

Witness Name: Baroness Dido Harding

Statement No: 2

Exhibits: DH7/01 – DH7/30

Dated: 9 April 2025

UK COVID-19 INQUIRY

WITNESS STATEMENT OF BARONESS DIDO HARDING

I, **BARONESS DIDO HARDING**, will say as follows:

SECTION 1. INTRODUCTION

- 1.1 I make this statement in response to the request sent to me by the UK COVID-19 Inquiry ("**the Inquiry**") dated 26 June 2024 ("**Rule 9 request**") for Module 7 which concerns the approach to testing, tracing and isolation adopted during the pandemic in England, Wales, Scotland and Northern Ireland between January 2020 and 28 June 2022 ("**the Relevant Period**"). This is the second witness statement I have provided to the Inquiry, having previously provided an individual witness statement for Module 5.
- 1.2 The Rule 9 request raises a substantial number of questions and sub-questions. In substance, they all concern my role as Executive Chair of NHS Test and Trace ("**NHSTT**") between May 2020 and May 2021.
- 1.3 I have contributed to, and read in draft, the corporate witness statement provided on behalf of the United Kingdom Health Security Agency ("**UKHSA**") for this module ("**the UKHSA Corporate Statement**"). Insofar as its contents relate to the period when I was in post as Executive Chair of NHSTT, then I agree with the UKHSA Corporate Statement. Save where otherwise indicated below, I have nothing to add to that statement and will not repeat in detail the information contained in it. I will, where appropriate, refer to that statement. I would ask that this statement is read alongside the UKHSA Corporate Statement.

- 1.4 I want at the outset to express my sincere condolences to all those who lost loved ones and have suffered because of the pandemic. It has had a global impact, and I welcome the chance to contribute to this Inquiry's work in learning lessons for the future so as to improve our response to future national emergencies. It is also important to me to acknowledge and thank everyone who worked for and with NHSTT for the contribution they made to saving lives and supporting the UK's pandemic response. Their unstinting commitment to public service – often at considerable personal sacrifice – is admirable and should not be forgotten.

SECTION 2. QUALIFICATIONS AND BACKGROUND

- 2.1 When I took up the role of Executive Chair, I had over a decade of experience acting as a Chief Executive Officer (“CEO”) or Chair, leading large and complex consumer-facing organisations – physical and digital – through periods of change and growth. I also had six years' experience as a Board member, Chair and Deputy Chair of two of the largest public bodies in the country, the Bank of England and the NHS. The task of building NHSTT from scratch required a combination of different skills and it is important to note that it involved a monumental team effort. I do not pretend to have had all the skills necessary to build the organisation singlehanded. I was supported by an exceptional team of people from all parts of the public and private sectors.

- 2.2 My own experience was particularly relevant to NHSTT in four main areas:

- a. People Leadership. A number of my previous roles involved recruiting, developing and supporting leadership teams in both the public and private sectors, and leading and motivating large geographically dispersed workforces, which was one of the main tasks as Executive Chair of NHSTT.
- b. Healthcare and public services. I understood the unique challenges involved in the leadership of essential public services in healthcare and beyond, having spent three years as Chair of NHS Improvement and six years on the Court of the Bank of England.
- c. Retail and logistics. My experience of large-scale retail logistics, consumer marketing and operational management might not at first sight appear relevant to building a public health service, but NHSTT was a vast multi-site, physical and

digital consumer service where my experience of designing such services and expanding retail stores and logistics was extremely relevant.

- d. Digital and tech. NHSTT needed to build an end-to-end digital system from test ordering, results delivery, contacts being contacted, and data written into patients' GP records and aggregated to enable public health experts and Ministers to make decisions. My experience of delivering digital transformation in telecoms, retailing and healthcare was directly relevant.

A. PEOPLE LEADERSHIP

- 2.3 By far the most important job of a CEO is to recruit, develop and support a great team. This is doubly true of an organisation growing at the speed required of NHSTT. My experience in the top teams at Tesco and Sainsburys and as the CEO of TalkTalk equipped me with the knowledge to attract and support the best talent possible and lead large groups of people through major change.
- 2.4 Following a competitive process, I was appointed Chair of NHS Improvement in October 2017 and held the role until October 2021. NHS Improvement oversaw the performance of all NHS Hospitals, Community and Ambulance Trusts in England. I was tasked by the Secretary of State for Health and Social Care (“SSHSC”) with working with the Chair of NHS England to bring NHS Improvement and NHS England together. Both were large public sector organisations with several thousand employees. This was a substantial transformation program that involved, amongst other things, recruiting a new joint leadership team. I took a leave of absence from NHS Improvement from October 2020 to May 2021 in order to fulfil my responsibilities as Executive Chair of NHSTT.

B. HEALTHCARE AND PUBLIC SERVICES

- 2.5 My tenure as Chair of NHS Improvement meant that I had detailed knowledge of the unique challenge of leading change in healthcare services.
- 2.6 In January 2019, I was commissioned by the then Prime Minister, Theresa May, and the then SSHSC to lead the development of the first ever NHS People Plan. The Interim People Plan was published in July 2019. I therefore had first-hand experience of working closely with senior managers and clinicians in the NHS, and in wider

government as well as the clinical and scientific leadership in the Medical Royal Colleges. These relationships proved important in building a new national clinical service, as NHSTT became.

- 2.7 I was also Chair of Genomics England from 2019 to 2020 and had seen the challenges and opportunities inherent in scaling new healthcare services directly. I stepped down from the board of Genomics England in October 2020 to focus on the national pandemic response.
- 2.8 My experience at NHS Improvement and at the Bank of England (as Deputy Chair of the Court of the Bank of England and a member of Court for six years) meant that I had considerable experience in the governance of large, systemically important public sector bodies which were implementing technology transformation and large-scale public procurement and of working with Ministers and senior government officials. This combined with my experience as Chair of the Bank of England's Remuneration Committee provided me with a detailed understanding of senior public sector recruitment.

C. RETAIL AND LOGISTICS

- 2.9 From 1988 to 2010 I had a career in retailing. I began in 1988 as a management consultant at McKinsey & Company primarily advising retailers and – apart from 2 years studying for a master's in business administration at Harvard Business School (1990-1992) – spent the following 22 years working for many of the UK's best-known retailers. I was Retail Marketing Director at Thomas Cook, responsible for a £20 million marketing and public relations budget. I then acted as Commercial Director of Woolworths PLC, responsible for buying, ranging and merchandising. In 2000, I moved to Tesco PLC. During my eight years at Tesco, I was responsible for buying £8 billion of Tesco's UK food range and led a global team of experts supporting Tesco's international businesses in Asia and Eastern Europe. In 2008, I became Operating Board Director and Convenience director at Sainsburys PLC. I led the scale up of the Convenience Division to cover 400 stores, 10,000 colleagues and over £1 billion annual turnover.

D. DIGITAL AND TECH

2.10 In 2010, I moved from retailing to Telecoms and was appointed CEO of TalkTalk Telecom Group. During my seven years as CEO, I led the demerger from Carphone Warehouse and post-merger integration of Tiscali and AOL which was a complex technology transformation program. I managed TalkTalk through the UK's first high-profile cyberattack and was tasked with securing the business and brand. I also spearheaded the campaign to 'Fix Britain's Internet' which led to the legal separation of Openreach from BT.

2.11 A member of the House of Lords since 2014, the primary focus of my parliamentary work has been digital regulation, including working on the creation of the Age-Appropriate Design Code in 2017. More recently, I worked on the Online Safety Act and Digital Markets, Competition and Consumers Act. I was also a member of the Digital and Communications Select Committee from January 2022 to February 2025 and, before that, was a member of the Economic Affairs Select Committee from June 2017 to December 2021. In 2015, I was appointed to the Advisory Board of the UK Holocaust Memorial Foundation by the then-Prime Minister David Cameron with a specific brief to assist with digital activities.

SECTION 3. APPOINTMENTS

A. NHSTT

3.1 On 5 May 2020 the then-Prime Minister Boris Johnson called me and asked me to lead what was then called the "Test & Trace Taskforce". From the conversation, I understood that the role was to be an operational (as opposed to a policy or political) one and involved the rapid expansion of the infrastructure to facilitate widespread testing for COVID-19 and contact tracing, which would produce an essential end-to-end population service i.e. a service accessible to all the population ("**Citizen Service**"), and to recruit a permanent leadership team to lead what would be a large organisation. I understood that the role would be temporary. I accepted the position, and my appointment was announced publicly two days later, on 7 May 2020.

3.2 A formal letter of appointment was sent on 12 May 2020 [DH7/01 INQ000528314]. In it, the Cabinet Secretary Sir Mark Sedwill explained that the "*immediate ambition is to have sufficient overall testing supply and test and trace operational to a level that*

allows the changes planned for 1 June to proceed". The letter made clear that testing was a priority for the government, and I was empowered to draw upon resources and expertise across government and to bring in external expertise as needed. I was to report to the Cabinet Secretary and the Prime Minister and work closely alongside the Government Chief Scientific Advisor ("**GCSA**"), Chief Medical Officer ("**CMO**") and Ministers from several other government departments. It also made clear that Ministerial accountability for Test and Trace would remain with the SSHSC. In practice I worked closely with the SSHSC and operated as part of his senior departmental team based in the Department for Health and Social Care ("**DHSC**"). In December 2020, my official reporting line changed so I reported directly to the SSHSC.

3.3 I was not paid a salary for my role as Chair of NHSTT. I continued in my role as Chair of NHS Improvement, in parallel with my role as Executive Chair of NHSTT until October 2020, when I took a leave of absence from NHS Improvement to focus on the covid-19 response.

3.4 I initiated the search for NHSTT's permanent Chief Executive in May 2020, the month I was appointed. It was not clear at the outset how long my appointment as Executive Chair would last, as we did not know how long the programme would run, what it would require, or how long the search for a Chief Executive would take. I initially anticipated that I would act as Executive Chair for three months but ultimately remained in post for a year because of the process of recruiting a permanent Chief Executive.

B. NATIONAL INSTITUTE FOR HEALTH PROTECTION

3.5 In August 2020, the SSHSC announced that a new body would be established to bring together the health protection elements of Public Health England ("**PHE**") with NHSTT under a single leadership team. This was initially referred to as the National Institute for Health Protection ("**NIHP**"). Ministers subsequently changed the name to UKHSA.

3.6 The SSHSC asked me to act as Interim Executive Chair of NIHP. I took up this interim position on 18 August 2020 as an extension of my existing responsibilities at NHSTT. I did not accept a salary for this position. My function from this point was to continue to lead the scaling and operations of NHSTT, lead the work of developing NIHP and undertake a global search for the organisation's future leadership. As indicated above, the search for NHSTT's Chief Executive had already begun in May 2020. A job specification had been drafted, and executive search consultants instructed to identify

potential candidates, whose background and experience were considered to assess their suitability for the role. The creation of NIHP meant that the job description was expanded and refined and the new permanent role of Chief Executive of NIHP was publicly advertised on 26 August 2020. A shortlist of candidates was identified shortly thereafter.

- 3.7 The appointment of Professor Dame Jenny Harries as Chief Executive of UKHSA was made on 24 March 2021. Following a month-long handover period with Professor Harries, I left my role as Interim Executive Chair on 7 May 2021.

SECTION 4. ESTABLISHMENT AND RESOURCING OF NHSTT

A. ESTABLISHMENT OF NHSTT

- 4.1 I was not involved in the decision to create NHSTT and I do not have any direct knowledge of the advice or assistance that led to the decision to establish NHSTT. I have read the section of the draft UKHSA Corporate Statement relating to the circumstances which led up to the establishment of NHSTT. There is nothing more I can usefully add to that narrative.
- 4.2 NHSTT was an operational organisation implementing UK government policy. When first created, NHSTT operated effectively as a new operating directorate of the DHSC with a specific remit as part of the pandemic response. The policy decisions were all taken by Ministers and as indicated above, Ministerial accountability for the programme remained with the SSHSC. My role was an operational one. I had to take Ministerial policy decisions and the scientific and medical guidance that the Scientific Advisory Group for Emergencies (“**SAGE**”) and CMO provided and then advise Ministers as to the best operating system and service to meet those requirements. Following Ministerial steers, I was then charged with implementing and running this operating system and service.
- 4.3 NHSTT was tasked with delivering an essential service that was integral to the UK’s approach to controlling the pandemic and whose goal was to “Test, Trace, Contain and Enable”. This required us to rapidly scale up testing and implement an operational nationwide contact tracing system, build a national data platform and analysis function in the Joint Biosecurity Centre (“**JBC**”), and design and implement the Contain framework and approach to local lockdowns with partners in local government. This

included the construction of a national laboratory and testing site and a logistics network of over 2,000 testing sites that increased testing capacity and a large scale digital and human contact tracing service. NHSTT was a combined local to national end-to-end clinical service where the individual's journey (from deciding to order a test right through to their close contacts being asked to isolate and their test results being added to their GP record and aggregated into a national data set for analysis) needed to be designed, component parts developed and procured, people trained and the service launched and operated seven days a week. The service was in a process of rapid evolution and iteration based on fast changing demands from across government, user feedback and the evolution of the disease itself.

- 4.4 As I explained above, my role was to oversee the creation and scaling of this complex organisation. My initial brief was to launch this service within three weeks of my arrival and then to scale it to what the Prime Minister called “world class levels” within three months. To illustrate the principal challenges to what was on any view an ambitious enterprise, it is useful to give some wider context.
- 4.5 To deliver the testing and contact tracing services required to respond to the COVID-19 pandemic, NHSTT needed to establish a distribution network equivalent to the size of Tesco or Amazon. For context, Tesco was created in 1919, launched its online shopping platform in 2000, and – in its biggest sales week around Christmas 2019 – delivered on 776,000 orders. NHSTT had to launch an integrated testing and tracing service within three weeks of my arrival. In five months, NHSTT expanded testing capacity from 921,958 Polymerase chain reaction (“PCR”) tests processed in May 2020 to 7,415,253 processed in December 2020. And at the same time, NHSTT developed new forms of testing and then scaled an end-to-end Lateral Flow Device (“LFD”) distribution system, Citizen Service and data flow, all of which had to be responsive to the UK government’s strategic objectives, which could change weekly. Such was the pace at which NHSTT was required to, and did, scale up that by September 2020 NHSTT was the fourth largest government department or agency in terms of budget spend and headcount (after NHS, the Department for Work and Pensions (“DWP”) and HM Revenue and Customs (“HMRC”)) despite not having existed four months prior.
- 4.6 The principal issue that faced NHSTT was the need to launch a service within weeks and then to grow exponentially in less than a year to a size that retail companies and public services would normally only achieve in years, and to do so in an environment

of considerable uncertainty. The service needed to be built as the scientific understanding of COVID-19 and the efficacy of testing and tracing was itself developing at great pace, and where the course of the disease changed suddenly and rapidly, making forecasting and planning extremely challenging.

4.7 My main tasks through each phase of the pandemic are set out below by reference to the wider objectives set for NHSTT:

a. 7 May to August 2020 – Launch of NHSTT. My initial focus on appointment was to recruit an experienced leadership team, sprint to launch the service at the end of May 2020, and start to bring some support, structure and order to what was an exhausted group of people working flat out to extremely short-term targets (including expanding testing to 200,000 PCR tests and launching contact tracing and JBC by the end of May 2020). The initial senior leadership team and I focused on the imminent launch of NHSTT at the end of May 2020, setting out a medium term (i.e., the next 3 months) business plan (published 30 July 2020) **[DH7/02 INQ000203616]** – which set out our operational targets and work program until October 2020 – and scaling up the organisation as fast as possible. Many functions that you would expect to find in a large public service organisation were not yet in existence within NHSTT and were either being provided by DHSC, in addition to their own tasks, or were not being done at all. For example, NHSTT's requirements for many of the corporate functions such as finance, legal, internal communications, data security, data governance, programme management, and recruitment were initially provided by DHSC, but the demands on NHSTT meant that its use of DHSC's resources quickly outstripped what the department had capacity to support. NHSTT needed to build its own capability, a task that was made harder by the fact that this was several months into the pandemic and most government subject matter experts were already deployed onto other parts of the national pandemic response.

b. My role was to set the strategic direction for the project, manage the current emergency leadership team, recruit a more permanent leadership team and explain to Ministers, including the Prime Minister, how fast we could build the service and how fast we couldn't. In doing so I was focused on developing operational services that (a) the public would use; (b) would be as flexible as possible to different needs as the pandemic developed; and (c) were underpinned by the latest data, science and technological evidence and insights. I spent much

of my time problem solving across the whole of the NHSTT portfolio wherever required and leading the communication of our priorities and approach internally and externally to organisations NHSTT was collaborating with (which I expand on below), Ministers and parliamentarians, and occasionally to the public.

- c. September 2020 to April 2021 – Maturing of NHSTT and the expansion of testing methods. By the end of August 2020 NHSTT was on track to scale PCR testing to 500,000 tests a day by the end of October. However, it was also becoming clear that that initial target for such tests – set in June 2020 – would not be enough, as infection rates began to rise again with the start of the school year and further use cases started to emerge which required increased testing capacity. The JBC was fully functioning as were the Bronze, Silver and Gold ‘Local Action Committees’ (“**LAC**”) (which had a role in responding to local outbreaks of COVID-19) and we had recruited a more permanent leadership team. Much of my time was focussed on performance improvement (increasing PCR capacity, reducing the turnaround times for the processing of PCR tests, increasing the percentage of contacts traced within 72 hours and improving the support we gave local authorities). At the same time, NHSTT were tasked with accelerating the development of new forms of testing to enable some form of mass testing. This added considerable complexity, for example the scaling of LFD testing was the equivalent of launching a whole new business even faster than the scaling of PCR testing. I met weekly with the Prime Minister and at least twice weekly with SSHSC as we tried to develop and then source sufficient suitable tests for various use cases (see the UKHSA Corporate Statement) including mass testing, testing in schools, workplaces, daily contact testing and eventually the Universal Testing Offer (“**UTO**”).
- d. It is not unusual when you are looking to build a new innovative service in an established organisation to ring fence that service and encourage the new team to work differently and separately from the old organisation. That was very much the brief that I was given by Ministers when I was appointed. As such, NHSTT was initially conceived as an independent organisation, separate from PHE, drawing on expert public health advice from PHE, and with PHE providing elements of the contact tracing service. As we raced to scale the operational capability of NHSTT it became increasingly clear to me that NHSTT could only be operationally effective if combined more systemically with the scientific and

clinical expertise of PHE. When a new product or service has reached operational scale in circumstances where it has been ringfenced from a pre-existing, established service, it is again not unusual to reach a point where the new service needs to be integrated back into the incumbent organisation. However, what was unusual about this situation was the speed at which NHSTT was growing and the scale it had reached in just a few months. To address the need for closer cooperation, in July and August 2020 we made a series of joint senior appointments to bring the two organisations closer together. Ministers then decided to create UKHSA (initially named NIHP) to combine the health protection elements of PHE with the operational processes of NHSTT, and including the analytical capability of the JBC. The creation of UKHSA as one operational and scientific/technical body did not delay the scaling of NHSTT, and in fact made scaling operationally easier from the Autumn of 2020. It did, however, broaden my role and changed my focus. I spent more time on internal communication, on designing the future combined organisation and on recruiting a permanent Chief Executive and Chair of NIHP. To provide clarity we produced a further business plan, published on 10 December 2020, which set out the next phase of operational work we were focussed on and referred to the establishment of NIHP **[DH7/03 INQ000528315]**. It is worth noting however that despite our attempts to set out a plan and deliver to it, the course of the disease and the resulting Ministerial decisions meant that much of my time was focussed on working across government to solve unexpected and often urgent problems, for example:

- i. supporting the implementation of the tiering system in October where the Contain and JBC teams supported Cabinet Office (“CO”) colleagues in negotiations with local authorities over tiering decisions and specific lockdown measures, and worked with the NHSTT operational teams to provide targeted testing and tracing support into high tier areas;
- ii. mobilising teams and working with colleagues from the Department of Transport (“DfT”) to oversee and operationally administer the testing of hauliers crossing into France at Dover over Christmas 2020 within 24 - 48 hours of the request from the UK government to do so (which was made in response to new French government requirements arising from the emergence of the Alpha variant); and
- iii. following a quick decision by Ministers to test all secondary school children after Christmas 2020 (in the context of rising infection rates),

working with colleagues at the Department of Education (“DfE”) to stand up a testing and tracing service focused on secondary schools in time for the start of the term in early January 2021.

e. April 2021 onwards – Path out of lockdown. Once the Prime Minister decided to appoint Professor Harries as Chief Executive and Ian Peters as Chair of UKHSA, my role was to ensure both that the organisation maintained momentum during this leadership transition, and that I had handed over everything effectively to them both. At this stage, as the vaccine rollout gathered pace, NHSTT was starting to plan for declining PCR testing capacity. Genomic testing was scaling rapidly as the understanding and approach to handling COVID-19 variants developed, the design of UKHSA was gaining traction and we launched the UTO enabling everyone in the UK to access free LFD tests for regular asymptomatic testing. The combined organisation was operating in shadow form in a more mature way than previously with programme boards, investment boards and change programmes in place as one would expect to find in a complex organisation of this scale.

4.8 Organograms exhibited to the UKHSA Corporate Statement illustrate the evolving structure of NHSTT. It’s important to recognise the speed with which NHSTT grew during 2020 and how frequently the organisation structure needed to adapt accordingly. There were frequent changes throughout my tenure, but these organograms accurately reflect the main phases in the evolution of the management structure over the period that I was Executive Chair, as far as I can recollect.

4.9 As of September 2020, once NHSTT had been fully launched, I had 12 individuals reporting directly to me: the PHE Chief Executive, the Chief Medical Advisor, the Testing Divisional Director, the Tracing Divisional Director, the JBC Director General, the Contain Divisional Director, the Chief Finance Officer, the Chief Customer Officer, the Policy Lead, the Chief Operations Officer, the Chief Commercial Officer, and my Chief of Staff. Each of those individuals ran substantial teams of their own. The number of teams reporting to me, as well as the frequency and purpose of that reporting changed frequently during my time as Executive Chair as one would expect with an organisation that was doubling in size every one to two months.

4.10 The Executive Committee which I presided over at that time comprised 14 people. Where – in the context of a FTSE 10 company or large government department

(operating in non-emergency times) – executive teams might meet for an hour each week and for a half-day monthly, the NHSTT executive team met daily and for a half-day weekly. Where those companies or departments would hold a Top 100 meeting (i.e., a meeting with the most senior managers/employees) every month, we were holding them every week, sometimes more, as emergency meetings were called whenever needed (for example, when there had been a significant policy announcement) to ensure leaders had the context they needed to deliver their plans. I would have one-to-one meetings with each person directly reporting to me at least once a week and would frequently talk to them late at night and over the weekend.

- 4.11 In terms of contact with the wider workforce, any CEO should, in my view, work hard to communicate with staff across their organisation, to explain the direction they are setting, to listen to feedback from all levels of the organisation and act on that feedback to improve staff engagement and morale. In an ordinary context, in an organisation of this scale, one might expect all-staff meetings to be held every six months, senior management meetings to occur monthly and occasional front-line visits. In this case, I led a call with all directly employed staff every two weeks and with contact tracers which involved thousands of people every couple of months. Immediately on appointment, I started a weekly blog (which later developed into a video blog) that was sent to all those who were directly employed, as well as those engaged in contact tracing and working on testing sites, to give them a wider sense of what NHSTT was doing. I also held remote lunches with staff from across the organisation to gather their feedback and visited testing sites and laboratories regularly to get frontline staff feedback.

B. COLLABORATION

- 4.12 Collaboration between NHSTT and other government agencies, the Devolved Administrations (“DAs”) and local authorities was crucial to the effectiveness of NHSTT. In many ways NHSTT was seen as an ‘arm’s length body’ of DHSC (akin to PHE) and was included in the majority of operational, scientific and some policy conversations across government regarding the pandemic. I worked with Ministers and senior officials, as did my team, as part of the collective government effort in responding to the pandemic.
- 4.13 Collaboration with local authorities was one of NHSTT’s top priorities, as we adopted a local and national – rather than centralised – approach. One of my first appointments

in May 2020 was Tom Riordan, then CEO of Leeds City Council, as the first Contain Director. Tom led NHSTT's relationships with local authorities and we worked closely together to prepare the Contain framework (the purpose of which was to support local and national decision makers in the developing and execution of Local Outbreak Control Plans by clarifying decision making responsibilities and the scope within which they could be exercised), secure funding for local authorities to build those plans and improve access to NHSTT data for local authority teams NHSTT via the Contain team and JBC. made working ever closer with local authorities a clear priority to build a 'Team of Teams' as we scaled the service as set out in the NHSTT business plans.

- 4.14 I worked closely throughout the relevant period with officials in HM Treasury ("HMT") and the CO particularly after NHSTT was granted enhanced delegated spending limits. My team and I met weekly with CO and HMT officials to review progress of NHSTT to ensure they were sighted on our work and agreed with our operational plans and priorities as they evolved.
- 4.15 NHSTT was part of DHSC so worked extremely closely with colleagues in that department. As I have already mentioned, I personally became a de facto member of the senior staff of DHSC. Many support services were initially provided by DHSC until NHSTT outgrew them.
- 4.16 Relationships with NHS England were more complex. Pillar 1 (explained in the UKHSA Corporate Statement) was to boost NHS swab testing for those with a clinical need and the most critical key workers. NHSTT colleagues worked closely with NHS England to support them to scale Pillar 1 testing. NHSTT sourced testing supplies and provided funding for scaling up NHS labs and, once available, sourced rapid testing including LAMP and LFD tests for the NHS. NHS England attended Local Action Committees and the JBC worked with NHS England to collate analysis including hospital capacity to assist government decision making in the autumn of 2020 and beyond.
- 4.17 NHSTT sourced, procured and delivered testing for all use cases, as they developed, in the UK. As testing capacity expanded and asymptomatic use cases were developed in the autumn of 2020, NHSTT worked increasingly closely with other government departments including DfE (university student testing and schools testing), the Department for Business, Energy and Industrial Strategy ("BEIS") (workplace testing), the Home Office ("HO") (prisons testing, borders policy), DfT (haulier testing), and the

Foreign, Commonwealth and Development Office (“**FCDO**”) (overseas matters). Most of this work was managed by my team, though as required I engaged in direct discussions with senior officials and ministers.

- 4.18 NHSTT worked closely with the DAs, particularly in relation to Testing Operations teams and the JBC where representatives of the DAs were embedded in the NHSTT teams. I chaired the UK government and Devolved Administrations Board (“**UKG-DA Board**”), which was set up to oversee the UK-wide aspects of the testing programme and to ensure collaboration and shared learning between the UK Government and DAs. The UKG-DA Board was also the decision maker on Four Nation issues escalated from the thematic boards within NHSTT and on which the DAs were represented – namely the Investment Board, Operations Committee, and Change and Strategy Prioritisation Board.
- 4.19 NHSTT relied heavily on PHE colleagues’ scientific and public health expertise throughout its operations. PHE did not have the depth of operational or commercial experience and expertise to scale to the levels required as part of the pandemic response. NHSTT initially relied on DHSC’s commercial function and on staff from the CGO and Cabinet Office Complex Transactions Team seconded into DHSC from which the NHSTT CCO then built a separate Commercial function, established in August 2020. PHE developed and managed tier 1 of the contact tracing service (which involved PHE teams working in conjunction with local authorities to investigate and handle cases that may be linked to local outbreaks) within NHSTT and were integral to the building of the end-to-end contact tracing operation. PHE worked closely with the JBC in developing analytical capacity and providing insight to the LACs.
- 4.20 NHSTT worked closely with the independent UK regulators who oversee the development of clinical diagnostic and digital services, including the Medicines and Healthcare products Regulatory Agency (“**MHRA**”), the Information Commissioner’s Office (“**ICO**”) and the NHS National Data Guardian. The majority of this work was conducted by the clinical, digital, and public health experts within NHSTT, though as with most areas in NHSTT I did attend some meetings when required.
- 4.21 NHSTT also worked closely with academia, the NHS, and the commercial life sciences sector while developing and building the organisation. For example, in validating testing technologies, NHSTT collaborated with the University of Oxford for LFD testing, and Southampton University for LAMP testing. NHSTT also worked with Glasgow

University and the Royal Berkshire NHS Trust in building the Lighthouse Laboratories, and with many retailers and other commercial organisations in building the logistics network, testing site network and contact tracing services including with Amazon, and the Royal Mail on the home delivery channel and Boots for the testing sites. The cross-sector collaboration between the public health family and the academic and commercial sectors was one of the primary reasons that NHSTT was able to scale testing and tracing services so quickly whilst simultaneously developing new technologies.

C. RECRUITMENT

4.22 I recruited the majority of the first executive committee of NHSTT over the first weekend after I was appointed. Whilst the leadership team (mainly comprised of secondees from DHSC, NHS and Office for Life Sciences (“OLS”)) I inherited at the beginning of May 2020 had done an extraordinary job scaling PCR testing to 100,000 a day they were utterly shattered and did not have the operational experience that was needed to lead NHSTT to the scale required. Although a small number of the senior team stayed on with NHSTT, most were exhausted and took leave before returning to their home departments. I therefore set out to bring into NHSTT experienced, seasoned leaders from the NHS, local government and the private sector. I sourced candidates via head-hunters, the Chair of the Local Government Association, the Cabinet Secretary and the Deputy Chair and Chief Operating Officer of NHS England and, where it was possible to identify multiple candidates, interviewed them over the weekend and first week wherever possible together with the second permanent secretary at DHSC or NHSTT’s Chief People Officer once the latter was appointed. The individuals we appointed were either seconded from their permanent organisations or on gardening leave from commercial jobs, and therefore immediately available. I asked them to serve for 3 months initially. This process is obviously not standard for public or private sector recruitment but was essential given the urgency of the problem at hand.

4.23 The initial focus was on launching NHSTT at the end of May, but the next urgent problem for all my leadership team was recruitment. The exponential growth of the service, doubling in size every one to two months, meant that we were recruiting large numbers of people over the summer of 2020.

4.24 NHSTT faced significant obstacles in recruiting staff with the requisite skills and in the required numbers for the work that NHSTT was tasked with. Save in respect of the recruitment for senior leadership roles, I was not personally involved in individual recruitment decisions of those joining NHSTT. These resourcing challenges affected almost all areas of NHSTT's work. In a national emergency the first two places government departments go to resource a large programme is seconding civil servants from other non-urgent tasks and deploying military assistance known as "Military Aid to the Civil Authorities" ("MACA"). The National Testing Programme ("NTP") had been stood up initially through a combination of seconded civil servants, MACA support and external consultants where neither the civil service or military had the immediate capacity or capability (e.g., designing and building an ordering system for tests). This approach was similar to that within other parts of the COVID-19 response such as opening Nightingale Hospitals or the Ventilator Challenge. To stand up a service at speed, NTP and then NHSTT needed to call on talent across the whole of society, both public and private sector. The skills required were wide ranging, including but not limited to:

- a. Service design and development.
- b. Scientific and clinical expertise.
- c. Technology design and development.
- d. Programme management.
- e. People recruitment and management.
- f. Operational delivery.
- g. Central functions such as finance, legal and communication.

4.25 Some of these skillsets – such as technology design and development and programme management – were extremely hard to find at scale within the military or civil service. These skills gaps were exacerbated by the fact that NHSTT was launched several months into the pandemic and both the civil service and military were already at full stretch. The only practical routes to the initial scaling of NHSTT were to temporarily fill many roles with external consultants or outsource elements of the service to private organisations.

4.26 One factor, which I have already mentioned, and which made efforts to scale up NHSTT's workforce particularly challenging was the speed at which the COVID-19 pandemic developed, and the resulting speed and frequency at which government policy decisions were made.

- 4.27 The mixed team of personnel which was needed and made up NHSTT brought together a wide range of skills and capabilities. This created an innovative culture which enabled NHSTT to be built from scratch and adapt rapidly to changing requirements. This diversity in skill set and background was one of NHSTT's strengths in operation and this is an important lesson for future pandemics and major national challenges.
- 4.28 At its peak in December 2020, NHSTT employed close to 55,000 people either directly or through commercial partners. The split between civil servants and private sector contractors/consultants changed almost daily. It is an impossible task to confirm the exact percentage of staff at NHSTT who were contracted from the private sector at any one time during the Relevant Period.
- 4.29 Once NHSTT had been launched and it was clear that the service would be required for more than a few months, the then-Chief People Officer launched several concerted efforts in the summer of 2020, including a 2-week resourcing 'sprint' in late August and early September to fill vacancies and to recruit civil service staff to replace consultants, especially in management roles, on the basis this would be both less expensive and provide greater long-term continuity and therefore be better value for money **[DH7/04 INQ000000000; DH7/05 INQ000000000; DH7/06 INQ000000000]**. This proved extremely difficult to achieve, partly because some of the skill sets were in very short supply across the civil service (e.g., programme management, digital development) and partly because working in NHSTT was inherently a short-term assignment under enormous scrutiny and pressure, which certainly deterred some candidates. Given the frequently changing course of the pandemic, it was difficult to provide certainty to colleagues for more than a few months and as the pandemic progressed this became less and less appealing to those in permanent civil service roles who were understandably looking beyond the pandemic.
- 4.30 I think it is important to acknowledge the significant contribution the consultants who worked within NHSTT made to saving lives during the pandemic and supporting the country back to normality. However the country responds to a future pandemic, it is highly likely we will need to bring in consultants at short notice to fill gaps in expertise and enable rapid response, just as we did in 2020.

4.31 There were occasions on which NHSTT was instructed by HMT and/or the CO to reduce operational capacity (see paragraph 5.11 below) in testing and contact tracing only for infection rates to rise rapidly with the consequence that resourcing needed to quickly scale up existing services to meet demand. Further to that, NHSTT was frequently tasked with building new services within short time frames (such as testing the whole population of Liverpool and standing up education testing over the Christmas holidays in 2020/2021), which required consultants to be brought on and retained. As such, despite sustained efforts to reduce the use of consultants, NHSTT continued to use substantial numbers of temporary labour and resourcing throughout the pandemic.

SECTION 5. TEST

5.1 The Inquiry has asked me for an overview of NHSTT's involvement with COVID-19 testing. I have seen the section of the draft UKHSA Corporate Statement which explains PCR and LFD tests as well as the section of that statement which sets out NHSTT's role in testing. I adopt but do not repeat the overview in that statement here.

5.2 The Inquiry has asked me a significant number of questions on testing and testing technologies which require a level of scientific understanding and knowledge of the process of validating tests which falls outside both my experience and role of Executive Chair of NHSTT. There are others who are better placed to answer such questions. I am also aware of UKHSA's Module 5's Corporate witness statement (Science and Technical statement) dated 14 November 2023 (hereafter "the Science and Technical Statement") which provides useful detail that I cannot.

5.3 Had I become too involved in the process of how tests were being validated, then I would not have been fulfilling the role of Executive Chair. My role was to lead the creation of a very large and complex organisation from a standing start within a few weeks, in the context of a challenging and unpredictable global environment. Whilst the position of Executive Chair demanded knowledge of testing technologies, my material focus was on the overarching objectives and leadership of NHSTT, not the detail of its scientific processes.

5.4 As with any large operational organisation and consistent with my own approach, individual senior leaders in NHSTT were empowered to take decisions to deliver the overall objectives agreed for the organisation (in this case with Ministers). The level of delegation was necessarily greater than in an equivalent organisation operating

outside a pandemic given the speed and scale that the response needed. To enable this, I assembled and led a team of senior leaders who were experts in their own fields, several of whom were seconded from CEO level roles and therefore used to leading large organisations. Day to day decisions on the appropriate use of respective testing technologies were generally referred to the Chief Medical Advisor of NHSTT and their team, detailed logistics decisions to the Testing Director and their team, and detailed procurement decisions to the Chief Commercial Officer.

5.5 I maintained an overview of all activities in NHSTT through the Executive Committee. I commented and approved for submission advice put forward to Ministers for their decision. I got involved in specific decisions when it was necessary for the respective functions in NHSTT to resolve conflicting options and priorities and/or when Ministers wanted something to be delivered that my team did not think was possible. I did this mostly via convening our Executive Committee on a daily and/or weekly basis as required, through one-to-one discussions with my senior team, through my Chief of Staff and wider private office staff working with specific teams on my behalf, and by way of deep dive sessions into particularly challenging cross-function projects.

A. POLICY

5.6 During the first few months of the COVID-19 pandemic, the World Health Organisation (“WHO”) were encouraging all countries to scale up testing, advising that testing, isolation and contact tracing should be the “backbone” of the global COVID-19 response. Ministers were therefore keen to investigate all forms of testing which might enable lockdown restrictions to be relaxed or removed entirely.

5.7 The scale up of the testing service was an iterative one. The science of COVID-19 was not settled in 2020, nor the development of and access to tests. There was also limited understanding of people’s behaviour (including the take-up of and compliance with testing, tracing and isolation). Various experts and advisers (including NHSTT) developed options and proposals for Ministers to review. Ministers decided which hypotheses to investigate and NHSTT would be tasked with exploring them as fast as possible, often in parallel. The Prime Minister and SSHSC gave NHSTT a clear steer to develop multiple testing technologies and delivery mechanisms at an early stage. NHSTT set up a specific innovation team to explore new technologies and approaches at their earliest stages, for example, wastewater testing to identify prevalence of the virus across the country.

- 5.8 Inevitably, as our knowledge developed during the pandemic, some working hypotheses were abandoned whilst others were taken forward and became crucial tools in the UK's COVID-19 response. This iterative process of service development – which enabled the UK to deploy effective LFD tests at scale before most other countries – is not unusual; it is how almost all new major consumer services are developed. What was unusual was the pace at which these new services were trialled and developed and the scale and speed at which they were launched.
- 5.9 UK government decision making was affected by wider, and not unsurprising, disagreements on the appropriate policy approach which created challenges for NHSTT to deliver operationally.
- 5.10 For example, NHSTT faced various difficulties in obtaining HMT and CO approval for Lighthouse Laboratories in the summer of 2020 **[DH7/07 INQ000575994; DH7/08 INQ000575993]**, and this meant that the approvals process for the expansion of the Lighthouse network took far longer than it should have in the circumstances. Had NHSTT had greater delegated procurement authority during this time, this would likely have reduced the capacity issues we experienced in the autumn. It was these frustrations which led to the substantial delegated authority to directly approve spending on PCR and LFD tests and award contracts up to £150 million that was agreed with the Prime Minister and HMT from 22 September 2020.
- 5.11 These challenges were further exacerbated by the inherently unpredictable nature of the pandemic. In December 2020, NHSTT was encouraged to move towards a more “business-as-usual” environment and increase focus on value for money across the organisation (including in relation to procurement). Shortly afterwards, a new variant of the virus emerged which led to the standing up of new use cases such as the testing of hauliers at the border and of secondary school staff and pupils at very short notice and the need for a third lockdown. This meant that simultaneously NHSTT was being challenged by the Prime Minister to scale faster, and the CO to slow down **[DH7/09 INQ000528313, DH7/10 INQ000528316]**.
- 5.12 The centre of government, CO, HMT and No. 10 faced understandable challenges in managing competing scientific advice and the tension between managing the spread and impact of the virus and the economic impact of the measures taken to constrain the virus. The work of the COVID-19 Taskforce in late 2020 and 2021 to co-ordinate

and publish clear plans for successive phases of the pandemic helped provide more certainty to operationally plan and deliver against.

Operation Moonshot

- 5.13 One hypothesis that was also being debated amongst scientists in the UK and elsewhere during the summer of 2020 was that if an entire population was tested twice over a two-week period and all those who tested positive for COVID-19 isolated, it would dramatically reduce the incidence of the disease and enable a release from lockdown before any vaccine had been developed. This was modelled on a testing regime being adopted in Slovakia and was particularly popular with Special Advisors at No. 10. The Prime Minister referred to this as “Operation Moonshot”. Initially, a budget of £500 million was agreed and then the funding available was extended to £2.9 billion. This funding was approved by HMT.
- 5.14 This was one of the hypotheses which led the Prime Minister to task NHSTT with rapidly scaling up testing capacity in the late summer of 2020. The practical consequence of this hypothesis was a need for NHSTT to rapidly source sufficient LFD tests for the whole of the UK even before Operation Moonshot became a fully developed plan. The Prime Minister convened a weekly meeting to review testing and Ministers also asked NHSTT to work on several other hypotheses, namely: testing all school children weekly to keep schools open; testing university students at the beginning and end of term; testing all care home residents and staff; testing weekly in workplaces; daily testing of close contacts of infected individuals so that those individuals did not need to isolate; and giving local authorities testing capacity to reach vulnerable communities as they saw fit. NHSTT was tasked with trialling these various testing services over the course of autumn 2020 and scaling procurement so that there was sufficient testing capacity should they prove effective. These services were all trialled in parallel, at a time when NHSTT was also continuing to scale PCR testing. Between August and December 2020, NHSTT reported to the Prime Minister during the weekly ‘Testing Meeting’, providing progress updates on the scaling of testing capacity and efficacy of various services being trialled.
- 5.15 The difficulties with Operation Moonshot as originally conceived – namely simultaneously testing the whole population twice as a one-off intervention to avoid the need for lockdown – were the sheer scale of testing service that it required and the fact that near 100% compliance with testing and isolation was necessary for it to be

effective. I was among those who expressed concerns about adopting a whole population testing model and argued for an alternative approach to mass testing, which became the UTO, launched in April 2021, and that some of the testing budget should be diverted to support the vulnerable to isolate. I understood at the time that the CMO and many local authorities also had concerns with this model. The Prime Minister and his advisors were keen to pursue Operation Moonshot. However, during the iterative process referred to above, the approach to mass testing evolved.

- 5.16 In early November 2020, the focus shifted from a whole population Slovakia-style testing model to a regional approach; namely testing the entire population of specific regions based on tier status. On 21 November 2020, a proposal was made to COVID-19 to offer a community testing programme to everyone over 11 years old in the high prevalence areas of North East, North West, and Yorkshire and the Humber (which all contained local authority areas which had been in Tier 3 (or similar) restrictions for the longest). Again, I was among those who expressed concerns about the proposal, alongside – as far as I can remember – the CMO, not least because there was a lack of support for blanket community testing amongst local authority leaders, who favoured a targeted approach to mass testing, but also because I thought the proposal was impractical because of the sheer scale of testing required and the low likelihood of the required level of compliance. Ultimately, Cabinet Ministers approved a version of the community testing programme which was locally led by Directors of Public Health and much more operationally deliverable.
- 5.17 My team and I were relieved that a more targeted testing proposal was adopted which had the support of local authorities (which as indicated above was crucial to the success of the NHSTT programme). The adopted proposal became the Community Testing Programme (“CTP”) and the procurement which had taken place in anticipation of whole population Slovakia-style testing model was reallocated to the CTP and other use cases such as schools testing. This meant that LFDs were not wasted as a result of this change of testing strategy, though undoubtedly NHSTT’s ability to develop other testing use cases and the UTO was delayed because of the focus on Operation Moonshot in October/November 2020. The scale up of testing services continued to evolve and UTO was rolled out in April 2021, just before I stepped down as Executive Chair. The UTO was based on proposals which NHSTT had made in the autumn 2020 as an alternative to whole population Slovakia-style testing.

B. OPERATIONS

Laboratories

- 5.18 The scaling of laboratory capacity by NHSTT during the pandemic is addressed in the UKHSA's Corporate Statement. That covers much of the necessary detail but to assist the Inquiry, I offer some brief context and personal reflections on this issue.
- 5.19 The UK entered the COVID-19 pandemic with relatively limited diagnostic capacity, which largely consisted of small-scale laboratories that sat within the NHS, Universities or PHE. These laboratories were not connected to each other digitally and were not designed for consumers to access their services directly. I do not know why this was the case, but there were also no contingency plans in place prior to January 2020 that contemplated the scaling of mass citizen testing and laboratory capacity in the event of a national pandemic. The UK was not alone in this situation though. However, many Asian countries appeared to have operational blueprints and systems in place that enabled them to stand up a national citizen testing service very quickly and at scale at the outset of the pandemic.
- 5.20 The spread of COVID-19 was exponential and unprecedented. This meant that operationally, the demand for testing would also grow and decline exponentially and required us to build a system from a standing start that had surge capability in laboratory capacity, distribution capability and stock levels that all needed to cope with the sudden and rapid growth in testing demand, followed by a similarly rapid decline. With no prior history and data on COVID-19, for the first year this had to be forecast with very limited data, and we were not able to respond fast enough when infection rates surged, including when the university and school terms started in September 2020.
- 5.21 NHSTT sought to respond to the demand for testing by increasing laboratory capacity to enable high throughput testing in the UK. This was done by:
- a. Expanding the Lighthouse Laboratory network over the summer of 2020 with the addition of further sites in England and Wales. Slide 10 in the exhibited PHE and NHS testing daily status report shows the increase in testing capacity from different streams, for example on 28 July [DH7/11 INQ000223445] and 28 October [DH7/12 INQ000223446];

- b. Procuring short-term PCR processing capacity from private 'surge' providers to supplement core capability available from the Lighthouse Laboratory network during exceptional times, when demand for testing rapidly outstripped laboratory capacity (such as during Winter 2020). While these private surge providers provided much needed temporary capacity, they also had downsides as they were more expensive than the Lighthouse Laboratories, were more difficult to oversee and manage, often had lower quality metrics and were slower in processing tests because the samples had to travel further (initially overseas) to the laboratories; and
- c. Supporting the build of the high-throughput Rosalind Franklin Mega Laboratory at Leamington Spa, which was the last laboratory to join the Lighthouse network on 13 July 2021, and which had the ability to process a high number of tests per day, at a lower cost per test.

5.22 It was the frustrations with the private surge suppliers (as set out above at paragraph 5.21(b)) and the lack of resilience to manage the volatile nature of a pandemic that provided some of the inspiration behind the design and building of the Rosalind Franklin Laboratory. Once opened, this was the only Lighthouse Laboratory owned and operated by NHSTT. It was designed to be easily configurable so it could add and remove "production lanes" that could each process around 25,000 tests per day. These production lanes were more akin to a car manufacturing production line than a university or NHS laboratory, and each lane contained a series of connected positive pressure rooms with robotic processing equipment that performed the end-to-end diagnostics on Covid-19 PCR tests. The laboratory was also designed to be configurable post-pandemic for other large scale population health screening so that its capability could be maintained in peacetime.

5.23 On 31 October 2020, the UK's laboratory PCR testing capacity reached the UK government's target of processing 500,000 tests per day. Following continued efforts by NHSTT to further expand diagnostic capacity as requested by the government, the UK had expanded its theoretical laboratory PCR testing capacity to 800,000 tests per day by January 2021.

5.24 Despite achieving the testing capacity targets set by the government, there was considerable criticism during the pandemic that if NHSTT had made greater use of

available academic laboratories when needed, it would not have been necessary to use private sector labs to meet the demand for PCR tests during surge periods. I wish that this were the case, but practically it was not possible to scale at the speed required via existing NHS, PHE or university laboratories. A university or hospital laboratory that in peacetime may conduct a few hundred PCR tests a day, did not have the space, systems or processes to conduct 30,000 tests per day within a couple of months and this was the brief that was given to and urgently implemented by each Lighthouse Laboratory, supported by private surge providers when required.

5.25 The decision to limit the use of academic laboratories to those that could process a certain amount of tests per day, was not made because PCR testing is inherently difficult. It was an operational problem. An academic laboratory, focused on research, would be able to carry out different types of PCR tests but would have a small upper limit to the number of any particular type of test it could conduct per day (up to circa 300), would be a manual, bespoke operation, small in physical footprint and heavy in expertise. On the other hand, a 30,000 test per day laboratory that is only conducting COVID-19 PCR tests is a highly automated factory with bulk handling of 30,000 packages each day feeding robotic machines that batch process thousands of tests at a time. Existing laboratories were also not digitally connected such that data could flow easily between them and onwards to GP records and a national database. It was for these reasons that connecting and scaling thousands of very small-scale laboratories was considered to likely be substantially slower and more expensive than commissioning the opening of a small number of very large-scale Lighthouse Laboratories. The capacity of testing that NHSTT created in 2020 was second only to Denmark in the number of COVID-19 tests/per head of population, demonstrating that this approach was an effective way of very quickly scaling capacity.

5.26 As outlined above, there were several times during the pandemic where we did not have sufficient testing capacity to meet the needs of the various use cases the government wanted to implement. This occurred in Spring 2020, when testing was restricted to specific use cases only, and in September 2020 when swifter and more unified government decision-making on laboratory and testing procurement over the preceding months could have enabled a larger diagnostic capacity to have been available by the time schools and universities commenced a new term in September 2020. However, the total volume of tests and laboratory capacity required in any given week was highly dependent on the current infection rate, which was impacted by broader public policy decisions, such as the length and severity of non-pharmaceutical

interventions, such as lockdowns and by the development of variants of the disease itself. Whilst it is always hard to estimate what would have happened if different policy decisions had been taken, I think it is likely that if the government had taken a more risk averse approach and not delayed implementing the second lockdown after data showed that infection rates were rising exponentially in September 2020, the required testing volumes and laboratory capacity would have been lower and demand may not have outstripped supply as much as it did at the time.

- 5.27 By Christmas 2020, NHSTT had opened additional Lighthouse Laboratories and increased PCR testing capacity. LFDs were also in the early stages of deployment, which gave the service a greater ability to respond to the next surge in infection rates. Whilst turnaround times for PCR tests extended over the Christmas holidays as infection rates rose [DH7/13 INQ000566412; DH7/14 INQ000566416], they did not reach the low levels of performance of September 2020 [DH7/15 INQ000566415] and the substantial roll out of testing sites meant that journey times to get a test remained more acceptable. It is important to reflect here that test turnaround times and capacity utilisation were inherently linked during the pandemic. The turnaround time from taking a test to receiving the results was longer during periods when capacity utilisation was very high and meant that the efficacy of the test and trace system was reduced at these times. It was much easier to deliver quick turnaround times with low-capacity utilisation, but operationally it was a challenge to balance the cost of increasing total capacity, with capacity utilisation rates and turnaround times due to the volatility of infection rates and the demand for PCR testing.
- 5.28 Nonetheless, because government policy for testing was evolving almost as fast as the disease itself, the use cases for testing were expanding very fast as well. This meant that, as I have already mentioned above, whilst one Minister was asking NHSTT to start to reducing testing and laboratory capacity due to the forthcoming rollout of vaccines in December 2020, other Ministers and the Prime Minister were demanding NHSTT scale up testing to schools and to the hauliers in Dover. At this time, new testing technologies were also being developed, evaluated and procured. This meant that forecasting of both supply and demand was inherently challenging and designing a testing infrastructure with surge capability in mind is essential for future pandemics.
- 5.29 Testing and tracing is a well understood public health intervention for infectious diseases. Some of the challenges NHSTT faced in scaling up testing capacity between

May 2020 and October 2020, as set out above, could likely have been mitigated if the resources and top-down ministerial direction for the creation of NHSTT had been deployed several months earlier than May 2020. If the National Testing Programme had been started in January 2020 when the NHS began planning to expand critical care capacity and ventilator beds, the government might not have had to ration access to testing for as long as was necessary during the summer of 2020. With the benefit of hindsight, starting NHSTT right at the beginning of the pandemic could have also alleviated the lack of testing capacity in the late spring of 2020 when testing was restricted to specific use cases and contact tracing was paused.

- 5.30 Additionally, and again with the benefit of hindsight, if the government had set out in January 2020 to build a flexible testing platform that was designed to meet the needs of different testing use cases, rather than focusing solely on the scale of testing, NHSTT would have been able to adapt faster and more effectively as the pandemic developed.
- 5.31 The Inquiry has asked about the testing operations provided by the Immensa Health Clinic Ltd in Wolverhampton, the timing of the decision to suspend their testing operations on 15 October 2021, and any involvement I had in the Serious Untoward Incident Investigation (“SUI”) that followed. As the Inquiry will be aware from the content of the SUI report itself, which is publicly available, confirmation about an issue over PCR processing in a Wolverhampton lab arose in October 2021. I left NHSTT in May 2021. In the circumstances, I don’t believe there is anything I can usefully add by way of comment.

Accessibility and availability of tests

- 5.32 There is a danger in focussing all testing policy and operations on the size of the testing operation and laboratories only. The availability and accessibility of tests is as important, and enabling those most at risk of harm to access testing should be an important consideration in the building of any testing and tracing system. NHSTT was extremely mindful of the need to make the service as accessible as possible and worked hard throughout the pandemic to continually improve the service for the citizens who most needed it. I would direct the Inquiry to the UKHSA Corporate Statement for further detail, to which I have nothing more to add.

5.33 With the benefit of hindsight, my view is that if the government had initially focussed even more on reaching the most vulnerable and those most likely to be harmed by the disease (instead of the headline numbers of tests available and tests conducted per day), we would likely have saved more lives and reduced the need for lockdowns further. JBC's weekly analysis consistently showed that certain communities, categories of workers and geographical areas had higher rates of infection and mortality, although this fluctuated to an extent due the longevity of the pandemic and incidences of geographical local outbreaks or surges in infection rates. For example, the weekly JBC LAC Gold Slide packs in the late summer and autumn of 2020 consistently showed higher rates of infection amongst non-white ethnic minority groups, including but not limited to, the Pakistani and Indian populations (Asian or British Asian). Geographically, areas of North West England had the highest rates of infection at this time [DH7/16 INQ000000000; DH7/17 INQ000000000]. Additionally, the work undertaken by Professor Kevin Fenton in reviewing the impact of the pandemic on Black, Asian and Minority Ethnic Communities (“**BAME**”) illustrated that the COVID-19 pandemic disproportionately affected lower income, multi-generational households in parts of the country which had the lowest deciles for multiple deprivation. However, while NHSTT engaged with underserved communities and groups (as set out in the UKHSA corporate statement), a large part of the national public narrative and policy targets set for NHSTT by the Government were about overall national targets, targets for numbers of tests, turnaround times, and median travel times. An early approach that placed greater emphasis on accessibility to testing for the most vulnerable rather than the number of tests would, I believe, have likely been more effective.

Testing sites

5.34 When looking at the operational design and scaling of PCR testing, it is important not to focus solely on the laboratory network. Although testing sites are scientifically less complex than laboratories, they are in fact more operationally complex, especially if the site network needs to be built in a matter of weeks or months. The operational challenges of testing sites range from the design, scaling and physical operating of the sites, to the logistics and supply chain operations needed to ensure that all the appropriate equipment and staff are at the right site, operating in a clinically appropriate way when needed, 7 days per week. Pillar 1 of the NTP relied on existing NHS clinical setting for patients who had been referred by a clinician for testing, whilst

Pillar 2 needed to build testing sites that members of the general public could access COVID-19 testing directly.

5.35 The NTP Pillar 2 testing site network began by focussing on large scale “drive throughs”, followed by PCR home delivery (which launched on 24 April 2020), mobile testing sites that could be deployed daily to different locations (from April 2020), the satellite channel and finally walk-in sites in more urban areas.

5.36 As part of this network, NHSTT established physical testing sites that the public could attend. These were categorised as follows:

- a. **Regional testing sites ('RTS')**. These were drive through sites, ranging from single marquees to larger operations that could facilitate over 40 self-tests at a time. The first RTS was opened prior to my appointment at Boots Nottingham UK HQ in March 2020 and there were 90 RTS in operation at the peak of the pandemic in March 2021.
- b. **Local testing sites ('LTS')**. These were walk through and not drive-through sites. They ranged in size from three to over thirty bays. NHSTT opened the majority of LTS in 2020 with the first pilot site being operational from late May 2020, to address the surges of infection. The LTS network was expanded to over 400 sites by the end of 2020, and by mid-March 2021 this had increased to 513 operational LTS sites to respond to increased demand.
- c. **Mobile testing units ('MTU')**. These consisted of customised vans that had the capacity to administer up to 480 tests per day. MTUs enabled testing sites to be set up quickly to respond to local outbreaks. Between July 2020 and early 2021, 258 vans were available for use, increasing to 500 in the spring of 2021.
- d. **Satellite testing sites ('STS')** were also used as a preventative measure by NHSTT during the pandemic and usually served care homes to prevent large outbreaks amongst the vulnerable and higher risk individuals living in this type of accommodation. Tests were delivered by courier, conducted by care home staff members and then sent back to the laboratory for diagnostics. This enabled NHSTT to supply tests more efficiently and quickly to care homes during the pandemic. The first STS was operational from April 2020.

- 5.37 The different types of physical sites allowed NHSTT to tailor testing to the particular needs of a local area. MTUs allowed great flexibility when testing and were generally used to add capacity to locations where infection rates were surging. LTSs could be established in community hubs to encourage engagement. RTSs were efficient as a large throughput which tended to be placed in suburban areas where users were more likely to own a vehicle.
- 5.38 Between the end of May 2020 and the end of October 2020, NHSTT increased the number of available Pillar 1 (testing for NHS staff and patients) and Pillar 2 (community testing) testing sites from 230 to 593. During this time, the median travel time to a testing site halved from 5.9 miles to 2.9 miles. At the end of April 2021, NHSTT was operating 1,756 testing sites (excluding 500 mobile and satellite testing sites).
- 5.39 I was not involved in the first phase of design of the RTS sites, as these were developed prior to the creation of NHSTT. However, with the benefit of hindsight, the initial drive through sites were inherently more accessible to wealthier households who owned or had access to a vehicle, rather than households who were more likely to be exposed to COVID-19 and at a greater risk of harm. If a testing site network was designed again in a future pandemic, my view is that it would be more beneficial to urgently set up and embed LTS in the communities most likely to be affected by the disease and build a network of diverse sites from there. Although this option would not enable a testing service to scale as quickly as NHSTT did over the first couple of months, it would provide targeted and accessible testing in the early stages of the pandemic to assist in reducing the spread of an infectious pathogen. If clear blueprints were already in place available for potential test sites, distribution networks, systems and process design a new service would be able to scale a testing site network more logically and effectively in the future.

Central vs local approach

- 5.40 The Inquiry has asked me about NHSTT's shift from a centralised approach to a localised approach. In the first few days following my appointment, I spoke to various leaders in the NHS, Public health bodies and Local government including Chris Ham, then Chair of The Kings Fund and Mark Lloyd the then CEO of the Local Government Association. The clear feedback I received was that the current approach was too centralised and local government and local organisations needed to be actively involved if NHSTT were to be effective in establishing a testing and tracing service. As

a result of this, one of my very first decisions, as already mentioned, was the appointment of Tom Riordan, then CEO of Leeds City Council to lead the Contain function and development of the Contain Framework [DH7/18 INQ000563761; DH7/19 INQ000203625], with the express objective of making the service more local.

- 5.41 However, it is a mistake to think that national and local are a trade-off. Both are required for an effective system. I would describe the approach that NHSTT took as a local and national partnership. It was a mixed model, and it was clear that you could not build testing or tracing capacity, or the required digital and data systems of the scale required entirely locally. A national data architecture enabled the production of insight and analysis by the JBC and ensured data flowed quickly to individual NHS patient records. However, as with all public health interventions, effective implementation requires detailed local knowledge and on the ground engagement with communities, the most affected of whom are often marginalised and don't trust either central or local government and yet need to feel part of the process. This was the approach we adopted from May 2020 and is set out in our respective business plans which are exhibited here [DH7/02 INQ000203616; DH7/03 INQ000528315].
- 5.42 As part of the combined local/national approach, NHSTT also participated in the national and regional governance structures established during the pandemic. The Cabinet Office COVID-O (Operations) Committee approved the establishment of the Bronze/Silver/Gold ("**B/S/G**") hierarchy of meetings of the LAC to provide a governance framework where local, regional and national data and other information could be reviewed, and operational decisions on local support and/or control measures could be made.
- 5.43 The B/S/G hierarchy of meetings, which began in June 2020, were based on an established emergency response structure of subsidiarity where decisions are made at the lowest appropriate level, whilst escalating issues requiring decisions at a more senior level. The Bronze LAC was attended by representatives of DHSC, NHSTT and PHE as well as NHSE Regional Directors and Deputy Directors from local Health Protection Teams who had experience of close day to day working at local level. areas. The Silver LAC was chaired by the CMO for England with more senior representatives from DHSC, NHSTT, NHSE and PHE as well as the Cabinet Office. During the period I was Executive Chair of NHSTT, the Gold LAC was chaired by the Secretary of State from DHSC and decided which issues required escalation to the Cabinet Office

COVID-O Committee. I, the NHSTT Chief Medical Advisor and the JBC Director or in my absence a senior officer in NHSTT, attended all Gold LAC, a COVID-O meetings when required.

- 5.44 As NHSTT scaled testing and tracing capacity through the summer of 2020, we also worked as fast as possible to provide local authorities with the data they needed, to provide funds for them to build local action plans, piloted and then rolled out local tracing partnerships and local testing sites. We also engaged increasingly with marginalised communities and groups to design and develop the service to reach those who most needed it, and further information on this is found in the UKHSA corporate statement. With the benefit of hindsight, and with more time for pre preparation, I would put even more effort into this combined local and national system in a future pandemic.

SECTION 6. TRACE

- 6.1 By the time I was appointed to lead the Test and Trace task force, the government had already commissioned DHSC and PHE to build a population scale contact tracing service that combined with testing was to become NHSTT. In my initial meeting with the Prime Minister and Chancellor they were clear that the new national service needed to be launched at the end of May (i.e. in 3 weeks' time). I went on to meet with the Prime Minister weekly during my tenure to discuss testing and tracing. The Chancellor would occasionally attend these meetings but often sent the Chief Secretary to the Treasury instead. My role as Executive Chair in contact tracing was no different to that in the other areas of NHSTT, which was to lead the launch of that service, recruit a permanent team and scale and continually improve the service until a permanent leadership team was appointed.
- 6.2 As with testing, launching and scaling contact tracing involved a very large and distributed workforce, complex technology design, continuous development, operational processes and team-working with many other organisations in both the public and private sectors.

A. POLICY

- 6.3 The development of tracing strategy and policy is outlined in the draft UKHSA's Corporate Statement. Further to that detail, I add the following observations below.

- 6.4 The UK had never envisaged a contact tracing service of the scale that NHSTT was commissioned to build. The system that we built was designed to be as flexible and responsive as possible given the time constraints imposed on us to launch within a few weeks. There was no hard and fast data upon which to base estimates of likely resource requirements which meant that on launch, many of the contact tracers were not utilised.
- 6.5 In May 2020, SAGE concluded that for a TTI system to be effective at least 80% of the contacts of an index case would have to be traced, contacted and then isolated within, ideally, 48 hours and no later than 72 hours [DH7/20 INQ000498548]. That was the target for NHSTT. However, the sheer scale that needed to be built and unpredictability of the course of the disease meant that it took some months to hit the end-to-end target turnaround time (i.e. the time taken from the point of test order to contacts being told to isolate), as the team learnt how to get the best out of digital systems, local expertise and fast growing, flexible national resources.
- 6.6 In peacetime, it would be considered totally unrealistic to create and launch a brand new and never before envisaged national citizen service within 6 months, particularly one which oversaw the creation of a national app using novel code; created virtual call centres that employed circa 26,000 Tier 1 call agents, and between 3,000 and 6,000 Tier 2 NHSP clinical agents at its peak; collaborated with experts in every local authority; and established a complex web based architecture that enabled users to input data, that data to be aggregated, analysed and then made available to all local authorities. Despite these achievements in establishing the contact tracing service, the fact that it was still not fast enough to keep up with the spread of the virus is a lesson to be learned in the importance of pandemic preparedness.
- 6.7 Prior to the COVID-19 pandemic, the UK did not have a scalable contact tracing contingency plan. However, the balance between data privacy and public health for the purposes of contact tracing had been extensively debated upon in many Asian countries post SARS and MERS, with plans and legislation subsequently put in place. For example, public health authorities in South Korea were able to access individual credit card data to track potential contacts. On the other hand, the UK had not conceived the need for a national scale contact tracing service and therefore all discussions about the use of personal data in contact tracing started from scratch during the pandemic.

- 6.8 This was exacerbated by the fact that investment in digital and data infrastructure in public health had been limited, as budgets in PHE had been cut in the 10 years prior to the COVID-19 Pandemic. This meant that there was no existing local to national public health data infrastructure of the scale required that was configurable to meet the demand for contact tracing during the pandemic. It was clear very soon after the launch of NHSTT that CTAS (the contact tracing web platform developed by PHE and launched on 28 May 2020), was not best placed to adapt at the speed and scale required by NHSTT because it had been designed with smaller scale contact tracing in mind.
- 6.9 Likewise, given that there were only 290 trained contact tracers throughout England at the start of the pandemic in March/April 2020, NHSTT was always going to have to rely on external, relatively unskilled contractors on short notice to build and staff a large-scale contact tracing service, whilst simultaneously building the necessary technology in real time as we tackled the pandemic. If there had been a trained public health reservist force embedded in local authorities it would have been substantially easier to scale the tracing capability in the Spring of 2020.
- 6.10 Just as with testing, the performance of the contact tracing service must be seen in the context of broader government decision-making. The UK government's decision to come out of lockdown with relatively high prevalence of the disease in June 2020 and through the Autumn and Winter of 2020 meant that NHSTT's contact tracing systems needed to operate at a substantially higher scale than countries where infection rates were kept much lower through tougher border restrictions and longer lockdowns.

B. OPERATIONS

- 6.11 As with all aspects of NHSTT and set out above, it was clear from May 2020 onwards that the contact tracing service needed to be a combination of a national and local approach. A focus of NHSTT's contact tracing teams from May 2020 to the time I left in May 2021 was balancing and refining the systems and processes to get the best out of a local and national collaboration. Countries such as Germany which operated an entirely local contact tracing service were forced to suspend contact tracing when infection rates surged in the second and third waves, whereas we were able to continue operating because of the combination of local and surgeable national and digital resources.

- 6.12 Local delivery of surge testing and enhanced contact tracing to support local outbreak management were important parts of all local action plans and were used in multiple parts of the country to contain outbreaks. This began in Leicester and was then rolled out to all local authorities. However, managing these initiatives were often made more difficult by non-contiguous institutional boundaries. For example, in Leicester, the NHS boundaries are different from the parliamentary boundaries, which in turn are different from the local authority boundaries. Not one of these administrative boundaries accurately reflected the travel patterns that the population of Leicester and Leicestershire displayed. This made it difficult when planning to implement local lockdowns during the pandemic, as the differing geographical boundaries and competing councillors and ministers did not want 'their' area to be included in the lockdown. Initially, this resulted in some lockdown boundaries running down the middle of an urban street, and these blurred lines made local action planning and delivery extremely complicated.
- 6.13 As with testing, the exponential and unpredictable nature of growth in infections rates meant that operational capacity for contact tracing needed to be capable of surging at extremely short notice. Operationally, contact tracing was even more volatile than testing, and during a surge period in December 2020, NHSTT was tracing record numbers of close contacts [DH7/21 INQ000517411; DH7/22 INQ000520751]. During the pandemic, the only way to manage surge periods without imposing longer lockdowns was to retain substantial spare capacity. Looking ahead, a combination of technology, local leadership and national reserve force capability will be necessary should a future national tracing service be required.

NHS Covid-19 App

- 6.14 The creation and evolution of the NHS COVID-19 App (**"the App"**) is covered in the UKHSA Corporate Statement. I have the following additional observations.
- 6.15 The App was downloaded on 21 million unique mobile devices and used regularly by at least 16.5 million citizens at its peak between its launch in September 2020 and the end of December 2020. Over 30 million downloads were registered overall [DH7/23 INQ000543908]. The use of the App therefore demonstrated that the general public are willing to use digital technology for their personal and public health on a huge scale and under the NHS banner. The majority of the population were willing to scan in when

they visited restaurants, order tests and even self-isolate on the instruction of the App during the pandemic. The combination of functionality meant that the App was able to be smoothly implemented into a user's everyday life. Apps remain regularly used and since the pandemic, the NHS App has expanded its functionality and grown user numbers substantially as it is easy to use, enables individuals to make medical appointments, reorder prescriptions, see test results, participate in communications from various clinicians and manage clinical pathways. However, I believe that we are still scratching at the surface of what could be possible. Whilst it was only for one disease and one test, the App showed that it was technically possible to link all test sites, all laboratories and all UK citizens digitally. This meant that the patient journey was easy to navigate, and data flowed seamlessly end to end for patients, clinicians and ultimately senior national officials and ministers to use appropriately. Replicating this seamless data flow for all health conditions would be transformational for our health and care system and society. It is not something that requires novel technology or ground-breaking research, and in my view should be a priority if we are to improve the performance of our health and social care system.

- 6.16 The development of the Google/Apple COVID19 App during the pandemic also showed that to effectively implement consumer technology in healthcare you need a combination of public health leadership, people with consumer product design skills and collaborative working relationships with private technology partners. At the beginning of the pandemic, PHE only had one of these three critical ingredients, and I worry that as technology moves even faster than a pandemic, UKHSA risks losing the skills and relationships built with the private sector during the pandemic, leaving the UK no better placed to leverage cutting edge consumer technology today than we were in January 2020.
- 6.17 Finally, it is important to recognise the effectiveness of the App in slowing and preventing the spread of COVID-19 during the pandemic. A paper, published in Nature Magazine, examining the epidemiological impact of the App in England and Wales in its first year estimated that that the App's contact tracing function alone averted about 1 million cases during its first year, corresponding to 44,000 hospital cases and 9,600 deaths [DH7/24 INQ000561521].

Public Communications

- 6.18 Communicating what NHSTT was, how to access services and how to follow testing and tracing guidance was an important part of building and operating the new national service. Testing and tracing on their own do not add value unless people change their behaviour so as to break the chains of infection. This means that citizens need to trust that a testing and tracing service is doing the right thing, and that following what are inherently unpleasant instructions is the right thing to do. So, in assessing the effectiveness of NHSTT, you should ask whether or not the service was sufficiently trusted by the public and what we can learn to improve trust in a future testing and tracing service.
- 6.19 Once again, with the benefit of hindsight, I think it's clear that we could have done more and better to build the country's trust in the service. That's not to say that it would ever have been simple. A service that tells people to self-isolate is unlikely to ever be popular, but being highly trusted and respected by all parts of society would improve compliance and therefore the effectiveness of the service.
- 6.20 During the pandemic all of NHSTT's marketing and communication via the media had to be approved by the No. 10 communications team and all spending of marketing money had to be overseen and approved by the Cabinet Office Communications function.
- 6.21 As the pandemic progressed over summer 2020, the communications function at No. 10 increasingly resisted NHSTT requests to communicate directly with the public, despite the poor press coverage that we were receiving, and that the organisation was becoming a 'whipping boy' for others. This was not conducive to building the public's trust in the services we were offering and made it extremely difficult to gain and retain their confidence.
- 6.22 In the summer of 2020, all government communication departments were also told that a restructure was going to occur and that their roles were potentially at risk. This created distrust and uncertainty for the individuals in these comms functions, and uncertainty is always disastrous for organisational changes. This was particularly true for communications staff in DHSC at the time, as they had been working around the clock for months and could not see how they could operate with much smaller teams.

Many of these staff were on short-term secondments from other departments, and feared their home departments would not keep their roles open. To the best of my knowledge, several of the staff left DHSC to return to their permanent jobs following news of the restructure.

- 6.23 With the benefit of hindsight, I should have asked for greater control over communications of NHSTT, just as Dame Kate Bingham attempted to do to the Vaccine Taskforce. A public health body must be able to give an independent, factual based view to the public in a crisis and, in my view, government must allow UKHSA to have its own communications function free from political interference of other government departments so that it can better engage directly with the public as the UK's new health agency. I am not suggesting that there should be no co-ordination across government communications or no oversight from elected Ministers, but UKHSA should have a strong, well-resourced communications function that is able to communicate directly with the British public to deliver on its objective as set by Ministers without needing prior approval from No 10. This was not the situation NHSTT found itself in in 2020.

SECTION 7. ISOLATE

A. ISOLATION GUIDANCE

- 7.1 The role of NHSTT in developing rules, guidance and regulations around isolation and support to individuals who were isolating during the pandemic is addressed in the UKHSA Corporate Statement, which I have read in draft. For completeness, I should add that I have read UKHSA's Module 2 Corporate Statement which also addresses this topic. There is nothing I can usefully add to the content of these statements.
- 7.2 I had no personal role in the development of the guidance and regulations around self-isolation. While NHSTT and NIHP colleagues likely gave advice around these regulations, as a non-clinician this advice would not have gone through me and rightly so. The exception to this was if regulations had an operational impact on NHSTT, and in these circumstances proposals would usually be sent to my office for sign off before being sent onto Ministers. For example, I had some input into the operational connotations of advice on whether a confirmatory PCR test was required after a positive LFD test, because the clinical advice was complex and difficult to translate

into operationally deliverable and understandable workflows. My input on this issue was operational and looked at whether NHSTT had the capacity (e.g. the number of tests required, the right data flows and overall system design) to deliver the proposed confirmatory PCR testing in the time frame required.

B. SUPPORT TO THOSE SELF-ISOLATING

7.3 I became involved in advocating for isolation support after seeing evidence suggesting it would improve the impact of the NHSTT programme and could be funded from the existing NHSTT budget. In the summer of 2020, NHSTT conducted research to understand how communities who were disproportionately affected by COVID-19 were engaging with NHSTT. This included individuals from the most deprived postcodes, asylum seekers, individuals with limited English and low literacy rates, and specific ethnic communities such as Black men and South Asians. The research showed that one of the major barriers that prevented them from engaging with NHSTT was the cost to them and their families of self-isolation. These findings are set out in the UKHSA corporate statement. As a result of the findings, I advocated for what I thought was a sensible policy that would benefit the programme and did not require additional funds. Within NHSTT, Ben Dyson led on the policy for isolation support payments. Initially, we argued that isolation support should operate along the same lines as Jury Service where jurors can claim £64.95 per day for ten days to compensate for loss of earnings. This payment is not means tested. Ministers rejected this proposal, and when self-isolation became mandatory on September 28th 2020, Ministers instead decided to launch the Test and Trace Support Payment Scheme which provided £500 to individuals who were on benefits and were required to isolate. A parallel scheme of discretionary payments was set up at the same time by local authorities to help those outside the welfare system to self-isolate. Both schemes were funded by NHSTT. Ben wrote several papers between September 2020 and January 2021 setting out the rationale for increasing isolation payments and making them non-means tested so that people were more likely to access test and trace. Several papers were submitted to Covid-O setting out options to fund increased isolation payments out of already agreed NHSTT budgets, including in January 2021 **[DH7/25 INQ000575998]**.

7.4 A number of recommendations were made to increase isolation support payments, however, the Treasury, and the Chancellor consistently blocked the recommendations **[DH7/26 INQ000575995; DH7/27 INQ000575996; DH7/28 INQ000575997]**.

- 7.5 We tried various approaches to show the value and impact of self-isolation support payments, including seeking approval to run various trials. However, we never succeeded in getting approval for the overall proposal that Ben Dyson set out in the papers that were submitted to Covid-O.
- 7.6 Isolation is vital to the effectiveness of the test, trace and isolate system. During the pandemic we massively over indexed on testing capacity compared to almost all other countries and there was not enough early focus on supporting the vulnerable to get tested and isolate. If you do not make it easy for people to self-isolate, they will not do it. Initially, there was no support enabling the financially vulnerable to self-isolate where they would lose their income. It is concerning that it took until September 2020 to provide any self-isolation support at all and this only came into play because the government was making self-isolation mandatory. It took several more months before parents whose children had to isolate began receiving support payments so that they were compensated if they had to stay at home to support an isolating child. When compared internationally, there were many countries in which isolation support payments were more generous. In Australia, the government offered a Covid Worker Support Payment of AU\$1,500 (c. £850) to all employed people in the state of Victoria who were losing out on income while adhering to self-isolation requirements, and in Germany, anyone who was required to self-isolate was paid 67% of their normal salary, which was capped at €2,016 per month.
- 7.7 If the UK needed to require citizens to self-isolate in scale again, I would focus less on testing capacity and more on supporting the vulnerable to get tested and to isolate. For me, that is one of the most important policy learnings we should take from NHSTT.
- 7.8 The UK spent proportionately much less than other developed countries enabling disadvantaged people to self-isolate. If we had allocated more of the NHSTT budget to isolation support, I strongly suspect that fewer would have died, and infection rates would have been lower with all the benefits that would have brought. It is complex to work through how to create this benefit on a temporary basis for a novel pandemic but it is vital that this work is undertaken. We know that infectious diseases will always require some form of isolation to break chains of transmission. In my view, an element of pandemic preparedness should involve establishing now what a fair and effective level of isolation support would need to be in a future pandemic.

- 7.9 As stated above, the work undertaken on inequalities by NHSTT is set out in detail in the UKHSA Corporate Statement. Personally, during my tenure as Executive Chair of NHSTT, I held several listening sessions, visited community testing centres, visited regional centres that were the subject of various pilots (e.g. Newham), and attended various virtual conferences to listen to representatives from minority groups who were being adversely affected by the pandemic. It was a core part of the NHSTT business plan to do this and something I championed throughout the organisation to ensure we were making our services as accessible as possible to all. We made many changes to the customer experience as a result of these listening exercises including adding multiple additional languages to the App and the digital journey, using videos and voice as well as text, upweighting community media channels and working with local community leaders and organisations to build trust with disenfranchised communities more and more as the pandemic progressed.

SECTION 8. EVALUATION

- 8.1 Assessing whether NHSTT was successful and/or value for money is a complex and nuanced question. On one level, NHSTT did not singlehandedly enable the UK to leave lockdown and get back to normal life. If that was its objective, it failed. But it is important to understand that NHSTT was one of many tools used to try get the country back to normal. It was never intended to be a single solution and was not designed as such. In fact, nowhere in the world did testing, tracing and isolation on its own enable a country to exit lockdown and return to normal.
- 8.2 Therefore, in evaluating the effectiveness of NHSTT, it is better to ask whether the very substantial amount of money spent was worth it in terms of saving lives, reducing the impact of lockdowns and improving social and economic outcomes. And then looking forward, whether for a new pandemic triggered by the emergence of a novel pathogen, you should build a similar scale testing, tracing and isolating system as had to be done during the COVID-19 pandemic.
- 8.3 I would argue that the most important lesson to learn from NHSTT is that a population scale testing, tracing and isolation system was value for money, did save lives and should, in some form or other, be part of the planning for future pandemics.

- 8.4 There have been several attempts to evaluate the financial, economic and social impact of NHSTT on which I draw to make this conclusion.
- 8.5 The Rùm Model, for example, was a retrospective assessment of test, trace, and isolate. Using this model, in February 2021, NHSTT provided an estimate on the impact of test, trace, and self-isolation on COVID-19 transmission in October 2020. It was a collaboration between NHSTT and analysts within JBC. The Model estimated the proportion of those individuals who would have avoided infection from COVID-19 due to test, trace, and isolate interventions, either on symptom onset or following tracing **[DH7/29 INQ000566414]**.
- 8.6 The model estimates that the combination of testing, tracing and self-isolation in October 2020 resulted in an R reduction of 18% to 33%, compared to a scenario with only social distancing restrictions and no self-isolation. The impact of contact tracing alone reduced the R number by 2% to 5% (with testing and self-isolation accounting for the remaining 16% to 28%). An 18% to 33% reduction corresponds to a reduction in the R number of 0.3 to 0.6, given the official estimate in October 2020 was around 1.2.
- 8.7 The Canna model, published in September 2021 **[DH7/30 INQ000566413]**, used an updated framework to estimate the historical impact of test, trace, and isolate interventions in England, from June 2020 to April 2021. The analysis was developed by the JBC, together with a panel of independent academic advisors. It estimated the impact directly attributable to NHSTT by comparing to a counterfactual scenario, which assumed that all individuals who tested with suspected COVID-19 symptoms would self-isolate without ever taking a test, together with their household contacts.
- 8.8 The study indicated that there were several periods when test, trace, and isolate brought R_t below 1 and this would have prevented exponential growth, bringing incidence rates down, and would have helped to reduce the duration and economic impact of lockdown and other restrictions. These periods were August 2020, November 2020, and January to April 2021.
- 8.9 NHSTT did not reduce infection rates enough to negate the need for a second or third lockdown. There was no test, trace and isolate system that achieved this in the world for COVID-19 without imposing some form of non-pharmaceutical interventions. The nature of the disease meant it spread too fast between asymptomatic individuals for

NHSTT to slow it down without additional interventions such as border restrictions, lockdowns and eventually a vaccine. However, the above models indicate that NHSTT had a significant impact on the R number throughout the pandemic, and reduced the need for the frequent use of other non-pharmaceutical interventions while a vaccine was developed

- 8.10 With the benefit of hindsight there are many things that we would now do differently and looking ahead that we need to learn from. Personally, ensuring that we can learn lessons and give careful thought to what we can realistically do now in anticipation of a future pandemic is vital. Drawing on my experience of being involved in NHSTT, I would like to offer some lessons and thoughts for the future.

SECTION 9. REFLECTIONS AND LESSONS LEARNED

- 9.1 While the work of NHSTT did not negate the need for lockdowns, it enabled the UK to rapidly scale up testing and tracing capacity, and the development and mass deployment of mass testing saved thousands of lives and reduced the time the country spent under lockdown restrictions. As such, it was value for money, and we should have plans to scale mass testing and tracing for future pandemics.
- 9.2 Prior to the COVID-19 pandemic, the UK did not have any plan for mass scaling of testing or tracing services and our public health teams, operating at their normal, non-emergency capacity, were unable to cope with the first wave of COVID-19. I fear the same would be true were another pandemic to hit today. The previous government decided to decommission the Rosalind Franklin laboratory, which had been expressly designed and built to provide surge diagnostics capacity for the future. That was a mistake. Building surge capability for future pandemics and national emergencies is essential.
- 9.3 As set out at paragraphs 5.39 and 7.9 above, much earlier engagement with the most disengaged and vulnerable communities with a system that began by serving them and then scaled up to serve everyone else would, I believe, likely have produced better results. Most fundamental to this, would be a system that made it materially easier for the most vulnerable and marginalised to financially and practically isolate. If we had spent even a tiny fraction of the energy and budget expended on expanding testing on better understanding and supporting the most marginalised to isolate, we would likely

have reduced the harms of the pandemic. We need to do this work in advance of a pandemic, so we are ready on day one next time.

- 9.4 Better working between local and national government and between NHS and public health agencies would have made the service more effective, faster. It took too long to share data and too much time was spent in public and in private arguing about who should play what role. While some ambiguity will inevitably come from a novel pathogen, it should be clear how data will flow through the whole health family and what role each organisation is expecting to play to support each other in an overall pandemic response.
- 9.5 With different government policy decisions NHSTT would have been more effective. For example, if NHSTT had been started earlier or if expert advice to lockdown had been followed in the autumn of 2020 sooner. That is easy to say with the benefit of hindsight but looking forward suggests some important learnings. We need to have a pandemic preparedness plan to scale up mass population testing, tracing and isolation as soon as the early warning signs emerge of a pandemic. That plan needs to be tailored not for COVID-19, but for a novel pathogen. We also need to maintain a baseline capability that makes that scaling up materially faster and easier than it was for NHSTT. Part of that baseline capability should be realistic and extensive exercises that enable key government decision makers to practice making the trade-offs between earlier lockdowns and societal resistance and later lockdowns and larger economic and societal impacts.
- 9.6 More work should be done in peacetime prior to the next pandemic to engage with the public on what they will and will not accept in a pandemic to help inform the guardrails for delivery in the future. The more public policy issues such as the use of personal financial information to speed up contact tracing vs the infringements of privacy have been debated and settled across society the more effective a future testing, tracing and isolating system will be.
- 9.7 The investment made by NHSTT during the pandemic into the end-to-end data infrastructure provided via JBC, PHE, SAGE and wider academia ensured that decision-makers were provided with real-time data and invaluable insight into the scale and rate of COVID-19 infections both geographically and within different demographic groups throughout the United Kingdom. This infrastructure should be maintained and kept current, so that in the event of a future outbreak, the right people have immediate

access to accurate data and data systems and can then deploy appropriate and timely mechanisms to respond to localised outbreaks.

- 9.8 No matter how much preplanning is done and/or stockpiles of equipment laid down, a novel pathogen will almost certainly require different testing regimes and tracing pathways. This means that a new service will need to be designed, developed, procured and operated live during the next pandemic.
- 9.9 I have mentioned MACA above. The military deliver the capacity to put a substantial physical presence 'on the ground' in an emergency. However, inherently that on its own does not provide a sustainable solution behind an immediate response, as at least some of the skills needed to build a public health service are those held outside of the military.
- 9.10 To harness the appropriate skills to scale quickly, the UK should build and maintain a public health reservist resource – with core public health skills like contact tracing and more corporate skills such as programme management and consumer digital design and development – who are trained and ready to respond when needed.
- 9.11 There are two models that should be explored. The first is an extension of the military reservist model, where civilians would train and occasionally be deployed internationally to support public health programs to contain major infectious disease outbreaks. Exercises that rehearse contingency plans for future pandemics need to be treated with the same seriousness and level of resource as military exercises rehearsing other major national risks.
- 9.12 The second is an extension of the GCO, who provided outstanding commercial support to NHSTT. This would involve the government building and maintain a pool of accredited experts in key operational functions such as programme management and digital product design who can be posted to full time roles across the public sector in peacetime but are available for immediate deployment elsewhere in national emergencies.
- 9.13 The government should also explore existing logistics, infrastructure and other networks that might be 'co-opted' during a pandemic. In any emergency the fastest way to respond is always to repurpose existing infrastructure, systems and processes.

Therefore, future pandemic preparedness plans should consider much more broadly than before what private sector and public sector assets should be including in building a testing and tracing service in a future pandemic. For example, being clear how postal networks such as Royal Mail and Amazon should be deployed, how university laboratories could be integrated into the NHS and what retailer capabilities should be integrated should all be worked through as part of pandemic preparedness plans and could also be extremely valuable in other scenarios on the national risk register.

- 9.14 Unless this resource is developed during non-emergency times, the UK will again find itself in the position of having to rapidly recruit a vast workforce from a standing start, which takes too long to scale and is more costly. Developing a trained, accredited group of experts in these areas, who can be deployed across Local and National government in an emergency would enable a faster and more efficient response not just for a pandemic but for any large-scale emergency that required programme management, technology and digital development skills.
- 9.15 The UK should also recognise that a combination of public and private expertise, properly procured and recruited, deliver better outcomes in response to national challenges. The size of the team needed for NHSTT's work would not be proportionate to fund during non-emergency times. There is a risk that the vilification of consultants who worked on the UK's COVID-19 response will make it harder to build such a diverse and talented team in response to future emergencies. The UK therefore needs to maintain up to date commercial frameworks, which enable consultants from the private sector to be rapidly onboarded in a crisis and ensure that this is done in a way that gives the public confidence in their involvement. Moving forward, UKHSA should maintain collaborative relationships with the private sector and academic sector to foster the sort of innovative culture that will be needed in a future crisis.
- 9.16 When I first started in May 2020, it seemed to me that some colleagues in PHE were nervous of the private sector, including being cautious about building strategic partnerships with the commercial diagnostics sector. Relationships with academia in, for instance, modelling, statistics, behavioural science, and data science generally, did not appear to me to be as broad outside public health as were needed. I know that UKHSA is working hard to build skills and strategies to prevent this happening in the future, but without conscious government encouragement and funding I fear that inevitably UKHSA will become isolated again. The UK government should ensure maintaining collaborative relationships with the commercial diagnostics sector and

broad academic institutions beyond public health (in statistics, data analytics, behavioural science etc) is a stated priority for UKHSA going forward and appropriately funded.

- 9.17 In a crisis of the scale of a pandemic, government's and society's risk appetite fundamentally changes. We are all willing to spend money and try new approaches in order to halt the pandemic and the harms it brings to health, wellbeing and our way of life. This means that pandemic response needs a higher risk, more innovative approach than peacetime public service provision. Creating and maintaining that culture of innovation in UKHSA is a hugely important component of pandemic preparedness and likely to be dependent on continued collaborative working between the public sector, private sector and academia; clear objective setting from government and active recruitment from diverse backgrounds into UKHSA in peacetime. Much in the same way that the government is looking to the Advanced Research and Invention Agency ("**ARIA**") to develop innovative defense solutions, UKHSA should have a clear brief to develop innovative health protection solutions.
- 9.18 The UK was substantially disadvantaged in the early months of the pandemic when starting to scale testing because we lacked a domestic diagnostics industry. In the autumn of 2020, the lack of a domestic LFD manufacturing capability meant that we were totally reliant on Chinese LFD manufacturing. The UK government should designate diagnostics as critical national infrastructure (in keeping with a pandemic being the number one risk on the national risk register) and ensure the UK maintains capability in the sector to develop, manufacture, and process clinical diagnostics.
- 9.19 Finally, the machinery of government – national, regional and local – made decision making in a crisis harder, not easier. The overlapping but not identical geographies of local government (and therefore Local resilience Forums); Members of Parliament, Regional Mayors and NHS Integrated Care systems meant that far too much time was spent negotiating about geography. As detailed above, conflicting instructions I received from different ministers over procurement slowed progress substantially. I appreciate that the Inquiry has already considered government decision making in Module 2, but it would be remiss of me not to state how the lack of clear centralised decision making by ministers and pre agreed data sharing and collaboration protocols across the machinery of government made the operational challenge of building NHSTT harder. I appreciate the huge complexities inherent in navigating a crisis of the proportions of a pandemic, but my experience is that the larger and more complex

the problem, the more important it is that there are clear lines of accountability, easy flows of data and clear and swift decision-making processes.

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.

Signed:

Personal Data

Dated: 9 April 2025