2 which are relevant and 1.6 in IOR3 which specifically calls for this). Across our analysis of three reviews of frontline first and secondary responders through 2020 (link to IORs) colleagues managing the pandemic response, EU transition and local emergencies highlighted the need to re-visit the way they are held to account, and the re-focussing and sustaining of Civil Contingencies and risk management as a priority activity. An inspection of resilience standards would be broadly welcomed as would the inspection of Local Resilience Forums which recognise the need for an introduction of two additional stages within emergencies of a complex and longer-term nature. Covid-19 has seen the implementation of a number of new bodies to support the national effort (LOEBs and JBC alongside the reforming of PHE) which has highlighted the evolving operating model. There is much to learn from professionals on the frontline who have enacted new innovative solutions and who have had to mesh new initiatives to the current systems. An inspection against standards would also increase the accountability and capture the work that goes on within these structures and legitimise the provision of resources from the partnership organisations. This should include the development of the standards of a Multi-

Agency Information Cell (MAIC) to increase the flow of intelligence and alleviate the challenge of the paucity of information with which to make local evidence-based decisions. The adoption and implementation of the JESIP doctrine should also form part of that inspection, because our research shows the strength of the multi-agency partnership directly contributes to the effectiveness of the management of the emergency. This doctrine is currently being reviewed and we have fed into that process through

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our products, as well as highlighting this in our response to the Integrated Review.

3.8. In response to Question 5, our research shows that the government could complete better societal forecasting of the changing nature of society and technology and where our emerging true dependencies are. This has become apparent in the pandemic management where increased dependency on technology produced an increased risk from cyber failure or sabotage, or power outage than before. This cascade effect of consequences from one risk or threat impacting on the capability and vulnerability of critical infrastructure should be accounted for at national level to save replication of this work at local level across the UK. This is what we have seen in the Covid-19 pandemic and so for efficiency and accuracy reasons this scoping and identifying of cascade effects should be included in the future methodology of consideration of risk and threat.

3.9. In response to Question 6, our research during the pandemic highlights how well the national contingency plans are communicated to and understood by those at a local level, including emergency responders. To increase the capability of local responders to effectively plan for and respond to emergencies the government should significantly increase its communication of options, reasonable worst-case scenarios, data, intelligence, decision-making, strategy, and policy in a timely and transparent way. Our research has established this has not been achieved throughout the Covid-19 pandemic. In our research we argue for future reviews to be cognisant and address any future (non-Covid related) participation from local political stakeholders. This has been challenging throughout the pandemic (see IOR 2, 3 and page 9 of Managing the First 230 Days), but an important part of risk communication with the public. The emergency responders are well briefed through local activities, plans and Local Resilience Forums. However there has been little bi-directional communication or strategy sharing at national level. At the local level the Civil Contingencies roles and portfolios should be valued in higher regard more consistently as they tend to move in and out of priority depending on the declaration of a major incident. These roles need more training resource and an established career development and growth pathway.

3.10. Our research informs Question 7. The Civil Contingencies Secretariat appears to have adequately supported Government departments to address risks within their remits, however further oversight or accountability is required. This is mostly based on our work throughout the Covid-19 pandemic and the management of this. Our research demonstrates a lack of coordinated approach

across government with conflicting or absent advice from across the different departments. There is no longer an approach of department primacy, the consequence of this is that there is little structure or system of decision-making for other departments or local level decision-makers to plan against. This leaves a network/holistic approach to decision-making and guidance in an emergency, which is legitimate and has worked in other countries, but in England, our evidence suggests a silo approach to working within departments that does not facilitate a network or holistic approach to policy or guidance development. Consequently, the challenges to cross departmental working

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within government and across the four nations during the pandemic has created significant operational and strategic challenges for local strategic decision-makers.

3.11. In response to Questions 9, 11 and 12, our research indicates that, particularly in the case of health emergencies such as the Covid-19 pandemic, the behaviours of individual members of the public are key in a successful response. However, the behaviour of individuals does not occur independently of governmental response but is rather shaped by the communication strategy of leaders, with trust being the most important determinant of adherence to recommended behaviours. Openness and transparency, with clear information and accurate presentations of risk increases trust and the perception of reliability, which increase the likelihood of individuals engaging in positive emergency response behaviours. Conversely, a lack of co-ordination and consistency can lead to confusion and frustration, and individual behaviours may then undermine the disaster response. Similarly, community level activity and engagement can increase preparedness and resilience to disasters, but this again requires investment and support from central government. Engagement at the community level can identify and prepare for risks before they occur, and collaboration across jurisdictional boundaries that may not be locally meaningful improves resilience and efficiency. This engagement and collaboration needs to be motivated and facilitated by government, who should support horizontal and ground-up structures of organisation to develop rather than impose top-down command and control structures. The utility of such collaborations had been evidenced in our work with LRFs and partner organisations, where collaboration and innovation at the local level has led to effective and efficient responses in challenging circumstances. As well as collaboration at the national-local and local-local government levels, better integration and collaboration between the public and private sphere would increase resiliency, particularly in terms of critical infrastructure. These public-private relationships are often complex, with multiple stakeholders, governmental levels, authorities and arrangements. Simplifying, consolidating or mapping these relationships would increase situational awareness and allow for the identification of vulnerabilities and the alignment of business interests and continuity plans with the community, increasing the efficiency of the response.

3.12. Question 10 asks what is needed to develop resilience capability. Our research demonstrates that there needs to be a significant increase in the

resource allocation to the creation and sharing of intelligence. There has been a paucity of data, information and intelligence of the impacts of the pandemic which has significantly impacted on the ability to plan and develop policy at a local level on real time. Our research has demonstrated significant challenges of communication and decision-making flow at local level which has impinged on professionals' abilities to tackle the risks posed by the pandemic. This is primarily due to the pace or turnaround times of Government announcement of guidance or policy and the implementation time. The challenges from the differing sized geographical footprints to the integration of intelligence, the integration of plans and the silo approach this facilitates should be resolved

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moving forward. The evidence from our work suggests that the pandemic is challenging critical infrastructure as outlined in the discussions above due to the consequences of concurrent events or the amount of impacts across society from the Covid-19 pandemic and the length of time the structures have been stood up and the integration of new structures established for Covid-19 (such as the Joint Biosecurity Centre and the Local Outbreak Engagement Boards). The capability of the local response is not the relevant issue according to our evidence base. They are knowledgeable, experienced and prepared. The issue is their capacity, the draw and drain of energy, time and resources to Covid-19 has meant the ability to respond to another emergency of significant size and to continue to run the rest of public service provision and critical infrastructure is a significant challenge. In other words, the plans are in place, but we do not know if the resource and ability of people to manage that across the UK is available to deliver those plans. This means that at local level, risk preparedness is theoretically prepared for, but the capability from existing, already stretched resource to deliver those plans is a point of significant concern. Our research shows that during the pandemic the system of sharing reasonable worst-case assumptions failed. The original assessment of the risk was adequate, but the subsequent release of continuing and updated analysis of that risk, specifically the impacts of the event unfolding, failed. This is not a failure of the original approach or methodology, but how that continues to operate. The local responders are used to working with uncertainty, and the expert, scientific and technological professionals are also used to working in uncertainty. Through the pandemic our research suggests it was ministerial level at which the block of RWCS occurred. The likelihood of this happening again in future emergencies should be removed. The RWCS allow local strategic managers to plan against those assumptions on the understanding they are assumptions not predictions or certainty. This was not possible during the Covid-19 pandemic, causing duplication of effort and lack of reasonable planning through the lack of release of assumptions. The process in future should consider ways that differing expert views can be integrated in a more transparent way and be released to local strategic decision-makers to allow policy-based decisions to reduce duplication of effort, or planning being carried out against old or inaccurate data (see examples in IOR 1 pages 36-43 and IOR 2 recommendation 1.1 and associated evidence and page 9 of Managing the First 230 Days).

## 4. Recommendations

4.1. Our submission argues that HM Government should consider widening the paradigm within which the risk assessment, planning and management is considered, including a review of practitioners perspective that emergencies are increasing in frequency and complexity, that risks are becoming protracted, causing cascade impacts, and the consequences of this is threatening the capability of critical infrastructure. We have highlighted throughout the response to the questions how the capability is threatened and how the risk assessment process can be developed to alleviate or address some of these challenges.

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## 5. Authors

5.1. Dr Rowena Hill is an Associate Professor of Psychology from Nottingham Trent University. She was on secondment for ten months to the C19 National Foresight Group, a cross-governmental group to consider the longer-term impacts of Covid-19 and to provide academic insights and an evidence base to the considerations of the group. The C19 National Foresight Group is now decommissioned. This submission is on behalf of NTU and not the C19 National Foresight Group as their mandate has now ended. The submission therefore draws on the work conducted by the academics on this group during it's time of operating but is not a submission on behalf of the C19 National Foresight Group. Dr Hill has led research projects funded by the ESRC.

5.2. Dr Hill has been researching emergency management and resilience for the past five years. She has been researching alongside emergency responders specifically for over 15 years and has a strong publication record. Dr Hill has also been the lead author of reports which led on roundtable discussions with practitioners involved in the Covid-19 response and produced reports on these that have been disseminated to the resilience community across England. She is the lead author on the C19 National Foresight Group products, including Interim Operational Reviews commissioned by the C19 National Foresight Group. These are a series of UK wide rapid reviews focussing on the management of Covid-19, held in April 2020, June 2020 and September 2020 with representation from across the resilience and emergency management community. These have been written up as reports and published on NTU's website. Dr Hill will be happy to discuss the details of any of these projects at any future meeting of the committee.

5.3. Research collaborators relating to this inquiry include:

- Rich Pickford, Knowledge Exchange Officer, Nottingham Trent University (supported the creation of this submission.)
- Adam Potter, contract researcher engaged by NTU for their C19 Foresight work. Adam provides research assistance. (supported the creation of this submission.)
- Dr Duncan Guest, Associate Professor, Nottingham Trent University

- Dr Stacey Stewart, contract researcher engaged by NTU for their C19 Foresight work. Dr Stewart provides research assistance.
- Stephanie Bianco, contract researcher engaged by NTU for their C19 Foresight work. Stephanie provided research assistance.
- Dr Sally Andrews, Lecturer in Psychology, Nottingham Trent University.
- Dr Lisa Sanderson, Lecturer in Psychology, Nottingham Trent University.
- Professor Thom Baguley, Professor in Psychology, Nottingham Trent University.
- Professor Nigel Wright, Deputy Vice-Chancellor, Nottingham Trent University.

Additional colleagues provided research and insights to the material our group has produced. These can be shared with the inquiry if required.

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## 6. References

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- 6.4. Hill, R., Stewart, S., Potter, A., Pickford, R., Smith, K. (2021) Managing the First 230 Days, Report, C19 National Foresight Group - <https://bit.ly/C19NFG230Days>
- 6.5. Hill, R., Pickford, R., Towler, A., Hopkinson, A. (2021) LRF Learning, Report, C19 National Foresight Group - <https://bit.ly/C19LRFlearn>
- 6.6. A full list of the C19 National Foresight Groups can be viewed via Nottingham Trent's website - <https://bit.ly/C19NFG>

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