National Audit Office

REPORT

Investigation into the UK Health Security Agency's health security campus programme

UK Health Security Agency

SESSION 2023-24
28 FEBRUARY 2024
HC 553

We are the UK's independent public spending watchdog.

We support Parliament in holding government to account and we help improve public services through our high-quality audits.

The National Audit Office (NAO) scrutinises public spending for Parliament and is independent of government and the civil service. We help Parliament hold government to account and we use our insights to help people who manage and govern public bodies improve public services.

The Comptroller and Auditor General (C&AG), Gareth Davies, is an Officer of the House of Commons and leads the NAO. We audit the financial accounts of departments and other public bodies. We also examine and report on the value for money of how public money has been spent.

In 2022, the NAO's work led to a positive financial impact through reduced costs, improved service delivery, or other benefits to citizens, of £572 million.

National Audit Office

Investigation into the UK Health Security Agency's health security campus programme

UK Health Security Agency

Report by the Comptroller and Auditor General

Ordered by the House of Commons
to be printed on 27 February 2024

This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act

Gareth Davies
Comptroller and Auditor General
National Audit Office

20 February 2024

HC 553 | £10.00

Key facts

£400mn

amount UK Health Security Agency (UKHSA) and its predecessors have spent on the health security campus programme (the programme) at Harlow up to the end of October 2023

£530mn

Public Health England's (PHE's) initial estimated cost for the whole programme in 2015. PHE revised this figure to £888 million later in 2015 (both amounts are in 2015 prices)

£3.2bn

UKHSA's total estimated cost of the programme in 2023

2006	year that the Health Protection Agency (HPA) first identified the need for investment in facilities at Porton Down
2017	year that PHE purchased the site at Harlow
2021	PHE's initial estimated completion date for the programme
2036	UKHSA's current estimate for the earliest date by which the site could be fully operational, if the programme remains at Harlow
3	number of business cases produced by PHE and UKHSA so far, with the programme still to receive full programme approval

What this investigation is about

UKHSA's health security campus programme

1 The UK Health Security Agency's (UKHSA's) health security campus programme (the programme) is a long-running programme that aims to enhance and replace UKHSA infrastructure, most importantly its highest containment laboratories, which are essential for protecting the nation against potentially highly infectious diseases. These laboratories detect and study the most dangerous pathogens, including Ebola and Lassa fever, and more recently COVID-19. Existing UKHSA infrastructure at sites in Porton Down (Wiltshire) and Colindale (North London) are nearing the end of their operational life and, unless properly replaced, the UK would lose this capability.

2 The programme was initially established by the Health Protection Agency (HPA), a non-departmental public body that was superseded in 2013 by Public Health England (PHE). In 2021, the government established UKHSA to replace PHE. As part of that transfer of responsibilities from PHE, UKHSA took over the management of the programme. UKHSA is an executive agency of the Department of Health & Social Care (DHSC), as was PHE.[1]

3 HM Treasury approved an outline business case for the programme in 2015, which estimated the total programme cost at just over £500 million and identified a GlaxoSmithKline site in Harlow (Essex) as the preferred site for new facilities, including the highest containment laboratories. PHE purchased that site for £30 million in 2017. Since then, however, the programme has not received full business case approval. Total estimated costs have increased significantly, and doubts have emerged as to whether the Harlow site will be utilised, with DHSC ministers asking UKHSA to consider whether replacing infrastructure at existing sites, including at Porton Down, is a viable alternative option. While full approval of a programme business case is yet to be given, the programme has spent just over £400 million, with the bulk of this spending being on design and construction works.

1 The Department of Health became the Department of Health & Social Care in 2018. For ease of reading, we refer to DHSC throughout.

4 The programme sits on the Government Major Projects Portfolio (GMPP), which comprises the largest, most innovative and highest-risk projects and programmes delivered by government.[2] In its published reports, the Infrastructure and Projects Authority (IPA) recorded an 'amber' rating for the programme in its early years. In 2021-22 this was downgraded to a 'red' rating, meaning that it regarded successful delivery of the programme as unachievable, with major issues needing resolving.[3] We conducted preliminary discussions with UKHSA in spring 2023 and were told that a future decision on the programme was expected by ministers over summer 2023. When it became apparent that decision had been delayed until the end of 2023, we decided to investigate the issue in detail to understand the causes for delays in the programme.

Our scope

5 Our report sets out information on key facts and decision points for the programme. It does not seek to examine and report on the overall value for money of the programme but considers key risks to manage. We look at:

- the early history of the programme including the case for change (Part One);
- the causes of delays in the programme so far (Part Two); and
- what has been achieved at the Harlow site (Part Three).

2 The programme was initially called the PHE science hub and is listed as such in the IPA's GMPP reports. For ease of reference, we refer to the current programme name, the health security campus programme, throughout the report.

3 The IPA states that an 'amber' rating means that successful delivery is feasible, and, while significant issues already exist, they appear resolvable. An 'amber/red' rating means that successful delivery is in doubt, with risks or issues in key areas. A 'red' rating means that its successful delivery appears to be unachievable.

Summary

Key findings

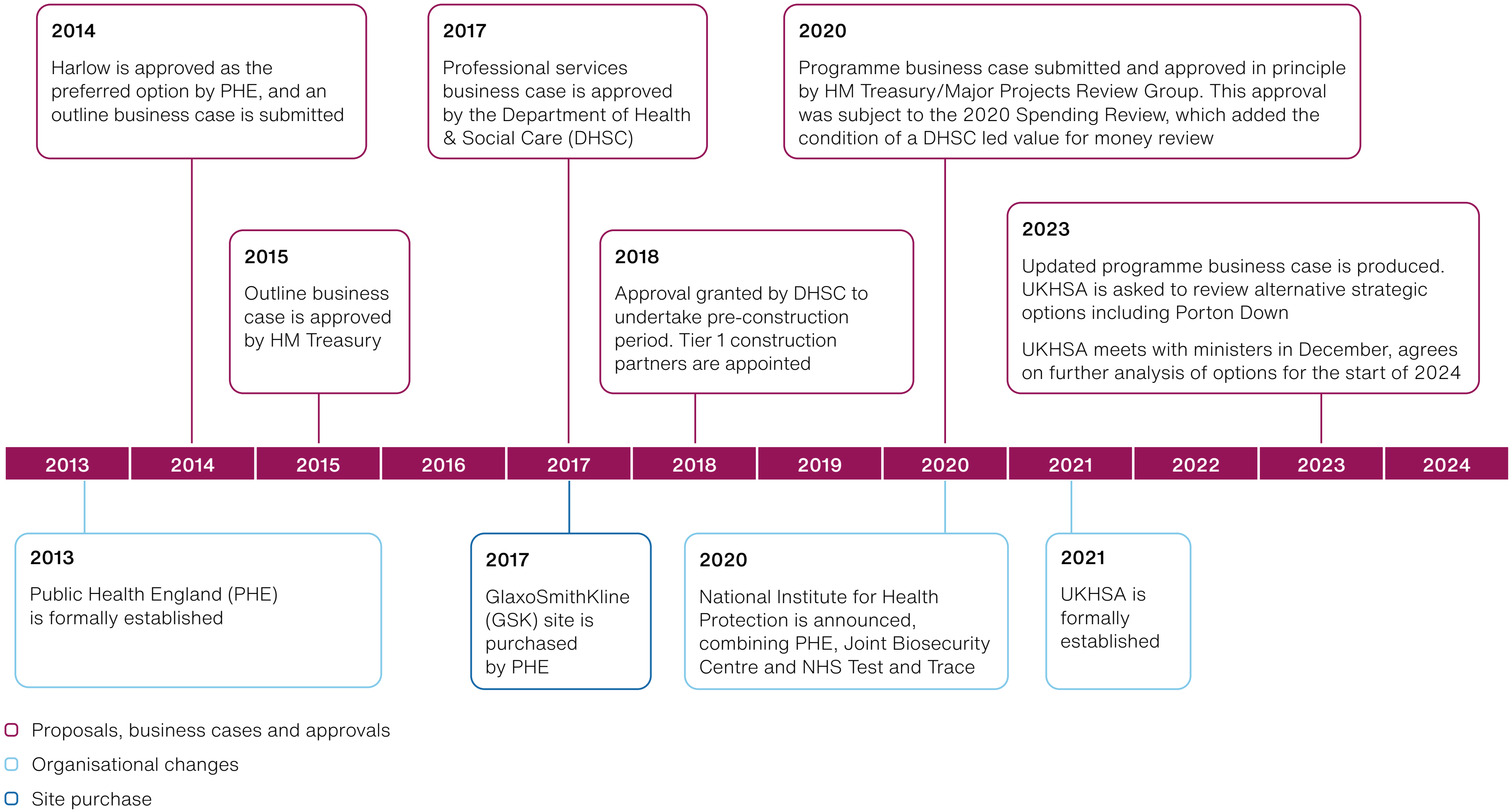
6 **The HPA identified the need to replace its highest containment laboratories at Porton Down as far back as 2006.** These laboratories are essential for protecting the nation against potentially highly infectious diseases and include facilities where scientists work to identify, study and respond to the most dangerous pathogens in the world, including Ebola, Lassa fever, and more recently COVID-19. The majority of facilities at Porton Down are over 55 years old. This can present challenges with respect to meeting the standards required by licensing bodies such as the Health and Safety Executive, which can result in increasing operational and maintenance costs for these buildings. In the last decade, these highest containment laboratories have been working with at least one known issue for 50% to 60% of the time, although this largely had no impact on service or health and safety. UKHSA acknowledges that these increasing periods of downtime present a significant but managed risk to public health (paragraphs 1.5, 1.6 and 2.9).

7 **In 2015, HM Treasury approved PHE's outline business case requesting investment of £530 million to create a new national integrated hub for public health science at a site in Harlow.** The funding was to be used to purchase and adapt a site in Harlow then owned by GlaxoSmithKline (GSK) and to relocate the highest containment laboratories and workforce from sites in Colindale and Porton Down (**Figure 1** overleaf). Harlow was PHE's preferred option because the GSK site had space to co-locate PHE's existing facilities and headquarters, and the location in the London-Cambridge corridor would provide good access to academic knowledge and skills, making staff recruitment easier. It was also felt that developing a new site and then transitioning to it would provide the greatest operational continuity and resilience. PHE assessed that this option would involve lower construction costs compared with developing existing sites as the existing GSK facilities could be adapted, and set out a programme timeline to completion by 2021 (paragraphs 1.9 to 1.12, 2.2, 2.5 and 2.15 and Figure 8).

Figure 1

Major events for the UK Health Security Agency's (UKHSA's) health security campus programme from 2013 to 2024

There have been multiple business cases produced and approved for the campus programme, in addition to changes to the organisation responsible for the programme since 2013



Notes

1 HM Treasury guidance requires that programmes must have a programme business case. The business case process for a project is divided into three stages: a strategic outline case, an outline business case (OBC) and a full business case (FBC).

2 The professional services business case relates to the procurement of specialist services to support design and business change that the organisation could not deliver in house.

3 The Major Projects Review Group is a panel that provides scrutiny of proposals to HM Treasury and Cabinet Office to support advice to ministers ahead of an approval decision.

Source: National Audit Office analysis of UK Health Security Agency documentation

8 **DHSC gave approval to PHE in 2017 to purchase the Harlow site from GSK for £30 million.** Following on from the outline business case, PHE produced a business case to support the £30 million purchase of the Harlow site, and this was approved by DHSC in line with HM Treasury guidance for an investment of this value. Four main contracts were let in 2018 to three construction suppliers following the site acquisition. Since then, however, the programme is yet to receive full business case approval, and there is no clear decision on whether the programme should continue at Harlow. DHSC ministers have asked UKHSA to consider whether investing at existing sites, starting with Porton Down, is a viable alternative option (paragraphs 2.8, 2.12, 2.22 and 3.4)**.**

9 **PHE/UKHSA has refined its options appraisals for the programme in recent years, on each occasion concluding that Harlow is the best value for money option.** With agreement from DHSC and HM Treasury, and in line with relevant guidance, PHE produced a programme business case in 2020, which, as with the 2015 outline business case, compared the plan for Harlow with the option of switching the programme to Porton Down. PHE concluded, however, that Harlow remained the best value option, with an estimated cost of £2 billion at that point. HM Treasury approved that business case in principle, following the advice of the Major Projects Review Group, but, as part of the 2020 Spending Review, asked for a further study to be conducted in 2021 to compare the Harlow and Porton Down options. This study reiterated that Harlow offered the best value for money, but the creation of UKHSA in October 2021 led to a further re-assessment of the options. In December 2021, the then Secretary of State supported the continued development at Harlow and UKHSA's new Executive Committee endorsed the Harlow option in autumn 2022. This led to UKHSA producing a further programme business case in 2023, which again assessed that Harlow was the best option. It concluded, however, that it could not be built there within the £2 billion that HM Treasury had previously indicated it was willing to fund and that DHSC want to stick to (paragraphs 1.7, 2.7, 2.17, 2.20 and 2.22 and Figure 4).

10 **UKHSA's most recent cost estimate for the programme in Harlow has risen to £3.2 billion, an increase of £2.7 billion, or over 500%, from PHE's initial estimate in the outline business case.** The initial cost estimate in 2015 was £530 million (in 2015 prices, and excluding any assessment of potential inflation, contingency costs, or VAT liabilities), which HM Treasury approved. By 2020, this cost estimate had increased to £2 billion with many contributing factors, of which the key drivers included a maturing risk analysis (£248 million), increased estimation accuracy (£183 million), and additional irrecoverable VAT (£174 million). By 2023, as a result of further delays and with rising inflation, the estimated cost had risen again to £3.2 billion. UKHSA assesses that it could construct new high containment and other bioscience facilities at Porton Down within the £2 billion envelope, but this would not factor in the additional costs required to further maintain and modernise the Porton Down and Colindale sites, which would require a separate business case (paragraphs 2.12, 2.15, 2.17, 2.18 and 2.22 and Figures 6 and 8).

11 The current absolute benefit–cost ratio for the programme is marginal but there are significant potential benefits that are not included. UKHSA's most recent assessment, in 2023, was that the benefit–cost ratio for Harlow was 1.02, meaning that the benefits only just outweigh the costs. Porton Down has a ratio of 0.86, meaning that the costs outweigh the benefits. UKHSA assesses that the main benefits of both are the delivery of new and enhanced facilities with updated laboratories and improved capabilities for UKHSA, but in addition to this Harlow is seen to represent a quicker way to realise benefits. Both assessments of benefits have potentially significant non-monetised benefits that are not included, for example, the fiscal transfer costs that could be averted as a result of mitigating a future pandemic (paragraphs 2.10 and 2.11 and Figure 5).

12 UKHSA's current assessment is that, if the programme remains in Harlow, at best that site will become fully operational in 2036, 15 years later than the initial timeline. When the initial outline business case was put together in 2014, PHE's timeline suggested that the programme would be completed by 2021. Delays to the programme due to uncertainty over the scope, location, costs and a lack of funding now mean that the best-case scenario might see Harlow become fully operational in 2036. Switching the programme to focus on maintaining and modernising Porton Down and Colindale could lead to further delays as design work would largely need to be reset and key construction contracts would have to be reprocured (paragraphs 2.2, 2.4, 3.3 and 3.6 and Figure 3).

Progress at Harlow

13 UKHSA, and its predecessors, have spent just over £400 million on the programme at Harlow up to the end of October 2023. This is around 75% of the initial cost estimate that was approved by HM Treasury in 2015. The largest elements of that spend have been on design, revenue, project/programme support and management, and construction costs, at £91 million, £89 million, £76 million and £66 million respectively, and the £30 million that was spent on acquiring the site. The majority of these costs would be written off if the programme elects to pivot to Porton Down, though some value would be recuperated through the sale of the site and from existing design work (paragraphs 3.2 and 3.3 and Figures 10 and 11).

14 **UKHSA suspended all its main construction suppliers in 2022, after DHSC, in agreement with UKHSA and HM Treasury, reallocated funding to other departmental priorities amidst continuing uncertainty as to the preferred location for the programme.** Three main suppliers were appointed in 2018, tasked with completing enabling and design works before moving on to construction across the site. All three have completed a significant proportion of enabling works at Harlow alongside significant design work. In March 2022, amidst continuing uncertainty over the preferred location for the programme, DHSC agreed with HM Treasury and UKHSA to reallocate funding to other departmental priorities, as part of the Living with COVID-19 strategy. Consequently, UKHSA suspended contracts with its suppliers at a cost of over £2 million, and has not been in a position to remobilise them since. Between March 2022 and October 2023, the programme spent £2 million on running costs for the Harlow site, including £1 million on security. UKHSA has asked suppliers to continue to provide some advice, but they are all contractually free to walk away from the programme. With continued uncertainty around the programme, a key risk that UKHSA is currently bearing is that key suppliers do leave the programme or there is a failure in the construction supply chain (paragraphs 2.9, 2.22 and 3.4 to 3.6).

Concluding remarks

15 Replacing and modernising UKHSA's facilities through the programme is of crucial importance to ensure the UK has the capabilities to identify, study and respond to the most dangerous pathogens in the world. Yet the programme still has no clear decision on where it should be located, despite a site having been purchased in Harlow back in 2017 with an original timeline that would have seen the new site fully operational by 2021. The government is committed to the programme but has not yet made a decision on the programme's location. Over six years on from purchasing the Harlow site, very little progress has been made and just over £400 million has been spent against an initial total cost estimate of just over £500 million. Revised timelines show that, at best, the programme might be fully operational in Harlow by 2036.

16 PHE's original estimate of the programme cost was plainly wrong, and the full implications emerging from design development, as well as the inclusion of contingencies, VAT and inflation, led to significant cost increases through to the programme business case in 2020, which was approved in principle by HM Treasury. The latest total programme cost estimate as of the 2023 business case is £3.2 billion, with changes to the scope and delays to the timetable, with an ensuing impact on inflation, contributing significantly to pushing up costs. We have seen similar challenges in other major government programmes, where decisions to proceed were not accompanied by sufficiently robust and realistic assessments of affordability.

17 Since 2022, UKHSA has suspended all main construction suppliers on the programme, and the programme has essentially stopped. UKHSA has been asked repeatedly by HM Treasury, DHSC and relevant ministers to re-evaluate whether Harlow is the best value for money option. It has consistently concluded that it is, but that it is no longer deliverable for the £2 billion the programme estimated it would cost in 2020. There needs to be clarity between all parties as to the way forward on this programme otherwise further delays and increases to costs are inevitable.

18 DHSC considers that delays to the programme have not affected the UK's resilience to dangerous diseases in the short-term, as UKHSA continues to maintain and manage risks at both the Porton Down and Colindale sites. In our view, as things stand, the UK's future resilience to dangerous diseases and value for taxpayers' money are both being undermined by failures in decision-making for a key part of the national infrastructure.