# IN THE COVID-19 PUBLIC INQUIRY

# BEFORE THE RT. HONOURABLE BARONESS HALLET

**UK COVID-19 INQUIRY** 

# DEPARTMENT OF HEALTH AND SOCIAL CARE SECOND PERSONAL STATEMENT OF JONATHAN MARRON

# **MODULE 5**

- 1. I, Jonathan Marron, Director General of Primary Care and Prevention, at the Department of Health & Social Care (DHSC), 39 Victoria St, Westminster, London SW1H 0EU, will say as follows.
- 2. I would like to start my statement by repeating my acknowledgment of the trauma and loss so many people have suffered as a result of the COVID-19 pandemic. I would also like to repeat my appreciation for all those frontline health and care workers who did all they could to care for their patients, both those with COVID-19, and those with other conditions, in the face of all the challenges the COVID-19 pandemic presented. Finally, I repeat my thanks to all those across the Civil Service generally and within the Department, the NHS and the Armed Forces who stepped forward to help secure and distribute the PPE needed to help protect some of the most vulnerable people in our community and those who cared for them.

# Background

3. I have worked in DHSC, its Arm's-Length Bodies (ALBs), and the NHS for 30 years. In the period leading up to the pandemic, I was Director General for Prevention, Community and Social Care, a role I was appointed to in June 2017. As Director General I was responsible for policy work in primary care, medicines, community services, mental health, social care

and technology transformation. In 2019 I took on responsibility for policy on health improvement and the formal sponsorship of Public Health England and gave up responsibility for technology transformation as part of internal reorganisations.

- 4. My role as Director General was to support Ministers in the formulation of government policy and to ensure delivery of that policy, through the activities of my own teams and our work with others, for example the NHS and Local Authorities.
- 5. As preparations for a COVID-19 pandemic increased from January 2020 to March 2020, my group's work switched to supporting the preparations, including the readiness of social care and primary care, and the Department's role in developing the shielding policy.
- 6. In March 2020, I became more closely engaged with the effort to secure and distribute PPE. At the weekly COVID-19 Oversight Board held on 18 March 2020, I took responsibility for actions to work with PHE on the governance for decisions to release PPE from the Pandemic Influenza Preparedness Programme (PIPP) stockpile, and to work with analysts on a prioritisation framework for releasing PPE. On 19 March, the Permanent Secretary asked me to mobilise efforts to establish clearer guidance on the use of PPE and clinical prioritisation of access to PPE. I re-tasked existing members of my team to support me in this work as a dedicated PPE policy team. Around this time, I was made the Departmental Director General lead for PPE. Given the seriousness of the PPE situation and the extensive effort to secure and distribute PPE, I increasingly focused my effort on PPE. By late March I was working alongside Emily Lawson to lead the PPE Cell. In recognition of this my formal responsibilities were changed on 27 April 2020, when I formally became Director General PPE and Prevention, a role I held until 1 October 2021, and my former responsibilities were distributed to other DHSC Director Generals.
- 7. By the time I was able to dedicate myself to the PPE effort we were already facing extremely difficult challenges and some of the key decisions had already been made. Prior to the pandemic, the Department had no direct role in the procurement or distribution of PPE. NHS and social care providers where responsible for securing their own supplies. Supply Chain Coordination Ltd (SCCL) trading as NHS Supply Chain Limited (then a wholly owned company of the Department) was a major supplier to the NHS. Public Health England (an ALB of the Department) maintained the PIPP PPE stockpile. The Department acted in January and February to support and boost this existing system for procurement and supply, By March it was clear that the existing structures would not be sufficient to meet the PPE challenge. The decision was taken to establish a parallel supply chain to

expand our capacity and capability to procure, transport to the UK, and distribute PPE. A PPE Cell was established in the Department, to manage this effort.

## Principal issues with procurement as the UK entered into the pandemic:

#### The strategy and guidance for procurement during a pandemic

- 8. The Pandemic Influenza Preparedness Programme (PIPP) recognised the likely disruption to the supply of vital material, such as PPE, during a pandemic. The PIPP included a stockpile of PPE to ensure continued provision of PPE in a pandemic. The PIPP stockpile was critical to ensure supplies of PPE in the first wave of the pandemic and placed the UK in a strong position in early February 2020. However, the PIPP was unable to meet the continuing and unprecedented demands for PPE that followed.
- 9. The items of PPE identified for the PIPP stockpile covered the appropriate PPE for both influenza and COVID-19. The shortfall in meeting the COVID PPE requirements arose from the volumes of PPE available. In particular:
  - a. The overall volume of PPE held in the PIPP stockpile was based on the reasonable worst-case scenario (RWCS) modelling for an influenza pandemic; estimated requirement to treat influenza patients, over a 15-week period in an influenza pandemic. In response to COVID-19, PPE was required for a wider range of patients that envisaged during an influenza pandemic (including non-COVID-19 care), and over a significantly longer period of time [JM03/1 INQ000339268].
  - b. Large proportions of each product were held in the PIPP stockpile in the UK, with some of the PIPP stockpile to be delivered through "just in time" (JIT) contracts [JM03/1 INQ000339268]. JIT contracts were planned to be used as a "top-up arrangement", however, this failed in the early phase of the pandemic due to the introduction of export bans and other controls on the international movement of PPE.
  - c. Some of the PIPP stockpile items were "close to", or beyond, their shelf life. Stock was managed to use "close to" shelf items first. The Department explored extending product life and commissioned a pilot scheme of accelerated aging tests. It was decided, following consideration of the test results, that shelf-life extension would not be considered further [JM03/2 INQ000496878].

- d. Gowns were not included in the PIPP stockpile. A decision to add gowns was taken in response to advice from NERVTAG in June 2019 [JM03/3 – INQ000023057]. However, a procurement running under normal public sector procurement rules had not completed by the time the COVID-19 pandemic struck.
- 10. Stockpiling PPE, as considered by the PIPP, is invaluable in ensuring resilience to pandemics. However, it cannot be the answer to the entire problem without incurring significant costs associated with storage and replacement of "out of shelf life" products.
- 11. The Department had also planned for potential interruption of supply of vital products as part of the preparations for a potential "no deal" Brexit. This included a National Supply Disruption Response (NSDR) service [JM03/4 INQ000107089]. The NSDR was stood up in the early stage of the COVID-19 pandemic and provided access to emergency supplies of PPE, via a hotline which operated 24/7, to health and social care providers at risk of running out of PPE within 72 hours. The NSDR was heavily used in the first wave of the pandemic.
- 12. The national level procurement and distribution systems in place before the pandemic were operated by SCCL, and heavily optimised for efficiency and low cost. As the COVID-19 pandemic progressed, these existing systems lacked the resilience and ability to scale to meet the requirements associated with the pandemic; a parallel system of procurement and distribution was established to supplement the existing supply chain.
- 13. A collaborative cross-Government team was established (which became known as the PPE Cell) to provide additional capacity for the PPE effort. Over 400 people were involved in this effort, supported by the Armed Forces, and included staff from the DHSC and NHSE, and commercial experts from across Whitehall. Procurement activity was organised in 4 groups:
  - a. SCCL continued to buy PPE using existing framework agreements.
  - b. The China Buy Team, based out of the then Foreign & Commonwealth Office (FCO), worked with the Embassy in Beijing to procure PPE direct from China
  - c. The New Opportunities Team, based out of the Cabinet Office (CO), considered offers from other sources, including suppliers without a tradition of supplying PPE. Circa 24,000 offers of PPE were made from 15,000 suppliers and the UK Make Team established UK manufacturing of PPE.

- d. The 'UK Make Team', based out of the Department for Business, Energy & Industrial Strategy (BEIS), established UK based manufacture of PPE
- 14. This emergency procurement phase ran from late March to July 2020. The PPE Cell remained in operation in DHSC until it was officially dissolved on 31 March 2023 when all operational responsibility for PPE returned to SCCL. [JM03/5 INQ000551735]

#### The systems for modelling and forecasting procurement of key healthcare equipment

- 15. The PIPP modelled the likely demand for PPE to treat influenza patients in a pandemic, as set out above (§9.a) As far as I am aware, the business as usual (BAU) need for some items of PPE (e.g. gloves and aprons) was not included in the RWCS calculations, as these were not part of the central stockpiling programme.
- 16. Modelling projections fluctuated through February to May 2020 as information on how COVID-19 was impacted by wider policy decisions (such as the imposition of lockdowns) became available. The models continued to be refined in line with our understanding of COVID-19. For example, modelling included a much wider use of PPE for staff interactions with COVID-19 and non-COVID-19 patients following the IPC guidance update on 2 April 2020 [JM03/6 INQ000496814]. The change in guidance led to procurement of PPE for every health and care patient interaction, including for episodes of normal care not due to COVID-19.
- 17. DHSC took steps to provide surge capacity from civil service analysts within the analysis function of government, to undertake the additional modelling required. In February and early March 2020, the Department was largely reliant on existing functions and data flows. As the pandemic emerged, the urgency of the evolving situation precluded in-depth research and modelling regarding what was a novel, unknown and unprecedented threat. It was necessary to work from data and modelling available at short order to inform the critical decisions that needed to be made [JM03/7 INQ000551482; JM03/8 INQ000551483; JM03/9 INQ000551484; JM03/10 INQ000551485]. By late March 2020, it was clear that substantial additional procurement of PPE would be required [JM03/11 INQ000551686; JM03/12 INQ00055937].

- 18. The modelling of the potential demand for PPE was a particularly important part of the overall response as we had no prior experience of similar pandemics on which to base our demand estimates.
- 19. The DHSC engaged McKinsey & Company (a strategy and management consultancy firm), from 23 March 2020, to support the development of a detailed model of demand for PPE in health and care settings. This was an extremely challenging task, as the volumes of PPE required were dependent on several factors:
  - a. The number of COVID-19 cases and the numbers requiring hospital treatment: PPE modelling worked on the RWCS for COVID-19 cases provided by The Scientific Pandemic Infections Group on Modelling (SPI-M) modellers and others. In adopting the RWCS, we were accepting an 80% probability that we would overestimate the actual number of cases. This was reasonable given the need to ensure we could protect both the workforce and patients.
  - b. NHS activity levels and the number of NHS patients: PPE modelling relied on NHSE projections of NHS activity over the course of the pandemic. My recollection is that the levels of activity actually delivered were lower than the projections. Overall NHS activity was important for two reasons. Firstly, some items of PPE are widely used by the NHS as part of normal practice, such as aprons and gloves widely used in patient care. The PPE programme needed to provide enough PPE to cover BAU requirements, as well as COVID-19 care. Secondly, the IPC guidance required PPE to be used in a broader range of patient care interactions, beyond looking after patients admitted with COVID-19. The guidance issued on 2 April 2020 extended PPE requirements to potentially all patients on a risk assessed basis.
  - c. The PPE needed for each clinical interaction: the McKinsey team worked with NHS Trusts to model how often the interactions requiring PPE would occur, and the consequential PPE requirements. This modelling was repeated for social care and, given the concerns regarding PPE supply for social care, we surveyed a wide range of providers to ensure we had a credible set of assumptions.
- 20. The model was used to generate 7 day and 90-day requirements for PPE. 7 day gave us a measure of the immediate pressures faced by the NHS and social care, and 90 day provided a measure of our resilience and on-going ability to provide required PPE. Confidence that we could meet both the 7 day and 90-day requirements was the PPE test

for ending the first lockdown. The first lockdown would be brought to an end only when the PPE test was met [JM03/13 - INQ000496843].

21. As the COVID-19 pandemic progressed, we were able to supply PPE to health and social care providers to meet their demands. This offered increased confidence that our supply of PPE was meeting all demand, and that we could use the operational supply of PPE as our measure of the requirement, rather than the modelled demand. Post-pandemic, the supplies held in the PIPP stockpile are based on this operational experience of the volumes used.

# The data gathering and inventory management systems in the UK and devolved administrations

- 22. At the outset of the pandemic, the national team had access to inventory data on stock held by SCCL and the PIPP stockpile for England. We did not have access to inventory data for the NHS organisations or for social care.
- 23. The devolved administrations held their own inventory data for their PIPP stockpiles. We put significant effort into working with colleagues across the devolved administrations to understand stock levels and demands in each nation, and to allow mutual aid across the four nations.
- 24. Initially SCCL had seen significant increases in NHS orders for PPE as NHS trusts sought to build their supplies ahead of the pandemic. While these orders clearly signalled demand for PPE, they were not a direct measure of the use of PPE.
- 25. Deliveries to NHS Trusts switched from an order system to a "push system", where each NHS trust received a centrally determined PPE consignment based on their size and characteristics. Feedback via NHSE regional colleagues allowed these push orders to be varied, giving some insight to demand but again no direct usage data.
- 26. We had very limited data on social care stocks and usage of PPE. We worked closely with MHCLG and the local resilience forums (LRFs) to understand their requirements for PPE and to adjust the volumes delivered appropriately.
- 27. The NSDR provided access to emergency PPE for providers at risk of running out within 72 hours. Contact with the NSDR gave insights into the number of providers struggling with PPE supplies but no overall picture of supply.

28. The PPE Cell secured access to NHS frontline inventories, first for London, and then the rest of England. This gave us visibility of overall stock levels and allowed us to move to a system where we supplied sufficient PPE to maintain a 7- or 14-day buffer stock at each NHS trust.

# The industrial capability, flexibility and scalability for the domestic design and manufacture of key healthcare equipment and supplies

- 29. The UK entered the pandemic with limited industrial capacity to produce the range of PPE products required. Prior to the pandemic, PPE was considered to be a readily, cheaply available and traded commodity in the global market.
- 30. Whilst UK firms did provide emergency support to help respond to the pandemic. For example, UK fashion firms were able to produce gowns and surgical scrubs in small numbers, but they lacked the capacity to produce PPE at the scale and speed required.[JM03/14 INQ000551521].
- 31. The UK Make Team looked to support both these offers of emergency support and to secure more scalable supplies of UK manufactured PPE. It was possible for some UK firms to produce PPE products with relatively simple adaptations to existing manufacturing capacity. For example, a plastic bag manufacturer switched to producing aprons by making adaptations to their existing manufacturing line [JM03/15 dhsc006:08896352].
- 32. In some cases, UK manufacture required significant capital investment. For example, we agreed contracts for production of FFP3 masks in the UK. This involved significant capital investment in the specialist machinery that produces the FFP3 masks. The extremely high global prices effectively allowed the cost of the capital investment to be offset against the prices paid for the FFP3 masks.
- 33. UK production of gowns was particularly difficult owing to high labour costs, making the UK unattractive for high volume production. UK production of gloves was not possible due to the significant industrial capacity required to process the rubber used for production.

The expertise within government and the civil service for procurement during a wholesystem civil emergency

- 34. Before the pandemic, the procurement of PPE and other supplies for health and social care was not a government function.
- 35. NHS trusts either ran their own procurement operations or purchased from SCCL (then a wholly owned company of DHSC). The SCCL is the legal entity through which the NHS Supply Chain undertakes its procurement services, and whilst NHS trusts were not obliged to use it, about 50% of the NHS PPE market was supplied by SCCL prior to the COVID-19 pandemic. Small NHS providers and social care procured their supplies from independent wholesalers.
- 36. SCCL provided an efficient supply of low-cost products. They were able to scale up their procurement during the pandemic but not to the unprecedented levels required. The volumes of PPE needed in response to the COVID-19 pandemic had not been foreseen, and additional emergency capacity was needed.
- 37. The additional procurement capacity was secured from Government Commercial Service experts from across the civil service who volunteered to join the PPE Buy Cell, led by members of the GCS complex transaction team. From late March to July 2020 this team established a parallel procurement operation and secured the additional volumes of PPE to meet our modelled demand. This was an extraordinary accomplishment.
- 38. The PPE Cell Team developed rapidly. Whilst funding, final decision-making and contracting authority sat with DHSC, the PPE Cell's work was a collaboration between multiple departments, including NHS England (NHSE), the Ministry of Defence (MoD), Armed Forces, FCO, BEIS and the CO.

# The expertise within the private sector for procurement during a whole-system wide civil emergency

39. We made extensive use of private sector expertise to support the development and delivery of the PPE Cell. The PPE Cell was responsible for developing a parallel supply chain between March and July 2020. The Department and NHSE designed a first iteration of an end-to-end process for procurement by the parallel supply chain [JM03/16 - INQ000551535]. With this process contributing to informing resourcing decisions for the parallel supply chain, staffing grew at pace to over 400 staff. Whilst the efforts of staff from NHSE, DHSC and across government and the Armed Forces were crucial, it was necessary to draw on specific procurement, logistic and management capability from the private sector. This included:

- a. Leadership of the PPE Programme. On 19 April 2020, Lord Deighton was appointed to lead the national effort to increase the domestic production of PPE, UK Make, with his remit broadened to cover the whole PPE programme on 24 April 2020.
- b. **UK Make**. The initial UK Make effort was led by Deloitte Touche Tohmatsu Limited (DTT). Over time we replaced the DTT team with private sector contractors working in the PPE Cell, led by Shaun Darke.
- c. **Procurement**. As we moved to stabilise the PPE Cell, from July 2020, private sector logistics and procurement experts were engaged to manage the PPE Cell activity. At this stage, the Government Commercial Service volunteers returned to their previous posts and support from the Armed Forces was brought to a close.
- d. **Logistics**. The PPE Cell engaged private sector logistics experts as contractors. Gary Horsfield was appointed as the Chief Operating Officer for PPE. He was tasked with running the PPE Cell and overseeing its full range of activities.
- e. **Modelling.** A team from McKinsey & Company supported the development of a detailed model of demand for PPE in health and care settings.
- f. Programme Management Support. Consultants, including from Baringa, Officio, and McKinsey & Company were engaged by the PPE Cell to support the management of the programme.

# The challenge of distributing PPE to health and care providers

- 40. In addition to the principal issues prescribed in the Request for Evidence dated 6 August 2024, I would also like to comment on the challenge of distributing PPE to health and care providers, which should, in my view, be given equal prominence. Procurement of PPE was only one part of the task. We also had to ensure the PPE was transported to the UK and, once in the UK, distributed to over 50,000 frontline locations across health and social care.
- 41. Before the pandemic, the Government had no direct role in the distribution of PPE, or any other supplies to the NHS and social care.
- 42. NHS hospitals either procured their own PPE and secured deliveries through those contracts, or procured PPE from SCCL, which had an established distribution network

delivering PPE and other supplies to hospitals. Smaller NHS providers (GPs, dentists, pharmacists) and social care providers secured their PPE and other supplies from private sector wholesalers.

- 43. The PIPP plans aimed to support these existing arrangements to distribute PPE through the provision of stockpiled PPE to the NHS (through SCCL), and sales of government PPE stocks to designated private wholesalers, to support smaller NHS providers and social care.
- 44. By mid-March 2020 it was clear that additional distribution capacity would be required. The parallel supply chain was established to supplement SCCL's existing logistics capacity, and to provide direct access to government-procured PPE for smaller NHS and social care providers. Key actions included:
  - a. Clipper Logistics Limited and Unipart were contracted to expand the scale of warehouse space (allowing PPE to sorted and assembled for delivery) and logistics capacity, to allow a '5 times a week' delivery schedule to NHS trusts. SCCL continued to deliver other supplies to the NHS.
  - b. Deliveries of PPE were made to local authority run LRFs from 6 April 2020. This allowed the LRFs to make emergency supplies available to social care and other local providers.
  - c. A PPE ePortal was developed and piloted from 20 April 2020, allowing social care providers and smaller NHS providers to order free PPE from Government stocks. By June, this service had been offered to all small adult social care providers and grew to include any eligible health and social care setting in England. Orders were picked and assembled in the Clipper warehouse and were delivered directly to the provider by the Royal Mail or other courier services.
  - d. The NSDR managed an emergency PPE supply service. Health and social care providers at risk of running out of PPE within 72 hours were able to contact the NSDR hotline to secure emergency supply, if they could not acquire stock through other channels [JM03/17 - INQ000551696].
- 45. Through this distribution network we were able to supply PPE to all NHS and social care providers. This free provision of PPE was maintained until 31 March 2024. At this point procurement and distribution arrangements returned to their pre-pandemic arrangements.

#### **Management of PPE Contracts**

- 46. Lord Deighton was appointed the UK Make lead in April 2020 and I worked closely with him throughout the period he was involved in PPE procurement. My initial engagement was to ensure he was properly supported as he took up his role as the UK Make Lead; he was then appointed Senior Responsible Officer for the PPE Programme in May 2020, and from that point Emily Lawson and I worked directly with Lord Deighton to deliver the PPE programme.
- 47. Emily Lawson, the Chief Commercial Officer for NHSE, was seconded to DHSC to support the parallel supply chain from March 2020. By late March 2020, I was working alongside Emily to lead the PPE Cell and support the parallel supply chain.
- 48. The DHSC finance team worked closely with colleagues in HMT throughout the pandemic. HMT colleagues were closely engaged in the PPE programme, and Catherine Little was the HMT representative on the PPE Oversight Committee. The PPE Oversight Committee, chaired by Lord Deighton, was designed to support the PPE Programme Executive, to promote robust discussion and facilitate Government engagement in programme matters.
- 49. Antonia Romeo, in her former role as Permanent Secretary of the Department for International Trade (DIT), sought to ensure the resources and capabilities of her department were fully utilised to support the PPE procurement effort. Antonia was involved in the meetings chaired by the PM where the PPE programme and our progress was discussed. From 27 April 2020, the papers for these meetings were jointly prepared and presented by the PPE Cell and DIT officials.
- 50. Colleagues in the PPE Cell worked closely with both the MHRA and the HSE to ensure that PPE procured met the required specifications. This collaboration developed into the establishment of a Decision-Making Committee, which met on a weekly basis. The Committee allowed colleagues from MHRA, HSE, OPSS and the PPE Cell to consider whether specific PPE products met the required specifications. I recollect being involved in discussions with colleagues from the MHRA and HSE in response to specific issues and concerns, for example, the recall of the Tiger Eye goggles following confirmation that they did not meet the required standards. I provide further details of the work with MHRA and HSE, and on the recall of Tiger Eye goggles in my corporate statement.

- 51. As set out above, the PPE Cell worked closely with DIT to ensure we made full use of their capacity and capability to secure the PPE required to support health and social care.
- 52. The Department for Business, Enterprise and Industrial Strategy was involved in the efforts to mobilise UK manufacturing to produce PPE. My recollection is that they were the initial sponsors of Lord Deighton, when he was appointed to lead UK Make. Following Lord Deighton's appointment as Senior Responsible Officer for the PPE Programme, the UK Make work became a fully integrated part of the PPE Cell.
- 53. The decision to establish a parallel supply chain for PPE was taken before I became involved in the operation of the PPE cell.

# Overall value of the contracts awarded

- 54. DHSC was directly engaged in the procurement of PPE for a relatively short period between March 2020 and July 2020. In March, the supply of PPE was extremely challenging, and we continued to face significant challenges with the supply of gowns; FFP3 masks; and IIR masks at different points across this period. By July, we were confident that we could meet the immediate (7 day) needs of the health and care system and that we had built sufficient stocks to allow us to respond to the anticipated second wave of COVID-19 infections, and beyond.
- 55. The details of the DHSC approach to procurement and steps taken to secure value from the contracts awarded are set out in the Department's corporate statement. I would like to draw attention to the following:
  - a. Our primary aim in this period was to secure sufficient high-quality PPE to meet the needs of health and social care, to help keep patients and staff as safe as possible.
  - b. There was a global scramble for PPE and demand far outstripped supply. The balance of power lay with those selling PPE. We accepted the high prices, and contract terms available, in order to secure the PPE we needed. If we had not taken this approach, the available PPE would have been sold to other international buyers.
  - c. We focused our attention on securing PPE of appropriate and sufficient quality. The IPC set out PPE specific guidance including the volume of specific PPE required,

and the technical specifications were set out independently by the NHSE and PHE clinicians working in the IPC Cell. We then procured PPE in line with this IPC guidance. We worked closely with the Medicines and Healthcare products Regulatory Agency (MHRA) and Health and Safety Executive (HSE) to ensure products without current "CE mark" authorisation met the appropriate standards and that we secured the necessary derogations to utilise these products. To maintain the confidence of NHS staff, we continued to procure and supply FFP3 masks, which had become the standard NHS respirator mask. This was despite WHO guidance, and most other nations' practice, was to use the slightly lower specification FFP2 mask. FFP3 masks were more expensive and tougher to source as many manufacturers focused production on the more commonly sought FFP2 masks.

- d. In the circumstances of the COVID-19 pandemic, it was not always possible to physically inspect the goods before placing orders. We took a cautious approach to releasing PPE into the health and care system. Any products which raised concerns on receipt were initially consigned to "Do Not Supply" (DNS) until further checks demonstrated that the products met the required standards.
- e. Alongside assuring ourselves of the technical standards of the PPE we procured, the Buy Team also carried out financial due diligence to establish the credibility of the counterparty to the contract. We were conscious that we were working with new and non-traditional suppliers, and we were prepared to accept a higher-thannormal level of risk, if there was a credible opportunity to secure the PPE we needed for health and care staff and patients.
- f. Market prices for PPE were hugely inflated as demand massively outstripped supply. To manage this, we established a pricing rule that we would not pay more than 120% of the average price we had paid over the last 7 days.
- g. The PPE Buy Team had no authority to enter into a contract on DHSC's behalf. Once a recommendation to buy had been made, this was handed over to the separate DHSC Finance Team and the Accounting Officer (AO) for decision. If they were satisfied, they would authorise the contract.
- 56. Given the challenges facing procurement in the early months of the pandemic, and the very real concerns around shortages of vital PPE, normal government procedures

designed to ensure value for money (VFM), were accelerated, which necessarily raised our risk profile, and created challenges relating to quality. The challenge we faced was to secure extensive volumes of PPE, both for immediate use and to build stocks against the demands of the expected further waves of COVID-19 infections. The Department's absolute priority was to secure sufficient PPE to protect frontline health and care workers.

## **Spending Controls**

- 57. Throughout the COVID-19 pandemic, there was close co-ordination between DHSC, CO COVID-19 Taskforce, and HM Treasury (HMT). The overall strategy was agreed with the CO COVID-19 Taskforce and the Prime Minister (PM). For PPE, the requirement was to secure enough PPE to meet the immediate and medium-term needs of the health and social care system.
- 58. The spending envelope for PPE was agreed with HMT by the DHSC Finance Team. This was agreed on the basis of our modelled demand for PPE to meet the overall requirement, and our estimated prices given the experience of price rises during the pandemic.
- 59. The spending envelope increased significantly through March and April 2020, from £100 million ex VAT in March [JM03/18 INQ000514152], to £500 million in April [JM03/19 INQ000551554; JM03/20 INQ000551556], with HMT approving a further increase to £1 billion on 11 April 2020 [JM03/21 INQ000551575] in response to our improved understanding of the requirement and likely cost.
- 60. HMT and the CO were also represented on the formal governance boards for the PPE programme. I give a full account of these in the Department's corporate witness statement.

#### Steps taken to eliminate fraud and the prevalence of fraud

- 61. I have set out the key steps we undertook to determine that we were entering into contracts with counterparties who met our tests for technical and financial due diligence.
- 62. The DHSC Counter Fraud Team were also engaged in seeking to prevent fraud. I had no responsibility for this team, nor direct knowledge of its activities. The steps taken by the Department to eliminate fraud and the prevalence of fraud are set out in my corporate statement.

# **Conflicts of interest**

- 63. I understand that potential conflicts of interest were considered during the PPE buying process and that a conflict of interest form was provided for potential sellers to complete [JM03/22 INQ000496766]. I set out further details in my corporate witness statement.
- 64. Our overall process aimed to meet the emergency procurement of PPE required to meet the urgent needs of the health and care system. As such we prioritised high volume offers of technically compliant PPE against our requirements.

#### Contractual provisions and performance by suppliers and manufacturers

- 65. In the very difficult market for PPE that existed in the early months of the pandemic, we faced a range of challenges relating to contractual performance management. These included:
  - a. A reduced ability to impose contractual terms on the sellers of PPE than would be expected in normal circumstances. It was a seller's market; if we were not prepared to conduct business on the seller's terms, others were both willing and waiting. This led to us taking significantly more risk than would be normal in public procurement, such as payments made up front and products checked on delivery, rather than prior to purchase. We would often take responsibility for transport. Contractual terms were developed to protect the Government's position, however, due to the scarcity of suitable products and the global scramble, it was not always possible to implement those terms.
  - b. We built a new emergency procurement team. This team lacked established infrastructure, and contract monitoring systems were built from scratch, in parallel to the procurement activity.
  - c. Tracking deliveries against contracts proved a significant challenge in the early months of the pandemic. Significant effort across the PPE Cell was dedicated to developing a tracking system that would allow us to both track and risk rate deliveries. This was crucial to decisions on distribution of PPE as well as contract management.
  - d. PPE was tracked against delivery and across the warehousing and storage network.

- e. Where any concerns were raised in relation to the quality of the PPE, those products would be designated DNS until further investigations, and potentially testing, verified appropriate technical compliance.
- f. A Dissolution Workstream was established in April 2022, with a team of 22 members, tasked with:
  - i. Establishing whether DNS stock met the established standards;
  - ii. Bringing to an early close those contracts, where possible within the terms of the contract; and
  - iii. Seeking redress for any contracts that did not meet contractual requirements. This included replacement of products, curtailed contracts, and payments from non-performing contract holders to DHSC. This activity is still underway and may lead to litigation in relation to some contracts.

#### Compliance with public law procurement principles and regulations

- 66. The PPE Cell Buy Team was staffed by Government Commercial Service procurement experts, who designed the process to enable us to procure the PPE we needed for health and care staff and patients. Whilst I am not a procurement professional, I would make the following observations:
  - a. The COVID-19 pandemic and the associated crisis in PPE supply clearly met the test for emergency procurement, and as such, was carried out under Regulation 32. Pursuant to Regulation 32(2)(c) of the Public Contracts Regulations 2015 (PCR), a contracting authority is permitted to procure public contracts in reduced timescales where there is a state of urgency (unforeseeable by the contracting authority) that means it is not practical to comply with default time limits. This permits the contracting authority to carry out direct awards, without prior publication, in cases of extreme urgency or emergency. Any procurement that had attempted to follow the normal public procurement rules would not have been successful, resulting in missed opportunities to procure vital PPE products. The CO Efficiency and Reform Group, and the Crown Commercial Service, produced guidance documents in the form of Procurement Policy Notes (PPNs).
  - b. The Buy Team designed effective processes to identify and prioritise new opportunities to secure PPE (on the basis of PPE needed, volume offered,

credibility of offer), to carry out technical and financial due diligence, and to recommend suitable contracts to the DHSC AO.

- c. These processes were established "in flight" as the Buy Team picked up the challenge of finding new PPE sources to meet the extant and pressing need we faced. The team received over 24,000 offers from over 15,000 suppliers.
- d. My understanding was that once Reg 32 was engaged, there was very little additional guidance or advice on how to proceed in an emergency situation beyond the PPNs referred to above.
- e. The separation of the Buy Team, DHSC Finance Team, and AO permitted further independent consideration of whether any particular contract was appropriate before its award.

# Operation and effectiveness of regulatory regimes

- 67. PPE is regulated by either MHRA or HSE, dependent on whether its use is primarily as a medical device or as PPE. PPE for sale in the UK is CE marked to show that it meets the necessary technical specifications.
- 68. We worked closely with MHRA and HSE to ensure we were able to access PPE that met the technical standards required, and that derivations were in place to allow the use of PPE that met those standards but had not previously secured a CE mark.
- 69. This close cooperation evolved to include a Decision-Making Committee (DMC) which had access to officials and experts from the PPE Cell, MHRA and HSE, who were able to resolve technical concerns and provide guidance to the PPE Cell Buy Team.
- 70. My reflection is that the arrangements worked well, with all parties understanding the need to secure new sources of PPE, whilst also remaining committed to ensuring we only bought PPE that met the required technical standards.

# Decisions of what to buy at what cost

71. The primary aim of emergency PPE procurement was to secure enough PPE to meet the immediate and medium-term needs of the health and care system. Procurement of PPE in this period involved paying higher prices and accepting a greater risk appetite.

- 72. Decisions of what to purchase and at what cost were made with the following considerations in mind:
  - a. The categories of PPE and their technical specifications were based on the guidance from PHE and NHS clinicians within the IPC Cell. This guidance set out the requirements for PPE and the circumstances for its use. Relatively small quantities of product not meeting the standards of IPC guidance, for example FFP2 masks, were purchased for use as a contingency, should we be unable to secure sufficient quantities of, in this case, FFP3 masks. The full description of the categories of PPE procured is set out in my corporate statement.
  - b. We aimed to secure enough PPE to meet the treatment needs of COVID-19 patients and social care residents and, as the guidance changed from early April 2020, to allow for the use of PPE on a risk-assessed basis in a much wider range of interactions with patients and social care users. For items of PPE with an ordinary use in health and care, e.g., aprons and gloves, we aimed to procure PPE for their everyday uses as well. This was to prevent competing purchasing activities for these items.
  - c. Buying activity was prioritised on the basis of the demand and existing national inventory for each item of PPE. This was reviewed at the daily 8.30am PPE Cell meetings to understand the supply and demand position and to set priorities and actions. A priority buy signal was agreed and shared with the Buy Team.
  - d. Initially the instruction was to buy PPE against the categories and technical specifications we required. It was clear that we had insufficient stock to see us through the pandemic. Through March and April 2020, we refined our modelling of the expected use of PPE and this allowed us set overall target volumes for the PPE required. This modelling was used to report our stock levels against both 7-day and 90-day demand. These reports were shared regularly with the COVID-19 Taskforce, and the PM. [JM03/23 INQ000496840].
  - e. The Buy Team's role was to source PPE which complied with the technical specifications, sourced from an organisation that met our financial due diligence, and whose offered terms we were prepared to accept. There were four separate teams:

- i. SCCL continued to purchase from their framework suppliers. This ensured we continued to maximise our existing commercial relationships. This route, alone, could not meet our overall requirement.
- ii. The China Buy Team worked with the Embassy in Beijing to procure PPE directly from China.
- iii. The New Opportunities Team considered offers from other sources, including suppliers without a tradition of supplying PPE. The Coronavirus Support from Business Scheme (the Portal) was established for offers of PPE to be registered received.
- iv. The UK Make team sought to identify potential new manufacturing sources within the UK.
- f. Offers to supply PPE were prioritised on the basis of whether they met the priority buy signal, compliance with technical standards, the volume of PPE offered (larger offers prioritised), and the credibility of the offer.
- g. Offers that appeared to be credible were taken through a technical and financial due diligence process before commercial terms were negotiated. Pricing was agreed in accordance with the pricing rule referred to above.
- Recommendations to purchase were made to the separate DHSC Finance Team.
  The decision to purchase would be taken by the AO.
- 73. From around July 2020, sourcing activity had ceased. We had increased confidence that we had secured sufficient stock to meet forecast demand and to create a buffer stock against further demand spikes. Initially, we were much more confident in relation to 90-day stock; it became clear that we had secured PPE which was expected to arrive in the months ahead.

# **Disposal Strategies**

74. From autumn 2020, it was clear to me and others in the PPE Cell that we would have excess PPE in certain categories. Eye protection was one category where we had significantly more PPE in stock than we appeared likely to use.

- 75. At this stage, the wider government concern was that we should stockpile enough PPE to ensure we could supply health and social care throughout the remaining waves of COVID-19 infection. No one wanted a return to the perilous position we found ourselves in from March to June 2020, when PPE stocks were critically limited.
- 76. We were now able to supply the NHS and social care without any restrictions on the volume of PPE supplied. Access to NHS frontline inventory data allowed us much greater confidence in the usage of PPE matching the required demand. In some cases, actual usage was significantly lower than our modelled demand (e.g., eye protection).
- 77. In order to secure the best value from the PPE we had secured and to reduce storage costs, we explored the following strategies to maximise PPE use, or, if necessary, dispose of PPE. In order of preference these were:
  - a. Maximise use of PPE in health and social care. The Government continued to supply free PPE to both the NHS and social care until the end of March 2024.
  - Supply PPE to other public services or to support the economy. We supported HM Prison Service with PPE and supplied masks for use in Ministry of Justice buildings. Packs of PPE were also sent to schools to support their reopening and to polling stations for local elections.
  - c. Sale of PPE. Limited amounts of PPE were sold to private sector organisations.
  - d. Donations of PPE. Up to 31 December 2022, 6,100 pallets of PPE had been donated both domestically and internationally, totalling 108 million items [JM03/24 INQ000106341].
  - e. Disposal and recycling. When we were confident we had excess PPE in specific categories, we sought to reduce the storage costs through recycling, and disposal through incineration, to obtain energy from waste.

#### Distribution of key healthcare equipment and supplies

78. Distribution of PPE to NHS and social care providers was a very significant challenge. The existing pre-pandemic distribution infrastructure lacked the resilience and ability to scale up to meet the challenges of distributing PPE, alongside all other supplies. Additional capacity was required, and new distribution routes were developed to ensure PPE was delivered to those who needed it. These new distribution systems were developed and

implemented during the early months of the COVID-19 pandemic, at a time when we were experiencing unprecedented challenges with regard to supply. By June 2020, we had secured sufficient PPE and established the distribution systems needed to ensure health and care providers were able to access the PPE they needed. I draw attention to the following challenges, and have described how we addressed them:

- a. The combination of high demand from NHS trusts, and limited national supplies of PPE, required us to move to a model of making frequent (daily) deliveries of PPE to NHS trusts, in addition to normal delivery cycles. To provide the additional warehouse capacity to both assemble the necessary PPE for each delivery, and to physically deliver the PPE to each NHS Trust, SCCL contracted with Clipper Logistics Limited to provide the necessary capacity to operate a "parallel PHE supply chain" alongside the existing SCCL distribution system operated by Unipart logistics.
- b. NHS providers were initially allocated and 'pushed' national stock based on predicted demand. After an initial few weeks of push deliveries, to address immediate shortages, the system for delivering PPE to NHS trusts evolved into a hybrid between modelled-push and demand-pull distribution. To protect minimal depot stocks (without which emergency deliveries would not be possible), push deliveries were sometimes restricted.
- c. Pre-pandemic planning had assumed that social care and small NHS providers (GPs, dentists, pharmacists) would continue to source their PPE from private sector wholesalers, with the Government supporting designated wholesalers with sales of PPE from the national PIPP stockpile. Whilst some sales of PPE were made to support the operation of wholesalers, this approach was quickly overwhelmed and alternative approaches were required.
- d. Deliveries of emergency supplies of PPE to Local Authority-run LRFs started in April 2020. Local social care and other providers in need of PPE, unable to source through private sector wholesalers, could access emergency supplies through LRFs. This distribution channel was specifically introduced as a response to the concerns of social care providers around accessing sufficient PPE.
- e. By June 2020 almost all small social care and NHS providers could secure deliveries of PPE through the PPE ePortal.

- f. By mid-May 2020 we started to get access to NHS hospital PPE inventory information. This allowed us to change our approach to delivering sufficient PPE to maintain 7- or 14-days stock (on the preference of the NHS trust). Greater resilience also allowed us to reduce the frequency of deliveries.
- g. Throughout the COVID-19 pandemic, the NSDR team maintained an emergency PPE service. Any health or social care provider at risk of running out of PPE within 78 hours could contact the NSDR for an emergency supply.

#### Suitability and resilience of supply chains

- 79. As discussed above, prior to the pandemic, PPE was seen as a commodity item. In recognition of the importance of PPE in a pandemic, separate arrangements were in place to hold a PIPP stockpile of PPE, with the aim of supplying PPE through any unexpected disruption to normal supply.
- 80. The existing supply chain arrangements lacked sufficient resilience to cope with the demand during the pandemic; an additional parallel supply chain operation was established to provide increased capacity to procure, store, and distribute PPE. Additional delivery channels were designed and established to allow us to deliver PPE to over 58,000 locations, ensuring all health and social care providers could access PPE. Key issues included:
  - a. Manufacture of PPE was generally concentrated in China, with the manufacturing of gloves concentrated in Malaysia. In normal times there was a ready supply of low-cost, high-quality PPE.
  - b. The UK supply chain for PPE and other NHS consumables was optimised for efficiency and low cost. Some NHS trusts procured their own supplies. SCCL was responsible for approximately 50% of NHS supplies. SCCL's operating model and organisation prioritised efficiency. Much of its capability and capacity was contracted out and it had limited ability to scale up in response to a crisis.
  - c. The PIPP stockpile was managed separately to the normal supply operations of the NHS. Whilst this stockpile was critical to the supply of PPE in the early months of the pandemic, there were challenges with lifecycle management of some stock; and the deep storage warehousing, while efficient for long term storage, did not allow the access needed to sort and distribute PPE.

- d. The failure of JIT contracts, as set out above.
- e. The need for additional warehousing and transport capacity, as set out above.
- f. New arrangements were needed to supply and distribute PPE to social care and small NHS providers (GPs, dentists, pharmacists). These providers procured their own PPE and other supplies directly from private sector wholesalers. The PIPP assumed this arrangement would continue with government support. Given the concerns over supply to social care in particular, the government stepped in to provide PPE directly; emergency supplies via LRFs; and then an ongoing direct supply via the PPE ePortal.
- g. SCCL was able to place significant orders for PPE through their existing commercial frameworks. Again, additional capacity was required and the PPE Cell brought together commercial specialists from across Whitehall to form an emergency PPE Buying Team.
- h. Visibility across the supply chain proved to be a significant challenge. Orders were placed through wholesalers and intermediaries. There was a clear risk of different suppliers bidding to offer the same PPE, from the same factory. The Embassy in Beijing played a vital role in working with Chinese suppliers. Our buying activity prioritised opportunities to buy direct from the manufacturers, where possible.
- i. There was no visibility of frontline inventory across the NHS and social care. The Department started to access NHS hospital inventory data from mid-May 2020.
- j. It was possible to establish UK manufacture for most of the required PPE products. Some items, for example aprons, required minor adaptations to existing UK manufacturers' lines, whilst other items required significant capital investment, for example FFP3 masks, as set out above.
- 81. Our post-pandemic supply chain arrangements have been able to build on many of the improvements secured during the pandemic. However, there is always a trade-off between resilience and cost. Determining how to manage that trade-off remains a key decision for the government. Key changes to our resilience post-pandemic include:
  - a. Responsibility for both day-to-day supply operations and management of the resilience stockpile has been combined in one organisation: SCCL.

- b. SCCL retains the capability to supply social care and small NHS providers through the ePortal, should that capability be required again.
- c. The pandemic stockpile holds significantly larger volumes of PPE, based on the experience of usage during the COVID-19 pandemic, and has taken advantage of the PPE purchased for the pandemic. Decisions on the replacement of this stock when it passes its shelf life will be key to future resilience. However, stockpiles cannot be the complete answer. Analysis by DHSC suggests that holding a stockpile sufficient to meet the complete needs of a COVID-19-like pandemic would only be cost effective if such a pandemic occurred every 10 years.
- d. The UK Make contracts have all expired. As large stocks of PPE from the pandemic procurement remained, there was no rationale for further purchases. Future procurements could be designed to support greater UK manufacture and resilience, but this would come at an additional cost.

#### Changes to procurement processes

- 82. The Inquiry will receive detailed and comprehensive evidence on procurement processes from the commercial experts directly managing the procurements. However, my key reflections are:
  - a. The standard public procurement processes are well designed to ensure transparency, fairness and value for money. They are not, however, well suited to meet the needs of an emergency. Attempts to complete standard procurements were unsuccessful. Even JIT contracts, agreed in advance of the pandemic, failed due to export bans and other controls on the international movement of PPE introduced in response to the global crisis.
  - b. Emergency procurement pursuant to Regulation 32 allowed much greater flexibility. The DHSC procurement of PPE between March and July 2020 was carried out pursuant to Regulation 32. It is my view that the commercial experts in the PPE Buy Teams established credible processes, which allowed us to source and secure the necessary PPE at the height of a global emergency. This was a major achievement. Much of the subsequent criticism of the PPE procurement has unfairly contrasted the approach taken with standard public procurement. Standard procurement would have failed.

c. We ceased procurement pursuant to Regulation 32 as soon as realistically practicable. Once we were sufficiently confident of our PPE supplies, we returned to the use of framework contracts.

#### Data transparency and publishing contracts

- 83. Transparency is an important part of public procurement and is critical to maintaining confidence. The PPE procurement undertaken by DHSC was an emergency procurement carried out pursuant to Regulation 32, to meet an urgent requirement to secure PPE for health and care staff and patients. In carrying out this procurement, we continued to take our responsibilities for transparency seriously. This included:
  - Publishing our technical requirements for PPE online, inviting offers from anyone able to meet our specifications. This led to circa 24,000 offers from 15,000 suppliers.
  - b. Publishing Contract Award Notices (CANs). Although this took place after the 30day deadline as the priority was to secure PPE supplies during a national emergency. These were published on 7 October 2020.
  - c. Publishing information online on 17 November 2021 about "the exceptional procurement exercise to secure critical PPE during the early months of the pandemic", which included publishing all successful 'High Priority Lane' (HPL) contracts, with the referrer into the HPL and the original referrer named. We decided to publish this given the very high level of public interest in this process.
  - d. We continue to consider the publication of further details relating to the contracts that have not performed to the contracted level. There is a balance to be struck between transparency and successful recovery against underperforming contracts, and in some cases litigation. We have provided full details to the Public Accounts Committee and the COVID-19 Inquiry. I would expect further details to be published when the recovery process is complete.
- 84. I do not recollect playing any role in either the Ventilator Challenge or Operation Moonshot.

## Lessons learnt

85. The preparations made in the PIPP and as part of the "no deal" Brexit preparations (particularly the NSDR) were invaluable in supporting the response to the pandemic. The existing systems for procurement and distribution of PPE played an important role in

scaling up the supply of PPE. Ultimately, this was insufficient, and we embarked on establishing a parallel supply chain to supplement the existing stockpile; procurement; and distribution capacity to meet the needs for PPE to help protect frontline health and care workers, patients, and care users.

- 86. These actions ultimately allowed us to secure and distribute the PPE needed. The early months of the pandemic were extremely challenging, and I am aware of the serious difficulties staff and patients faced in accessing PPE. Whilst we did not run out nationally, we did have to manage the distribution of our supplies. We prepared for a potential stock-out by issuing "Acute Shortages Guidance" to advise on actions to take if specific items of PPE were unavailable.
- 87. By July 2020, we were confident that we had secured sufficient PPE to meet the mediumterm demand. The PPE ePortal was available to small social care and NHS providers. The Portal enabled them to access free PPE, and we began to understand NHS frontline inventories of PPE. This allowed us to move towards keeping NHS supplies topped up to a 7- or 14-day supply. These arrangements proved resilient through the subsequent waves of the pandemic.
- 88. In terms of lessons learnt, I highlight:
  - a. The importance of the PIPP stockpile. The PPE held in the PIPP stockpile was invaluable in the response, if ultimately insufficient. The PPE procurement during the pandemic has allowed us to maintain a larger stockpile based on the volumes used across a 3-month period of the COVID-19 pandemic.
  - b. The importance of supply chain resilience. The resilience of the supply chain to cope with shocks such as the pandemic is important. This includes the resilience and capacity to scale up supply chain organisations within the NHS, and the understanding of the full supply chain and visibility all the way back to manufacturers. SCCL has also made changes to its operations and business model to improve its resilience.
  - c. Distribution capacity and the Government's role. Procuring PPE and having it available in the UK is only the first part of the challenge. A robust distribution system is also required. Prior to the pandemic, there was no centralised system to provide PPE to social care or NHS primary care providers. The development of the PPE ePortal and the distribution capacity behind it provided a centralised distribution

OFFICIAL-SENSITIVE

model for these services and allowed them to access free PPE from Government stocks. While the PPE ePortal was closed on 31 March 2024, SCCL retains the capabilities necessary to relaunch it, if required by a future emergency.

- d. Demand and usage. There was no data available on the use of PPE, or frontline inventories of PPE, during the early months of the pandemic. Estimates for use and for volumes required were therefore based on modelling. By the summer of 2020, we had access to NHS frontline inventory data as well as data on the volume of PPE distributed. This allowed us to build our understanding of the PPE required, based on operational experience, rather than theoretical modelling. This operational experience continues to inform our modelling of requirements for future pandemics.
- e. PPE tailored to the needs of all members of staff. For many of the required PPE items, this is simply a matter of having an appropriate range of sizes available (for example, gowns, aprons). However, for respirator masks (FFP3 for NHS, FFP2 for most other health systems) the issue is more complicated. The mask needs to form a seal with the face to be effective, which presented a particular issue for ethnic minority staff. Different masks from different suppliers provide a better fit to a broader range of faces. During the pandemic, we increased the range of FFP3 masks available from two to twelve. The fit of the mask must also be individually "fit tested" to ensure a fit. We supported 325,000 fit tests between 16 November 2020 and 18 November 2022 and introduced recording of the fit test results in the NHS staff record to ensure the results would remain available.
- f. The challenge of building new systems during a pandemic. The PPE Parallel Supply chain was set up at the height of the pandemic and involved the pulling together of volunteers from across Whitehall. These volunteers were supported by the Armed Forces and private sector experts. The country needed PPE, and our priority was to meet that urgent need through the procurement of required PPE, and to do so as quickly as possible. Our systems, processes and governance were all developed 'in flight', whilst simultaneously trying to secure new sources of PPE. This undoubtably made the task much more difficult and required expeditious decisions to be taken regarding how we operated, what PPE ought to be procured, and how to secure its distribution. I hope that our experience, and tools we developed, alongside the lessons we learned, will make it easier for the next team that faces the need to respond to a pandemic.

# STATEMENT OF TRUTH

I believe that the facts stated in this witness statement are true. I understand that proceedings may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief of its truth.

Name: Jonathan Marron

Date: 12 February 2025

