

# Cost Over-runs, Funding Problems and Delays on Guy's Hospital Phase III Development



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. The Report discusses issues which are the subject of on-going litigation, and therefore does not attribute responsibility for events which occurred. The report documents the changes in costs and reports on the delays to which the scheme was subject. The report also examines the impact of the cost increases and delays on the funding of the project.

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National Audit Office  
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## Cost Over-runs, Funding Problems and Delays on Guy's Hospital Phase III Development

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## Executive summary

**1** The development of Guy's Hospital Phase III was approved in principle by the Treasury in December 1986 at a cost of £35.5 million, and was planned to be completed in December 1993. In 1989, the Department of Health approved a budget cost figure for the project of £83.1 million. The development was finally completed in April 1997, and the latest cost estimate is £151.8 million plus £8.1 million for modifications required to reflect the changed use of the building following the Tomlinson report on "The Inquiry into London's Health Service, Medical Education and Research". There is currently a £26.8 million funding shortfall, which has been mainly covered by EFL brokerage of £26.4 million.

**2** The Phase III project is the final part of a rebuilding programme for Guy's Hospital begun in the early 1950s. Phase III, now known as Thomas Guy House, is designed to house state of the art inpatient, outpatient and support facilities, as well as research and teaching facilities for 40 clinical and academic departments. The planned use of the building has been affected by the reviews of health care practice in London and the impact of the establishment and merger of trusts as part of NHS reforms. It is now estimated that about 75 per cent of the space in Thomas Guy House will be used as originally intended. The remainder is being modified to enable Guy's Hospital to provide a "Planned Care Centre".

**3** This Report reviews the cost and funding of, and delays to, the project. As the Phase III scheme is currently the subject of litigation this Report does not seek to apportion responsibility for the time and cost overruns which occurred.

## Main findings and conclusions

**4** There were inadequacies in the original costings and, in September 1989, Treasury agreed a revised Approval in Principle of £74.6 million. The Department excluded a site location factor from the revised approval submission as it was seen as a variable figure which could move up or down in the light of building costs at the time of tendering. However, the Department agreed that, for budgeting purposes, a site location factor of £8.5 million should be added to the revised approval to give a budget cost figure of £83.1 million. The reasons for the subsequent £68.7 million cost increase up to £151.8 million were many and complex, but key factors were: the failure to freeze the design, and significant subsequent design changes; changes in statutory requirements and building regulations; a new liability for VAT; inflation; delays to the building works; a large number of disputes and claims associated with construction works; changes to the

design team's fee rates; and the insolvency of works package contractors. The sums paid under two supplemental agreements are included in the overall costs of £151.8 million.

**5** The funding arrangements for the project were innovative, if somewhat complex. Funding was derived from four basic sources: two sources of Exchequer funds, the NHS and the Department of Education and Science; and numerous private and charitable donors. At the outset the private and charitable donors accounted for around 45 per cent of the funding, including a £10 million donation from the Guy's Special Trustees. However, there were limited formal agreements between the South East Thames Regional Health Authority (the client) and the private donors on timing of payments and whether they were inflation linked.

**6** As costs rose, so the balance of funding changed. In particular, the funding contribution from Exchequer sources increased from £19.5 million (55 per cent of the funding package in December 1986) to £92.6 million (74 per cent of the agreed funding in December 1997).

**7** At the same time a funding gap emerged, caused mainly by the inability to match increased public sector funding with additional contributions from charitable and other sources. On completion of the project this funding gap was £26.8 million. This was financed as a temporary measure through the use of underspends on capital programmes elsewhere in the NHS. This allowed the EFL of the Guy's and St Thomas' Trust (the client at the time of completion) to be increased to meet the payments due.

**8** The reasons for the three years and four months delay in completing the project were also many and complex, but key factors were: delays in putting the design team in place; delays in resolving cost and funding problems; the failure to freeze the design, and significant subsequent design changes; delays in designing the engineering services and producing associated drawings; problems with the services installation; the insolvency of works package contractors; and technical problems, for example defective copper pipe-work. These matters are currently the subject of litigation and the list of reasons is indicative of the problems, not necessarily a comprehensive list.

**9** The early stages of the project were marked with a number of changes in management and control. Between 1986 and 1993 there were four changes in client body with overall responsibility, six project sponsors responsible for day to day issues on behalf of the client and five project managers. The project management arrangements stabilised under one externally appointed project

manager in December 1989. In June 1992, Guy's Hospital appointed a Facilities Director who became the project sponsor for the remainder of the project. The formation of the Guy's and St Thomas' Trust, in 1993, was the final client change.

**10** Attempts to mitigate the delays, and to deliver the project to the agreed timetable, included: the appointment of external project managers (Conspectus) in 1987, followed by the adoption of a staged construction, whereby the construction of Stage 1 was overlapped with the design of Stage 2; the termination of Conspectus's contract, in February 1989 and, following a short interregnum when the in-house project manager resumed responsibility, the appointment of a second firm of project managers, P&O Developments; and, following a review and discussion of various options and on the recommendation of P&O Developments, the adoption of a management contract for the main construction stage in February 1991.

**11** When the decision was taken to use a management contract, the main advantages presented to the client were early commencement and a shorter construction period. However, NHS Estates advised that experience with this approach in the NHS had not been wholly successful, and that it carried additional risks and greater uncertainty over costs. The management contract provided for completion of the main construction stage in May 1993. In the event, deemed practical completion was achieved in June 1996 and final completion - including some modifications works, the copper pipe remedial works and other rectification works - was in April 1997.

**12** Following the receivership of the mechanical and electrical engineering subcontractors (Kentz) in January 1994, the Trust was advised that a supplemental agreement, between the Trust and the management contractors (Higgs and Hill), would be needed to bring more certainty to the project in terms of time and cost. P&O Developments supported the principle of the proposed settlement but expressed reservations about the costs and completion date. NHS Estates considered that the settlement was the best way of bringing certainty to an increasingly complex situation. They advised the NHS Executive that the Trust should be authorised to negotiate a settlement with Higgs and Hill. The NHS Executive approached Treasury for their approval and, after detailed discussion and review, Treasury accepted that the supplemental agreement appeared to represent value for money. The agreement, signed in December 1994, was supported by the Trust's professional advisers, consultant quantity surveyors (Davis Langdon and Everest) and solicitors (Rowe and Maw) and their architects (Watkins Gray International). P&O Developments supported the intent of the settlement subject to the reservations previously expressed. The delays continued

and the January 1995 completion date was not met. In September 1996 a further supplemental agreement was needed to ensure the completion of the Guy's Phase III project.

**13** In June 1996, following deemed practical completion, the Guy's and St Thomas' Trust gave three months notice to terminate the contracts of the project manager (P&O Developments) and the service engineers (Austen Associates). Litigation between them and the Trust is now in progress.

## Action taken by the NHS Executive

**14** In the light of the problems experienced with this project and an earlier hospital building project - the Chelsea and Westminster Hospital (the subject of a Memorandum by the Comptroller and Auditor General - Committee of Public Accounts Twenty-sixth Report, 275, Session 1992-93) - the NHS Executive have taken a number of steps to improve guidance relating to the construction of major capital projects. These included the preparation and promulgation of the 1994 Capital Investment Manual to give comprehensive guidance to the NHS on the planning and delivery of capital schemes with particular emphasis on the importance of strong project leadership, management and control.

**15** In addition, the NHS Executive commissioned NHS Estates to carry out a comprehensive review of Concode (its guide to procurement of building contracts and commissioning consultants). This review complemented NHS Estate's input into the 1994 Capital Investment Manual, and, since April 1994, NHS Estates has issued revised guidance to the NHS on contract policy, procedures, guides to standard forms of building contracts and guides and agreements on the appointment of project managers and consultants. This reflected: the lessons of Guy's Phase III and Chelsea and Westminster; ongoing experience; and the recommendations from major Government initiatives into improving construction, procurement and contractual arrangements (the Latham and Levene Reports).

## Recommendation

**16** If followed, current NHS guidance should help to improve the planning and delivery of NHS construction projects. But we believe that the NHS Executive should remind Health Authorities and NHS Trusts of 8 key points:



**Point 1**

Responsibilities for projects should be clearly set out, and there should be a single client who takes full responsibility for the cost and funding implications of design changes.

**Point 2**

Costings should be complete and realistic, and where there are uncertainties these should be fully spelt out when seeking approval and backed up by a fully costed risk analysis.

**Point 3**

Sources of funding should be secured: before projects are approved; before subsequent changes are agreed; and before contracts are placed. There should be agreement from the outset on timing of payments and how the costs of inflation will be funded.

**Point 4**

The project manager should be appointed at the earliest possible stage and continuity of personal involvement should be sought.

**Point 5**

The design brief should be frozen at the earliest possible time, and the full implications of later changes assessed - in terms of cost, funding and delivery - before approval.

**Point 6**

Timescales should be realistic. Where there is evidence of slippage against an agreed timetable, the client should require details of how this is to be managed.

**Point 7**

Management contracts offer potential benefits but significant risks, such as controlling costs when design and construction overlap. These risks must be identified and action taken to minimise them.

**Point 8**

Even when external project managers are appointed, the importance of the role of Project Sponsor within the Trust needs to be recognised. The NHS Executive should consider how to ensure that Project Sponsors are equipped to handle this effectively.

## Part 1: Introduction

**1.1** Guy's Phase III development project (Photograph 1), now known as Thomas Guy House, was completed in April 1997 at an estimated cost of £151.8 million plus £8.1 million for modifications. Figure 1 provides some key facts about the development project.



Thomas Guy House

**Figure 1**

**Key facts about the Guy's Phase III development project**

**The building comprises**

Eight storeys  
(Basement, Ground floor and floors 1-7)

2400 rooms

4 Atria

50,000 square metre gross floorspace

Plant rooms at basement and sixth floor levels

Standby generation plant for the whole Guy's site

Link bridge to London Bridge Station

**Key Facts**

Covers 1.5 acres of ground on a  
landlocked site

Has a frontage 1/10th of a mile long

500,000 bricks

25,000 cubic metres of concrete

4,000 miles of cabling and wiring

2,000 tons of reinforced steel

24 acres of plaster board  
3 miles of copper water pipe

3 miles of corridor

**It houses**

40 clinical, academic and support  
departments including:

a Planned Care Centre comprising  
outpatient clinics; a day surgery and  
endoscopy unit; planned inpatient beds;  
and integrated diagnostic facilities

United Medical and Dental Schools  
teaching and research facilities

Outpatient and inpatient mental health  
services

Thomas Guy House, Guy's Hospital, was planned as a state of the art building designed to accommodate various clinical directorates and the United Medical and Dental School. It has at its heart an innovative Planned Care Centre which integrates diagnostic tests with inpatient and outpatient care.

Source: Guy's and St Thomas' Hospital Trust

**1.2** Guy's Phase III is the final part of a rebuilding programme for Guy's Hospital. New Guy's House was completed in 1962 and Guy's Tower was completed in 1974. Following the formation of Lewisham and North Southwark District Health Authority (the District) in 1982, the Department of Health and Social Security (the Department) approved a 10 year strategic plan for the District. This plan envisaged focusing the District's acute health care provision on two main sites: Guy's Hospital to the north and Lewisham Hospital to the south. The development of Guy's Phase III was a key component of the District's strategy.

**1.3** As well as being strategically important, the proposal for Guy's Phase III had a high profile. The Department promoted Phase III as a model of co-operation between the private and public sectors: Guy's Hospital Special Trustees and other private and charitable donors contributed 45 per cent of the original funding for the project. In addition, at the same time as the plans for Phase III were being developed and approved, the Guy's clinicians agreed to pioneer the system of Clinical Directorate management that is now the National Health Service standard. Subsequently the clinicians were influential in Guy's Hospital becoming a "flagship" NHS Trust.

## **Cost, funding and delivery of Phase III**

**1.4** In December 1986, the Treasury approved the project in principle at an estimated cost of £35.5 million. This approval was formally revised in September 1989 to £74.6 million. At the same time the Department agreed that, for budgeting purposes, a site location factor of £8.5 million should be added to the revised approval to give a budget cost figure of £83.1 million. By December 1997, following completion in April 1997 and hand-over in July 1997, the costs had increased to £151.8 million plus £8.1 million for modification works. These modification works were required to reflect the change in use of the building following the Tomlinson enquiry into improving London's health services.

**1.5** The original funding package of £35.5 million matched the estimated cost. The subsequent cost increases put pressure on the funding package and since December 1989 there has been a gap between the estimated out-turn costs and available funds (Figure 2). By December 1997, only £125.3 million of the £151.8 million projected out-turn costs had been funded. The £26.5 million funding gap has been financed through temporary borrowing (EFL brokerage). In addition, the modification works have been funded through a separate package.

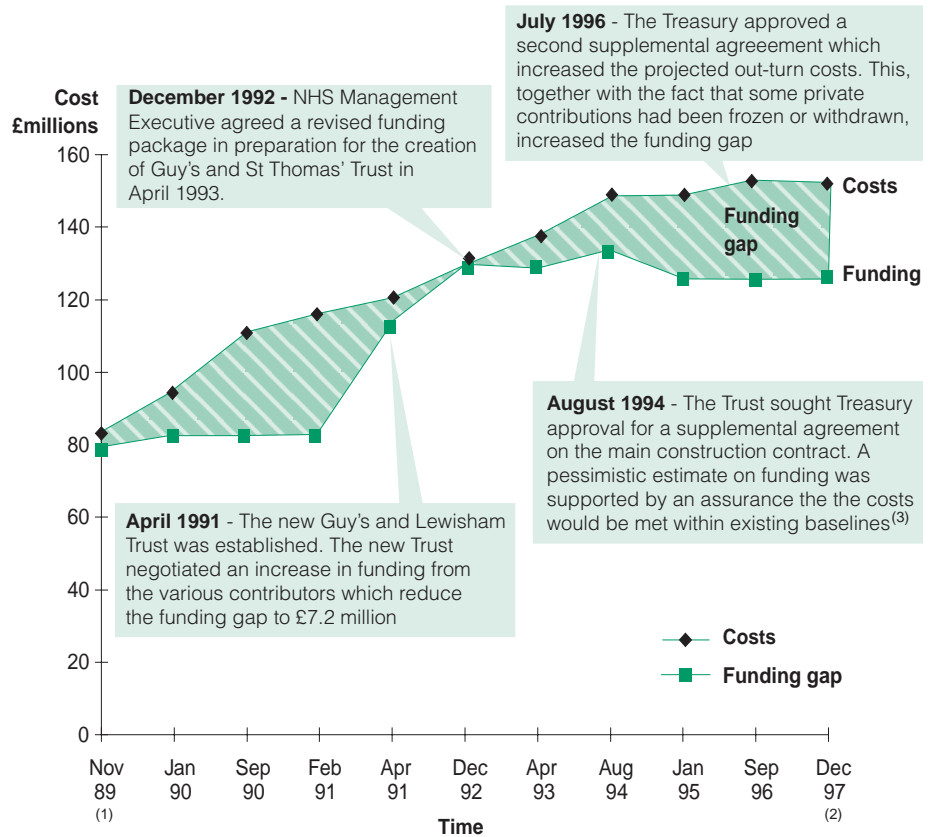
**1.6** In 1986, the project was planned to be completed in December 1993. However, it was beset by difficulties which, despite adopting various strategies to maintain the programme, led to several extensions to the project completion date. The project was finally completed in April 1997, 3 years and 4 months late. The new building was opened to patients in July 1997.

## **NHS reorganisation and changing roles and responsibilities for Phase III**

**1.7** During the project, the National Health Service went through a number of major changes. New management and organisational structures were created, leading to changes in the management hierarchy for the Phase III project (Figure 3). Partly in response to these reorganisation changes, but also due to the problems with delays and cost increases, there have been six different project sponsors representing the clients' interests in the project and five changes in the project manager. Key players involved in the project, and who feature in this report, are shown in Figure 4.

The increasing costs of the Guy's Phase III project (excluding modification works) compared with the available funding at key stages in the projects development<sup>(3)</sup>

**Figure 2**



- Notes: 1. In September 1989, Treasury agreed a revised Approval in Principle of £74.6m. In addition, in November 1989, the Department approved a Budget cost figure of £83.1 million (comprising the £74.6 million approval in principle plus £8.5 million site location factor). However, identified funding was £78.5m, leaving a funding shortfall of £4.6m.
2. In December 1997, following handover of the completed building in July 1997, a funding gap of £26.5m remained. This was funded through temporary borrowing (EFL brokerage)
3. The changes in costs and and funding are explained in detail in Part 2.

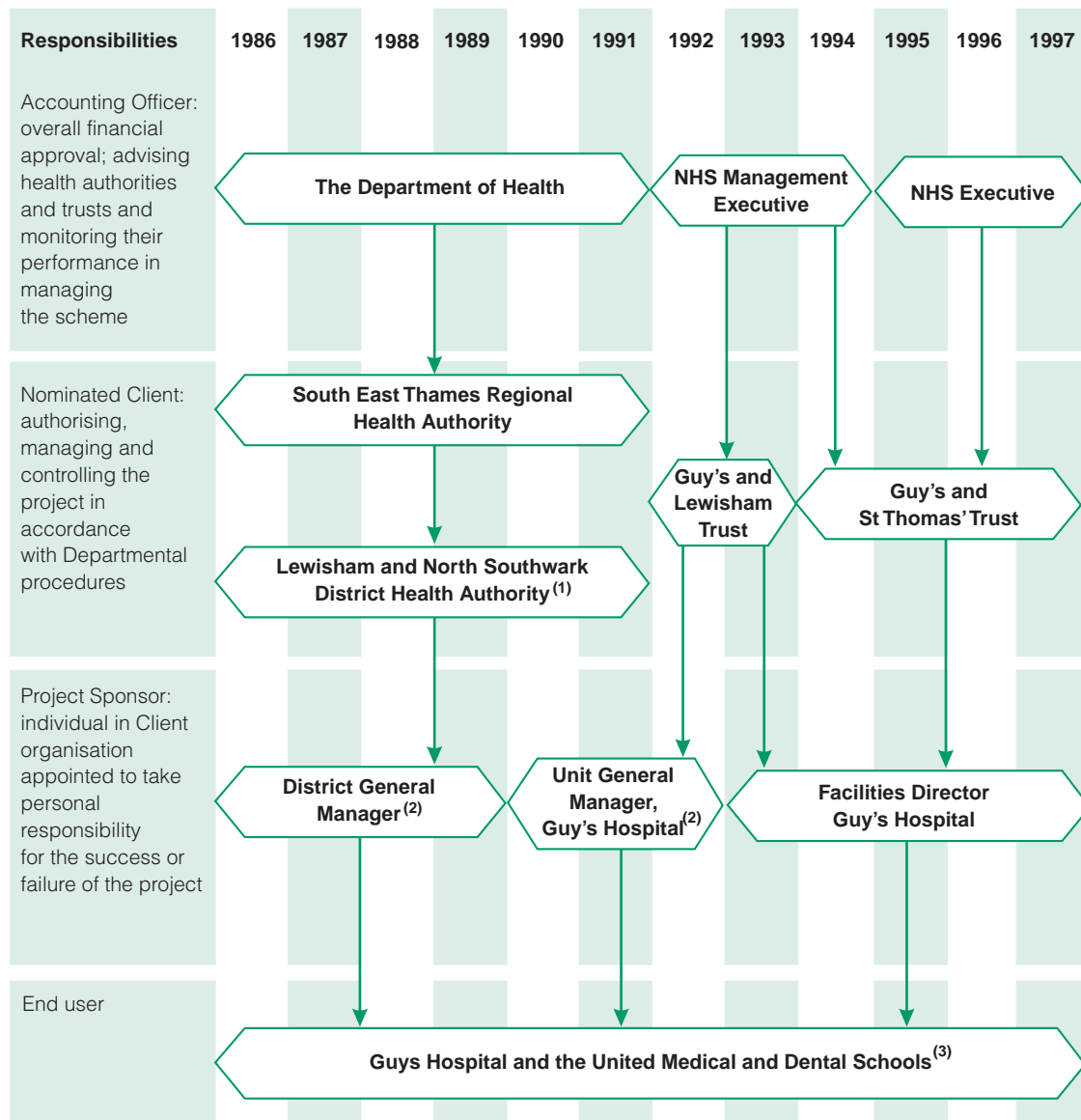
Source: Department of Health and Guy's and St. Thomas' Trust

As costs increased, available funding failed to match the increases, and since November 1989 there has been a funding gap.

**1.8** The changes in project manager were aimed at bringing strong management control to the project. The first change was the replacement of the regional project manager with an external appointment in September 1987. However, the General Managers Group (a steering group comprising representatives of the main funding parties) felt that the external project managers, Conspectus, failed to deliver the required management control and their contract was terminated in February 1989. The regional project manager

**Figure 3**

**Changes in roles and responsibilities of the key NHS bodies involved in the administration of Guys Phase III**



Notes: 1. Client authority was delegated to District Health Authority between November 1987 and February 1989 and from December 1989 to April 1991 when responsibility passed to the Guys and Lewisham Trust.

2. There were two consecutive District General Managers and two consecutive Unit General Managers.

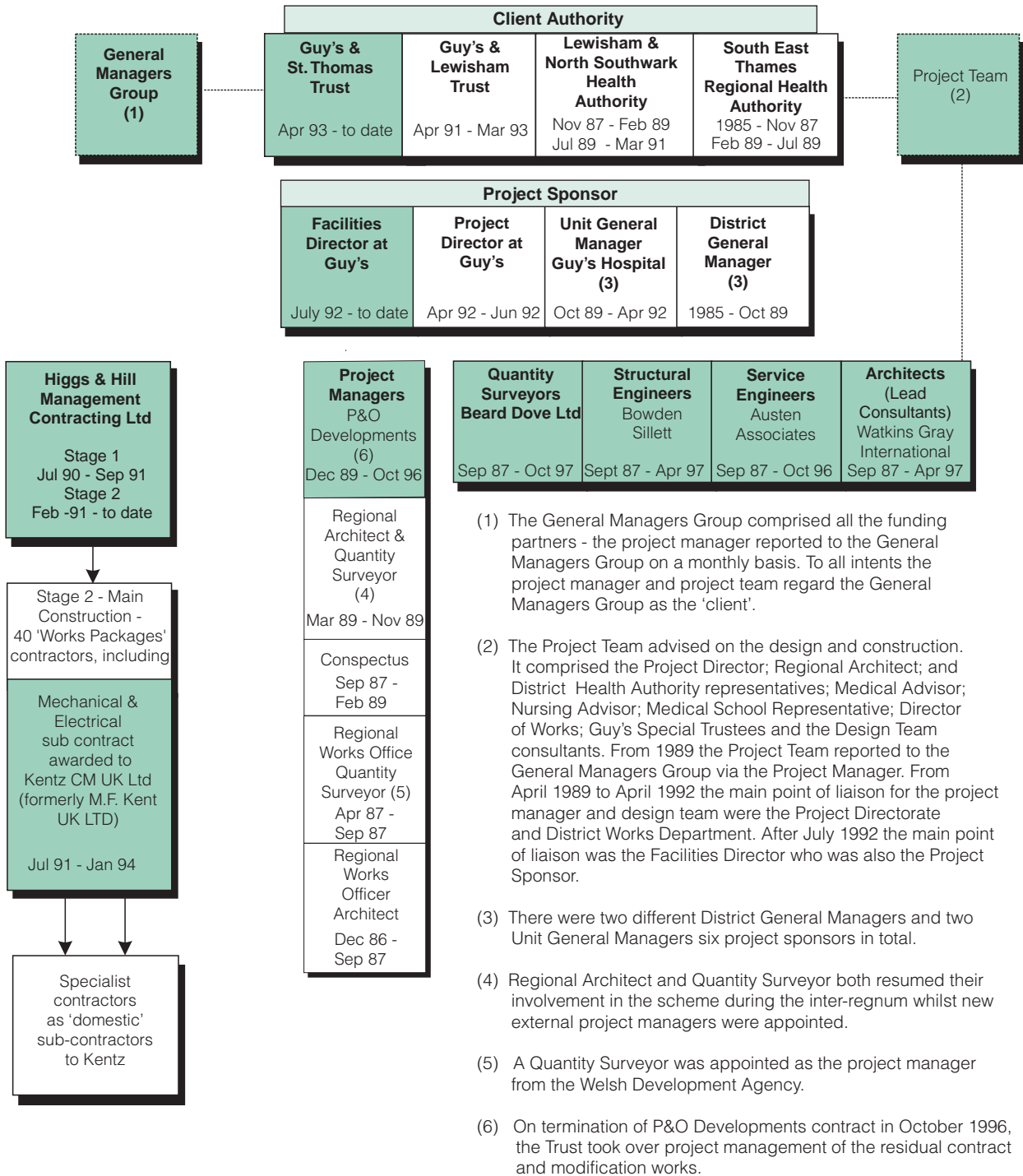
3. The United Medical and Dental Schools of Guy's and St Thomas' was founded in 1982. It had a particular interest in the project as it was to occupy much of the fifth floor (and finally occupied the whole of it) and part of the third and fourth floor and two rooms each on the first and second floors. It contributed funding aimed at securing a high specification research facility.

The NHS reorganisation led to important changes in the key NHS bodies with responsibility for the project. The only constant was the end user, although the actual use changed as a result of the Tomlinson enquiry into improving London's health services.

Source: Department of Health

**Figure 4**

**Guy's Hospital - Phase III development - Key players involved in the Phase III development**



This diagram is not intended to show the accountability relationships.

Over the course of Phase III there were several changes in the client, project sponsor and project manager. The client representatives on the project team and General Managers Group changed accordingly. On the construction side, Higgs and Hill were initially appointed as management contractors to Stage 1 and subsequently were awarded the Stage 2 - main construction contract.

Source: Guy's and St. Thomas' Trust.



then resumed responsibility in the interregnum whilst the Region sought a new external appointment. The Region subsequently appointed P&O Developments as project manager in December 1989.

## The future of Guys Hospital

**1.9** Since 1992, there has been uncertainty about the future of Guy's Hospital. In 1992, the Tomlinson Report which enquired into the future shape of London's Health Service, concluded that within five years, the NHS would require only three of the four major hospitals (Kings, Lewisham, Guy's and St Thomas') serving the South East Thames Regional Health Authority. The report confirmed that Kings and Lewisham had a secure future and concluded that only Guy's or St Thomas' should be retained. The report took into account aspects such as patient flows; the quality of the building stock (including the new Phase III building); and the need for Accident and Emergency provision. It recommended that Guy's and St Thomas's Hospitals should be merged into a single management structure to create the Guy's and St Thomas' Trust and that the new Trust should seek ways of rationalising services onto a chosen site.

**1.10** Between April and November 1993 the Trust considered a number of options for the future use of the two sites. The Trust's preferred option, which was submitted to the London Implementation Group in November 1993, was for a two site solution which included using Phase III as originally planned. In February 1994, the Secretary of State announced that she would ask the Trust to pursue proposals to concentrate acute and specialist services at St Thomas' Hospital. Guy's would remain as a major hospital, but focusing on non-emergency care, as well as being a centre for teaching and research. The decision raised much controversy.

**1.11** In April 1995, following the Trust's preparation of an Outline Business Case and public consultation, the Secretary of State confirmed that Guy's would remain a major hospital site focusing on planned care services. These services were to include a range of out-patient, day-care and elective in-patient surgical services, centred in the new Phase III building. The Trust now estimates that 75 per cent of the space involved in Phase III will be used as originally intended. The rest has been modified to meet the new requirements for a Planned Care Centre. Guy's Hospital Accident and Emergency Department and supporting beds are not to close until alternative facilities are in place and operating satisfactorily, which is not expected to be before the end of 1998.



## Current litigation

**1.12** In October 1996, the termination by the Trust of P&O Development's appointment as project manager and Austen Associates' appointment as engineering consultants took effect. This was with a view to instigating legal action against them to determine responsibility for meeting excess costs on Phase III. The Trust began gathering evidence in contemplation of litigation in late 1993, and their original intention was to issue a writ by early November 1996. However this timetable was delayed by the complexity of the case and, in November 1996, P&O Developments issued a writ against the Trust in respect of claims for additional/unpaid fees on the project. The Trust responded to the Court indicating that they intended to defend P&O Developments' fee claim and counterclaim against P&O Developments and Austen Associates. A date of January 1999, was set for the court case in April 1997.

## The National Audit Office investigation

**1.13** Against this background we looked at:

- cost increases and funding (Part 2); and
- delays to the Phase III project (Part 3).

**1.14** A detailed chronology of events, focusing on the main issues of costs: and funding; delays; and management and control issues, is at Appendix 1.

**1.15** Our report is based on review of papers held by the Trust, NHS Executive, NHS Estates and the Department of Health. We also:

- consulted widely within the NHS Executive and the Trust and had discussions with Consultant Quantity Surveyors, Davis Langdon & Everest, who have been advising the Trust since 1993 on the potential litigation concerning Phase III;
- reviewed several detailed reports on the project to assess progress and identify the reasons why budget costs and project milestones were being missed;
- evaluated the reasons for the cost increases and delays at strategic points in the history of the project;

- examined the funding arrangements and, where relevant, analysed the extent of action taken to bridge the funding gap; and
- reviewed NHS authorities' compliance with the Departmental guidance on managing construction projects which applied at the time of building the project.

**1.16** In order to present a balanced view of events, the report's findings have been cleared with the Trust, the NHS Executive, and the Treasury on the basis that the report fairly and accurately presents the relevant facts.

**1.17** In line with our normal practice, we have also consulted all other third parties mentioned in our report: Conspectus, P&O Developments, Higgs and Hill; the members of the design team (Austen Associates, Watkins Gray International, Bowden Sillet and Partners, and Beard Dove Limited); Taylor Woodrow; and funding parties (the Guy's Special Trustees, the United Medical and Dental Schools, the Department for Education and Employment and Sir Philip Harris). In most cases this consultation involved obtaining views on those paragraphs where the third party is named. In the case of P&O Developments and Austen Associates this involved obtaining comments on the whole report. Because of the receivership of subcontractors Kentz, we copied relevant parts of the report to their receivers Ernst & Young.

**1.18** In view of the fact that the project is currently the subject of litigation, Higgs and Hill, the management contractor, did not consider it appropriate to comment on the report. They stated that their decision in this regard should not be construed or interpreted as acceptance by them of the accuracy or completeness of the report. We received detailed comments from both Austen Associates and P&O Developments which we considered in drafting the Report. In view of the fact that the Guy's Phase III development is currently the subject of litigation, Austen Associates did not consider it appropriate to comment further on the report. Austen Associates point out that their decision reflects their disagreement with the wording and accuracy of parts of the Report. P&O Developments pointed out to us that the causes of some of the delays to the project and costs over-runs together with recovery of outstanding fees are the subject of current litigation. P&O Developments wish it to be made clear that they cannot accept that the report accurately sets out the entire and correct reasons for cost over-runs, funding problems and delays to the Guy's Hospital Phase III development.

**1.19** The other members of the design team and the funding parties have confirmed that they are content that the paragraphs in the report which refer to them are a fair and balanced view of events and that they have no further comments to make on the conclusions drawn.

**1.20** The National Audit Office has considered all comments made by third parties, the NHS Executive and the Guy's and St Thomas' Trust and produced a report based on the factual evidence available. Where there are apparent inconsistencies in the evidence this has been set out in the report. The litigation between the parties concerns items over which there is dispute over the facts or over responsibility for the causes of delay and cost increases. As stated earlier, the National Audit Office report does not deal with these issues between the litigants which are the proper concern of the courts.

**1.21** In reading our report it is important to note that since the project started:

- external guidance on the management of construction projects has been regularly updated, including guidance from the Treasury's Central Unit on Procurement;<sup>1</sup>
- in the light of their experience on the Guy's Phase III development and also on the Chelsea and Westminster hospital (the subject of a memorandum to the Committee of Public Accounts, Twenty Sixth Report, 275, Session 1992-93) the NHS Executive have taken a number of steps to improve their own guidance on the construction of major capital projects. These steps included the promulgation of the 1994 Capital Investment Manual and revisions to Concode, the NHS guide on the procurement of and contractual arrangements for NHS building and engineering work.

**1.22** A summary comparing the Committee of Public Accounts recommendations and Treasury Minute response on the Chelsea and Westminster Hospital with the findings on Guy's Phase III and the Capital Investment Manual is at Appendix 2.

1 From July 1997, the Central Unit on Procurement became Procurement Practice and Development.

## Part 2: Costs and funding of Phase III

### Key Findings

- In December 1986, the Treasury approved in principle the Guy's Phase III project at an estimated cost of £35.5 million.
- The Region's £35.5 million estimate was not soundly based and in September 1989 Treasury agreed a revised Approval in Principle of £74.6 million. This, together with an £8.5 million site location factor became the £83.1 million baseline or Budget Cost estimate for the project.
- Over the life of the project there were large increases in the project's outturn costs. By December 1997, following the completion of the main contract in April 1997, costs had increased by £68.7 million to give a total cost for Phase III of £151.8 million, this included sums paid under two supplemental agreements. In addition some £8.1 million had been spent on modification works.
- The reasons for this increase are many and complex, but key factors were: the failure to freeze the design, and significant subsequent design changes; changes in statutory requirements and building regulations; a new liability for VAT; inflation; delays to the building work; a large number of disputes and claims associated with construction works; changes to the design team's fee rates; and the insolvency of works package contractors. The Trust is currently in litigation seeking to recover some of the cost increase.
- Funding for the project was to be provided by a unique partnership between the public and private sectors. At the outset private and charitable donations totalled £16 million, and public funding totalled £19.5 million (including £2.1 million from the United Medical and Dental Schools and £2.3 million from the University Grants Committee). However, there were limited formal agreements on timing of payments and whether they were inflation linked.
- Two main changes to the design, the introduction of atria and the replacement of one adult mental health ward with Asthma and Allergy Laboratories, were conditional on funding being provided by the private sector. In the event these funds did not materialise.
- Indeed, as costs rose a funding gap emerged, and when construction was completed there remained a funding gap of £26.8 million.

- The proportion of funds met by the public sector increased from £19.5 million (55 per cent of the funding package) in 1986 to £92.6 million (74 per cent of agreed funding) in 1997. The £26.5 million funding gap (excluding modifications work) was financed as a temporary measure through the use of underspends on capital programmes elsewhere in the NHS (EFL brokerage). This allowed the EFL of the Trust to be increased to enable them to meet the payments due.

## Part 2: Costs and funding of Phase III

**2.1** This Part of our report documents the changes in the costs of Guy's Phase III and reviews the reasons for the cost increases and funding gap (Figure 5). A detailed chronology of events is at Appendix 1.

### The initial cost estimate in December 1986 was £35.5 million; the funding package was £35.5 million

**2.2** Planning for Phase III began in 1985. The South East Thames Regional Health Authority (Region), was the nominated client for the project and had to manage the project in accordance with mandatory Departmental procedures known as Capricode. These procedures provided a set of interconnected stages through which all projects were expected to pass (Figure 6). A fundamental requirement of Capricode was that the client should be satisfied before going to tender that the scheme could proceed to completion without foreseeable problems, including sufficient capital and revenue resources. Capricode was particularly suited to contracts let under the traditional JCT 80 form of contract. The main features of Capricode were subsequently incorporated into the NHS Executive's 1994 Capital Investment Manual (paragraph 14 and 1.21).

#### The six main Capricode stages in a NHS construction project

**Figure 6**

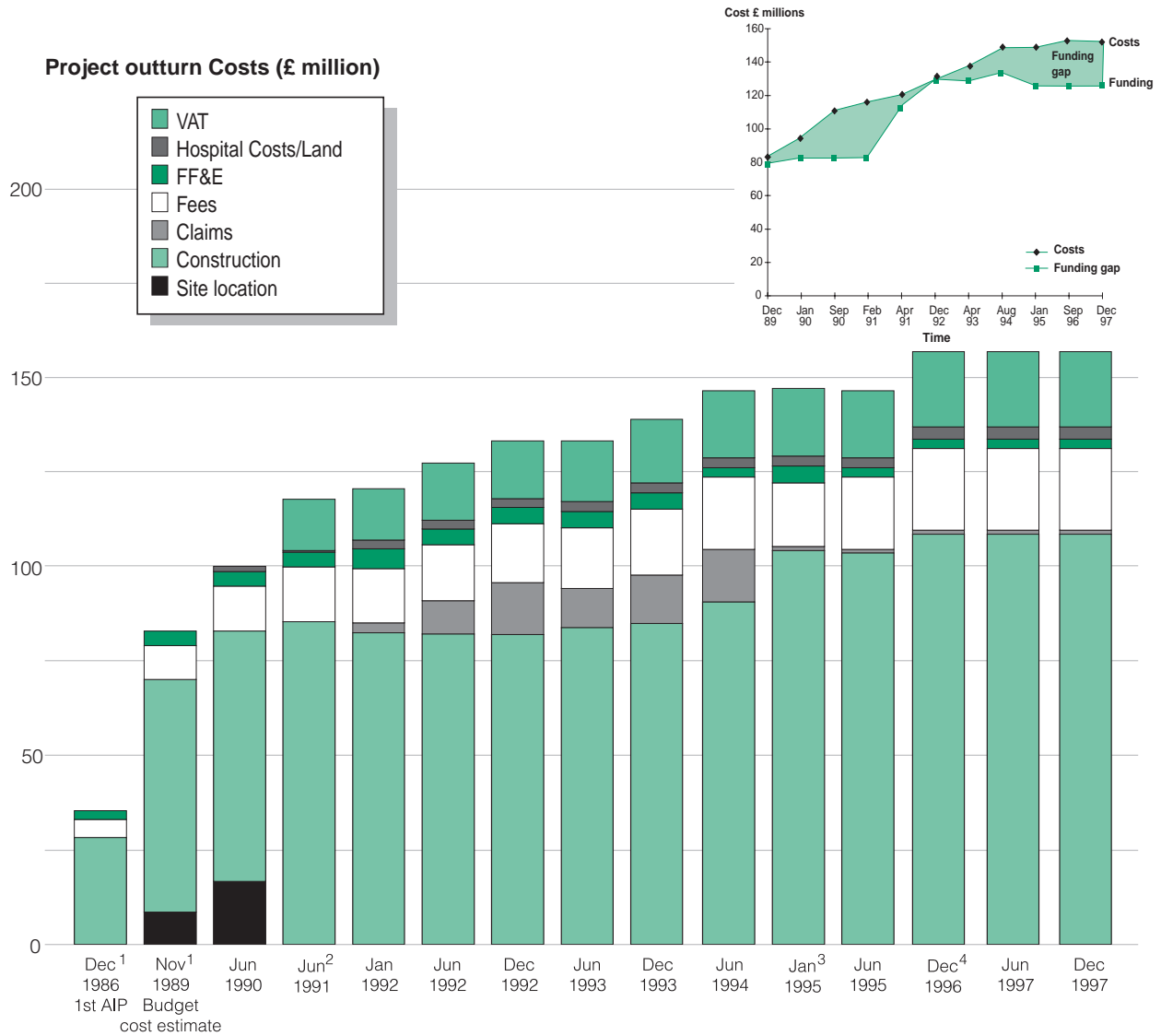
Stage 1	Approval in Principle (broad general content and costs agreed at this stage)
Stage 2	Budget Cost (detailed calculation of costs)
Stage 3	Design
Stage 4	Tender and Contract
Stage 5	Construction
Stage 6	Evaluation

Note: The Department (for schemes over £5million) and the Treasury (for schemes over £10 million) must approve the project at Stage 1. Regions normally take projects through stages 2-6 without reference to the Department, subject only to submission of routine progress reports.

Source: Department of Health

**Figure 5**

**Increase in cost of the Guy's Phase III Development and comparison of costs with available funding**



- Notes:
1. Original Approval in Principle figure excluded a site location factor to cover the costs of building in London on a constrained site. This was subsequently included in the Budget cost estimate in November 1989.
  2. Site location factor is now part of the construction budget. VAT became payable on construction projects from April 1991.
  3. A commercial settlement on Stage 2 construction (Figure 10 refers) was reached between the Trust and the management contractor on 21 December 1994. As a result the claims element on Stage 2 is included within the construction heading.
  4. The construction costs include the second commercial settlement reached with the management contractor in July 1996.

The cost of the Phase III Development increased sharply during the formative years of the project and have continued to increase throughout its life. Costs levelled off between December 1994 and July 1996 due to the project contractor bearing the increase in costs as part of the first supplemental agreement. Initially funding matched the estimated outturn costs but, as costs increased, a funding gap emerged and since November 1989 estimated costs have exceeded the available funding.

Source: Guy's and St. Thomas' Trust

**2.3** In 1986, the District Health Authority, concerned at the lack of impetus at Regional level, took the initiative. They commissioned planning consultants to provide the Approval in Principle submission, using funds provided by the Guy's Special Trustees. The Region subsequently adopted this as the basis of their own submission to the Department.

**2.4** The Department were not happy with the way either the District or the Region handled this exercise. In particular, they believed that the Region might have "abdicated too much of its responsibility to the District and its consultants". The Department's Health Building Directorate (now NHS Estates) identified several specific concerns about key aspects of the Approval in Principle submission, in particular:

- the adequacy of the capital cost estimates given the complexity of the scheme, its location and the pressure for a fast track timetable (capital cost estimates jumped from £22.4 million to £35 million during the Approval in Principle Stage);
- the Development Control Plan and fire safety strategy;
- uncertainty about the programme for the works, and
- uncertainty about project management arrangements.

**2.5** The Department nevertheless cleared the Approval in Principle submission quickly. However, they asked to review the scheme again when the detailed budget costing had been finalised (Capricode Stage 2), as this would give them a detailed insight into the Region's progress and performance and the prospects for meeting time and cost targets.

**2.6** Departmental papers reviewing the history of the project described the Approval in Principle as "having been produced at great speed to enable the announcement of the decision to close New Cross Hospital at an early date, necessitated by extreme revenue pressures facing the Region, to be linked to the agreement of the new development at Guy's".



**2.7** The initial funding of the project was innovative, if somewhat complex. There were two sources of central government funds, the NHS and the Department of Education and Science, and numerous private/charitable donors, including the Guy's Special Trustees whose £10 million donation was the largest single commitment to the scheme (Figure 7).

The funding for the Phase III development at the original Approval in Principle Stage in December 1986 matched the £35.5 million estimated expenditure

**Figure 7**

Amount	Contributed by
<b>NHS Funding</b>	<b>a. Charitable/Private Donors to the NHS</b>
£10 million	Guy's Special Trustees
£5 million	Sir (now Lord) Philip and Lady Harris
£5 million	<b>b. NHS exchequer finding</b>
£5 million	Department of Health -Teaching Hospital Support
£5+million	District Health Authority Revenue Funds
	Proceeds of the New Cross Hospital Sale
<b>Academic support</b>	<b>c. Department of Education and Science</b>
£2.3 million	University Grants Committee
£2.1 million	United Medical and Dental Schools
£1.1 million	<b>d. Private/charitable donations</b>
	Imperial Cancer Research Fund and other charitable donors to the United Medical and Dental Schools
£35.5+ million	<b>Total Funding (to cover estimated expenditure of £35.5 million).</b>

Funding for the project was derived from four basic sources: the NHS, the Department of Education and Science, charitable donors to the NHS and charitable donors to the United Medical and Dental Schools. The NHS funding was derived from three sources: District Health Authority Revenue funds, proceeds from land sales and Department of Health teaching hospital support.

Source: Department of Health

**2.8**

The Department saw the high level of private and charitable donations - some £16 million or 45 per cent of the funding - as a reflection of the strong local support for the project. The availability of private funds and an agreement to use the proceeds of the sale of New Cross hospital meant that the Department of Health's Teaching Hospital Support was only £5 million (14 per cent).

**2.9**

The Treasury also cleared the submission rapidly, and gave their formal Approval in Principle in December 1986.

## **In September 1989, Treasury approved a revised cost estimate of £74.6 million; available funding totalled £78.5 million**

**2.10** Following the Treasury approval for the project, the Region began to develop the budget cost estimate. It quickly became apparent that the original estimates were inadequate. The Region had derived the costs for the Approval in Principle submission from a straight application of “Concise”, the Department’s costing model. This model assumed that the hospital building would be based on the NHS standard nucleus design, on a greenfield site. It did not reflect the fact that the Guy’s site was a landlocked London location, constrained by roads and existing buildings, designed to take up the maximum amount of available space (Photograph 2). The costings also failed to take into account the presence of a number of specialist units not normally found in a District General Hospital and did not make any allowances for the concept of dedicated directorates.



**The Guy's Phase III building takes up every square metre of the site**

**2.11** The Department were concerned at the cost implications and supported the Region’s decision to replace the in-house project manager with an external appointment. Whilst this decision was mainly driven by concerns about potential slippage and the need to avoid future delays (paragraph 3.5), the Region also expected improved cost control. The external project manager (Conspectus) was appointed in September 1987 and the design team in November 1987 (Figure 8).

**Project management and  
design team  
appointments to the  
Phase III project**

**Figure 8**

<b>Responsibilities</b>	<b>Consultants (appointed by competitive tender)</b>
Project management	Conspectus
<i>The design team</i>	
Consultant Architects	Watkins Gray International
Consultant Service Engineers	Austen Associates <sup>1</sup>
Consultant Structural Engineers	Bowden Sillett & Partners
Consultant Quantity Surveyors	Beard Dove Partnership <sup>1</sup>

Note: 1. Became limited companies during the course of the project .

Source: Department of Health

The main consultants employed on the Phase III project were appointed by competitive tender.

**2.12** On appointment of the external project managers, the Region delegated client responsibility to the District Health Authority. Subsequently, in recognition of the number of funding parties involved in the project, the Region established a steering group, known as the General Managers Group. The first meeting of the Group, which consisted of representatives of all the capital funding sources, including the Region and District, was September 1988. Their remit was to provide overall supervision, oversee funding and provide a channel for feedback on progress. The District General Manager, in his role as project sponsor, told Conspectus that the General Managers Group were effectively the client and would be responsible for approving changes to the functional content and cost increases.

**2.13** The Region spent most of 1988 attempting to finalise the design and agree a robust budget cost estimate. The first broad brush estimate in December 1988 was around £92 million. The original Approval in Principle cost of £35.5 million when increased for inflation was £51 million. Ninety-two million therefore represented a real term cost increase of £41 million (80 per cent). The main reasons for the increase were: a 50 per cent increase in the space needed to meet the required functional content; large increases in administration space needed for the clinical directorates; and an increase in the teaching areas.

**2.14** The General Managers Group were concerned at the cost increases and criticised Conspectus for failing to provide the information needed to enable them to approve changes to the project. They were also concerned that the Region had identified only £65 million funding, leaving a £27 million gap.

**2.15** In February 1989, the General Managers Group terminated Conspectus' contract on the grounds that they needed stronger management control. The Region regained client responsibility for the project for a temporary period until a further external project manager was appointed. The Region nominated the Regional Architect to take charge of the project. He, in turn, allocated the quantity surveyor who had been the project manager prior to the appointment of Conspectus to manage the Phase III project. The first task was to finalise a Management Control Plan and complete the Budget Cost submission (Capricode Stage 2).

**2.16** As a result of the scale of the increase in costs, the original Approval in Principle lapsed and the Region needed fresh Treasury approval for the project. Before going back to the Treasury, the Region sought to identify ways of reducing overall costs and identify an appropriate funding package. By March 1989, the project team had advised that a revised estimate of the cost of the scheme was £81 million. As part of their efforts to reduce costs the Region specifically excluded proposals for atria from the revised submission.

**2.17** On funding, the Guy's Special Trustees - who had a considerable degree of influence over the project due to their initial donation of £10 million - agreed to provide a further £10 million index-linked funding. The remaining funding gap was closed when the District identified two sources of additional income from land sales. However £11.1 million of the funding was not index-linked and there was a risk that, over time, inflation might result in a further funding gap.

**2.18** In June 1989, the Region submitted a reappraisal of strategic options to the Department, together with an option appraisal and a revised Approval in Principle and Budget Cost submission. The Region's preferred option was the continuation of Phase III, and the Department accepted this recommendation.

**2.19** In August 1989, the Department submitted a revised £74.6 million Approval in Principle submission to the Treasury. This, together with a site location factor of £8.5 million, meant the budget cost estimate was £83.1 million. The Department assured the Treasury that the funding contributions of £78.5 million more than matched the £74.6 million Approval in Principle cost, but drew attention to the fact that the site location factor was not included as it was "a variable figure which could move up or down in the light of building costs at the time of tendering". If the site location factor had been included, there would have been a funding shortfall of £4.6 million.

**2.20** The Department told the Treasury that the Region, and indeed Guy's, had been "commendably entrepreneurial in tapping additional sources of finance and that a large part (£26 million or 35 per cent) of the capital costs were being met from charitable sources". In particular, the Guy's Special Trustees were providing over £19 million, Sir Philip Harris £5 million, and a further £12 million was expected from land sales made possible by the strategy of reducing the number of hospital sites in the District. At the same time, however, the Department increased the NHS contribution from £15 million (42 per cent of the original Approval in Principle) to £42 million (56 per cent of the revised Approval in Principle). This included an increase in the Department's direct contribution for central teaching hospital support from £5 million (14 per cent of the original Approval in Principle) to £22 million (30 per cent of the revised Approval in Principle).

**2.21** Treasury approved the revised estimate of £74.6 million in September 1989, Figure 9 shows the detailed breakdown of costs. In November 1989, the Department approved a Budget Cost figure of £83.1 million (comprising the revised Approval in Principle of £74.6 million and site location factor of £8.5 million). This Budget Cost figure then became the baseline for the project and was agreed by the project team and the Regional Architect, in his role as project manager, as the figure on which all future monitoring would be based.

**Analysis of revised  
November 1989 Approval  
in Principle and Budget  
Cost Figure, compared  
with the 1986 Approval in  
Principle**

**Figure 9**

	Original AIP December 86	Revised AIP and Budget cost figure November 89
	£' million	£' million
	27.9	60.2
Building and engineering costs		
	0.3	1.5
Other construction costs		
	2.4	3.9
Equipment costs		
	4.9	9.0
Professional fees		
	<b>35.5</b>	<b>74.6</b>
<b>Approval in principle total</b>		
	-	8.5
Site location factor <sup>1</sup>		
	-	<b>83.1</b>
<b>Budget cost figure</b>		

Note: 1. The site location figure was excluded from the approval in principle figure as it was seen as a figure that could increase or decrease depending on the market conditions

In August 1989, the Region sought the Department's agreement to a revised Approval in Principle. In September 1989, the Treasury, approved in principle a revised proposal for the Guy's Phase III development. In November 1989, the Department approved the Budget Cost figure comprising the revised Approval in Principle figure plus a site location factor.

## **By April 1991, the Budget Cost had risen to £118.1 million whilst the available funding was £110.9 million**

**2.22** In July 1989, the Region once again delegated formal client responsibility for the scheme to the District and in October 1989 the Guy's Hospital Unit General Manager took over the project sponsor role. In December 1989, the District appointed P&O Developments as the new project managers for Guys Phase III. This was in the expectation that strong project management would be applied. In their tender, P&O Developments stated that if they were to accept responsibility they would require the necessary authority to fulfil their role. They suggested that the minimum working arrangement would be for them to have single line responsibility for the project, reporting directly to the project sponsor, acting as a buffer between the client and the design team. However, the contracts of the design team were not amended to reflect this working arrangement and the extent to which single line authority was established or maintained is part of the circumstances surrounding the litigation. P&O Developments were required to keep the General Managers Group accurately informed about progress on the project, in terms of time and costs, through a series of monthly Project Manager's Reports.

**One of the four atria included in the design of Phase III in 1990**

**2.23** By January 1990, only two months after the Department had agreed the £83.1 million budget cost figure, P&O Developments' first report to the General Managers Group showed that the costs had increased to £94 million and that there was a potential funding gap. Reasons given for the cost increase included the General Managers Group's decision to add atria back into the design (Photograph 3); changes in statutory requirements and new building regulations; an increase in the site location factor; and an increase in professional fees. However, available funding had increased to only £82.2 million.



The four atria were included in the design for environmental and aesthetic reasons as without them the wind tunnel effect and local pollution would make the courtyards unusable for patient recreation, etc. This decision was supported by the results of wind tunnel tests undertaken by the University of Bristol.

**2.24** The Department were concerned about this £11.8 million funding gap, particularly as the Region had a general funding problem. They refused to provide any additional funding but agreed to release committed funds earlier, to ensure that the project could be maintained on schedule. They expected the Region to either reduce costs or find additional funding from non-exchequer sources.

**2.25** The decision to re-introduce atria was taken after receiving the results of wind tunnel tests from the University of Bristol. The General Managers Group agreed that atria were needed for environmental and aesthetic reasons, as the courtyards were thought likely to be unusable for patient recreation/fresh air areas because of the wind tunnel effect and local atmospheric pollution. The Department agreed to the re-introduction, but only on condition that the additional £2.3 million funding was provided from non-exchequer sources. The client therefore approached the Special Trustees who agreed that they would consider “contributing a fair share of the cost of the atria if the other sources of funding accepted their fair share”. However, the Special Trustees did not give a financial commitment to fund the cost of the atria. In the event, whilst there was no ring fenced funding for the atria, the Trustees overall donation was used to cover the cost. The final cost of including the atria at a late stage in the design process was some £3.2 million (excluding the fee implications).

**2.26** In February 1989, the client had agreed to adopt an accelerated programme and revised contract strategy to speed up the project and achieve the original, or possibly an earlier, completion date (paragraph 3.7). As a result, the work was arranged into separate elements (Figure 10). The first element was the enabling works, the second the substructure (Stage 1), and the third the main contract (Stage 2). The client had agreed that work could commence on each of these stages once the design work for that stage had been completed. The main advantage in respect of Phase III was that it allowed Stage 1 to start on site before the project team had completed the design work on Stage 2.

**2.27** In May 1990, the General Managers Group approved a management contract for the foundation and substructure work (Stage 1), but only on the understanding that there was no commitment to proceeding with the remainder of the project. The Region asked the project team to consider how the project could be delivered within the available funding. The general view at this stage was that there was no scope to reduce the functional content to cut costs, though falling tender prices were expected to contribute to meeting costs within budget.



**The Separate elements of  
the Guy's Phase III  
development project**

**Figure 10**

**Enabling works** - included archaeological investigations, demolition of existing buildings and relocation of the Renal Unit and oil tanks. The enabling works started on site in June 1989, ahead of final approval for the scheme. Using traditional NHS contracting methods, the work was completed in June 1990. However, the re-siting of the renal unit and oil tanks were 11 and 16 weeks late, respectively.

**Stage 1** - initially comprised the foundation and substructure works, up to and including the ground floor slab and below ground drainage. This stage was subsequently extended to cover the structural frame. Stage 1 commenced on site in July 1990 on the basis of a management contract. It was completed in September 1991, some 6 weeks late.

**Stage 2** - the main construction stage, involved construction of the envelope and fitting out of the building, including mechanical and electrical engineering services and interface works with the existing hospital. The contract strategy was changed from a traditional approach to a management contract, part way through the design. Stage 2 work started on site in May 1991 with completion programmed for May 1993. In the event, it was finally completed in April 1997.

**Stage 3** - the demolition of existing outpatient departments and other small buildings; the formation of a roundabout to provide an entrance to the new building; consequential pedestrianisation work; and formation of the new main entrance. Start on Stage 3 was dependent on completing Stage 2 as it relied on key departments transferring to the new building. This was completed in July 1997.

Source: Department of Health

**2.28** During this time the service engineering consultants Austen Associates told the project team that “their work was being hampered by the fact that the client was still developing the design brief”. The project manager (P&O Developments) agreed with Austen Associates that the latter would, as of 24 August 1990, assume that the client brief was frozen for the purposes of producing the tender documents. These issues form part of the litigation involving the Trust, P&O Developments and Austen Associates.

**2.29** In September 1990, the General Managers Group were informed that the estimated costs had risen to £100.2 million. The project manager’s monthly report showed that foundation and sub-structure work was generally proceeding according to plan. However, the estimated costs for the main construction stage (Stage 2) were increasing to such an extent that there was a risk that the overall cost of the project would exceed the revised Approval in Principle figure by more than 10 per cent, which would trigger the need for revised Treasury approval.

**2.30** Concerns about the escalating costs and potential delay to the completion date deepened. The Region asked the project manager to identify ways to reduce the overall cost and meet the June 1993 completion date. In September 1990, the project manager presented a report to the General Managers Group summarising the advantages and disadvantages of four options (see paragraph 3.18). The report



concluded that the Stage 1 management contract should be extended to include the concrete frame and that the client should tender a management contract to procure the remaining Stage 2 works competitively. As this would allow the client to maintain continuity of Stage 1 works and take advantage of “the current buying market and a shorter overall construction period; and earlier completion would give positive financial benefit to the Employer over the traditional JCT 80 method of procurement”.

**2.31** During the next few months the management contract was tendered. At the same time the Region attempted to establish a funding strategy to cover the increasing costs of the project. The Special Trustees asked the Region for a “total and explicit commitment” to continue the project and fund the shortfall. The Region’s position remained that no further NHS funding was available. However, they acknowledged the need to agree a funding strategy before the tender and contract stage was committed.

**2.32** In February 1991, all members of the design team, the lead consultant and project sponsor signed the certificate of readiness to proceed to tender for the management contractor. This was then counter-signed by the project manager (paragraph 3.25). Included in the certificates was the statement that “the project has been or can be designed within the budget approved for the project”. Also included was a statement that “Capital and revenue resources will be available to build and commission the scheme according to programme and to operate the planned services”. In February 1991, the Region and Trustees proceeded with a Stage 2 management contract, despite failing to resolve the funding issue. At this time the estimated cost of the project was £115 million and available funding was £82.2 million.

**2.33** In April 1991, when the new Guy’s and Lewisham Trust assumed responsibility for the project, the estimated cost had risen to £118.1 million, an increase of £43.5 million over the Treasury’s 1989 revised Approval in Principle of £74.6 million and £34.9 million over the estimated Budget Cost of £83.1 million (Figure.11).

**Guy's Phase III -  
Reconciliation between  
the September 1989  
revised Approval in  
Principle and the  
April 1991 Budget  
Cost figure**

**Figure 11**

	£ million	£ million
<b>Treasury Revised Approval in Principle September 1989</b>		74.6
<b>Site location factor (approved by the Department of Health)</b>		8.5
<b>Approved Budget Cost figure (November 1989)</b>		<b>83.1</b>
<b>Reasons given for the cost increases</b>		
■ change in VAT status due to budget changes	13.7	
■ increase in professional fee rates (from 15 to 18.15 per cent) as costs such as disbursements, travel time and expenses, additional meetings and design reviews were not fully covered in original documentation.	5.7	
■ approved variations and changes in statutory regulations <sup>1</sup>	2.9	
■ purchase of additional land	0.5	
■ inflation (inflation calculated using GDP deflator) <sup>2</sup>	14.2	
Offset by:		
■ identified saving	- 2.1	
<b>Total cost increase above the Treasury's revised approval</b>	<b>34.9</b>	
<b>Revised Budget Cost</b>		<b>118.1<sup>3</sup></b>

- Notes: 1. The increase due to variations was understated as it excluded elements such as the atria.
2. The Trust used the GDP deflator, as advised by the Department, to calculate the cost increase that could be allocated to inflation. However during the period 1988 to 1995 when the GDP deflator was expected to increase by 30.39 per cent the building cost index was actually decreasing. This therefore overstates the inflation figure.
3. Figures are as presented by the Department to the Treasury as part of the Business case submission

By April 1991 the costs were £ 34.9 million more than the budget cost figure (the revised Approval in Principle figure plus site location factor). The main reasons given to the Department by the Guy's and Lewisham Trust to account for the cost increase between the 1989 budget cost figure and the April 1991 budget cost approval were VAT and inflation.

Source: Guy's and Lewisham Trust

**2.34** With the creation of the Guy's and Lewisham Trust, the NHS Management Executive assumed responsibility for monitoring and authorising the Trust's expenditure, including agreeing their annual capital allocation. As part of their Business Case application, the Trust wrote to the Department seeking additional funding to cover the increased cost (as shown in Figure 11). With hindsight, whilst

there was no doubt that the revised costs had increased to £118.1 million, the reconciliation provided to the Department by the Guy's and Lewisham Trust overstated inflation (due to the use of the GDP deflator rather than the building cost index) and understated the extent of variations. The Department made it clear that they expected the NHS Management Executive Regional Office to resolve the funding situation. After detailed review the NHS Management Executive Regional Office identified funding of £110.9 million; including a further £6 million from the Special Trustees. However, the major source of additional funds came from the NHS, as the Department agreed to fund VAT and increase their overall contribution by 6.5 per cent per annum to allow for inflation. This increased the contribution from NHS sources, to £64 million or 58 per cent of the available funding. Despite the Region's effort to match funding to expenditure, a funding gap of £7.2 million remained.

### **By April 1993, estimated costs had risen to £133.5 million compared with funding of £128 million**

**2.35** In September 1991, the results of a rationalisation exercise in mental health care provision across South London indicated that two adult mental health wards within the Phase III building would be surplus to requirements. At the same time the United Medical and Dental Schools had been offered a charitable donation to form new Asthma and Allergy Research Laboratories. The project managers, P&O Developments, in conjunction with the design team and the Management Contractor, investigated the feasibility of changing one of these wards to a laboratory area. Because of the need to obtain the Trust Board's approval, there was only a short time in which to assess the implications of the change.

**2.36** P&O Developments sent the Trust two versions of their report on the "Implications Associated with the Proposed Asthma and Allergy Unit" and both were dated 24 October 1991. These reports were identical apart from an inconsistency in the conclusion about the impact of the delays on the overall completion date (paragraph 3.29). Both reports concluded that the indicative extra costs would be between £1million and £1.5 million. In a subsequent letter, dated 29 October 1991, P&O Developments estimated that the contract completion date could be delayed by up to five weeks with additional costs of £1.2 to £1.7 million and that these figures could be used to give an indication to the Trust Board of the impact of the change. This design change was approved by the Trust Board on 30 October on the basis that the cost would be covered by a private donation. In the event the private donation never materialised.

**2.37** In October 1991, the NHS Management Executive asked NHS Estates to examine the project. NHS Estate's view was that the Region had failed to comply with the Department's construction guidelines (Capricode), in that they should have reviewed the Approval in Principle following major changes to the project, and because the cost had increased by more than 10 per cent. In view of the position on funding, NHS Estates considered that such a review should have been under taken before going to tender on Stage 1 and again before going ahead with Stage 2.

**2.38** A subsequent detailed review by NHS Estates and the NHS Executive's Trust Finance Unit, which reported in May 1992, concluded that there did not appear to be "an agreed funding package to meet the total costs of the scheme". In particular:

- no final agreement had been reached on who should pay for what;
- no agreement existed over how any increases/decreases in costs should be distributed between funding parties; and
- in the absence of any formal mechanism to approve budget increases and secure funding the Trust had simply gone ahead on the assumption that funding would be found.

**2.39** NHS Estates recommended that urgent action should be taken by the Management Executive to clarify all outstanding funding issues in relation to the Phase III development, for example in relation to VAT and claims for variations etc. Furthermore, in the event that a shortfall still existed, it would be necessary for the Guy's and Lewisham Trust either to seek alternative funding or endeavour to make reductions in the scheme content.

**2.40** Delays to Stage 2 (see Part 3) and the consequential escalating costs of the project complicated the Trust's attempts to resolve the funding issue. At the same time, concerns about the cost increases and delays led the Trust to appoint a new Facilities Director who was also charged with a remit to investigate the delays and cost increases and management and control of the project. He assumed the project sponsor role (the first project sponsor with experience of major building contracts). One of his first actions was to stop any further variations to the project.

**2.41** By July 1992, the position on funding had still not stabilised and the estimated cost had increased to £128 million. Problems with the mechanical and electrical engineering works had delayed progress and resulted in claims for disruption/prolongation (paragraph 3.33 -3.35). The Trust found that uncertainty

regarding claims impeded their attempts to determine a final figure for costs and prevented them resolving their full funding requirements. This is the subject of the current litigation.

**2.42** In December 1992, the NHS Management Executive finally reached an agreement with the Trust on the financing of Phase III. This was based on an “assumed total cost of £128 million and no more” and required an increase in the NHS contribution to some £81 million or 63 per cent of the total. If the total cost increased above £128 million, extra funding had to be managed by the Trust from its block allocation or from non-exchequer sources.

**2.43** By April 1993, when the new Guy's and St Thomas' Trust assumed responsibility for the Phase III project, the project manager estimated that costs had risen to £133.5 million. The new Trust focused its attention on establishing whether the forecast cost of £133.5 million was realistic and how this should be funded.

**2.44** The NHS Executive recognised that the ability of the Trust to generate levels of non-exchequer funding would depend on the outcome of the rationalisation of the Trusts estate and on the site evaluation and the choice of site for the new Trust (paragraphs 1.9-1.11). As a result, in March 1993, in preparation for the new Trust the NHS Executive agreed to cover any shortfall in the non-exchequer contributions towards the total estimated cost of £128 million. Costs above £128 million had to be met by the Trust but could be funded through brokerage or temporary borrowing. However, the NHS Executive stated that “there was no question of the Trust being absolved from the problems of its predecessor or of the need to manage tightly within its income”. Furthermore, the NHS Executive decided that it would not be sensible to revisit the funding package until after the site decision had been made and then, only as part of an overall investment strategy.

## **By October 1994, the costs had risen to £146.9 million compared with funding of £132.5 million**

**2.45** In July 1993, the Trust (through its lawyers, Rowe and Maw) commissioned consultant quantity surveyors, Davis Langdon and Everest, to review the project and provide an independent view on: the accuracy of the cost and programming advice furnished by the project manager and consultants; and the possibility of future litigation. Davis Langdon and Everest's report concluded that Stage 2 was heading for a further delay (paragraph 3.37) and costs had risen to £139.4 million. In October 1993, the project manager reported that the cost had risen to nearly £140 million.

**2.46** The Trust considered various options, including termination or suspension of works and acceleration or deceleration of the programme. They decided to observe the original contract period, whilst attempting to resolve the growing number of claims and reimbursing fees in accordance with the fee arrangements. Because of the continued uncertainty surrounding the future use of Guy's Hospital, the Trust were unable to finalise a revised funding package.

**2.47** During the remainder of 1993, problems with Kentz (the mechanical and electrical engineering sub-contractor - formerly known as M F Kent) escalated leading to further delays and cost increases (paragraphs 3.38-3.41). Several of the sub-contractors remained off-site due to financial disputes with Kentz, and this resulted in little or no work on some parts of the engineering contract. On 19 January 1994, Kentz went into receivership. The appointed receivers declined to continue with the contract. At this stage the cost of the project, including the cost of the receivership, increased to £142 million.

**2.48** One of the risks of a management contract is that the client is responsible if a subcontractor goes into receivership. In order to mitigate against this possibility the contract with Higgs and Hill (the management contractor) incorporated amendments recommended by P&O Developments. The aim of the amendments was to transfer the cost risks of a works contractor's insolvency to the management contractor. Following the receivership of Kentz, Higgs and Hill and the Trust obtained advice from their lawyers, including Queen's Counsel. The advice given was that the Trust would be liable for the financial consequences of a works contractor's failure, because the protective clause in the contract was not strong enough. On the advice of the Queen's Counsel the Trust decided that the cost of pursuing any action were not justified by the strength of the case. The Trust estimated that the eventual outcome was that the Trust have had to meet some £4.26 million in costs, due to the receivership of Kentz and another works contractor, W S Brickworks. The amendment to the management contract now forms part of the current litigation.

**2.49** Following the collapse of Kentz and the strategic policy decision regarding the future use of Guy's (paragraph 1.9-1.11), the Trust Facilities Director (the nominated project sponsor) undertook a detailed review of the Phase III contract. He recommended completing the contract on the basis of a full and final contractual cost and timetable. This recommendation was supported by the Trust's professional advisors and NHS Estates. After taking legal advice, the Trust agreed that a subsidiary company of Higgs and Hills would take over responsibility for the mechanical and electrical engineering services.

**2.50** In April 1994, the Trust proposed a supplemental agreement with Higgs and Hill based on a new programme with a completion date of December 1994. This proposal was against the overall advice of design engineers, Austen Associates, and quantity surveyors, Beard Dove, who did not agree that the supplemental programme was feasible. P&O Developments response, in a letter dated 24 July 1994, was that the settlement figure appeared to be high. In a subsequent letter in September 1994, they confirmed this view but added “that in principle they believed that the method of approach taken in the wrap up deal and the subsequent Heads of Terms was acceptable and was likely to achieve the most realistic terms for the Trust in obtaining certainty of costs and works completion for the project. But they had reservations on Higgs and Hills ability to achieve the completion date”.

**2.51** Meanwhile, NHS Estates and the Trust’s professional advisers (Davis Langdon and Everest) had advised the NHS Executive to agree to the proposed supplemental agreement. NHS Estates considered that, because of the continued escalation in costs experienced by the Stage 2 contract since its inception, they were totally supportive of the Trust’s endeavour to bring certainty to an increasingly complex situation. Furthermore, they believed that certainty of cost would assist the Trust in seeking to finalise the disputes in relation to professional fee entitlements and outstanding funding arrangements.

**2.52** Accordingly, in August 1994, the NHS Executive approached the Treasury for their approval for the Trust to proceed to finalise a negotiated settlement up to £84.5 million for Stage 2 of the Phase III project, which would take the overall outturn cost to £147 million. This was the first approach to Treasury, regarding the costs of the project, since they gave their Approval in Principle in 1989. The Treasury, in their initial reply, raised “serious concerns about costs and how this project has been managed” and asked a number of questions. They sought confirmation that the NHS Executive’s Chief Executive was aware of the proposed settlement and would be prepared to defend it as providing value for money. The NHS Executive confirmed that the Chief Executive was aware of the proposed settlement and the need to ensure it represented good value for money and also that “he was prepared to defend it if called upon to do so”.

**2.53** The Treasury also sought: an analysis of costs under alternative assumptions, explanations for the cost increases and delays, and assurances about funding. The NHS Executive assured Treasury that the increased costs of the development would be met from within existing baselines. They indicated that, based on a pessimistic estimate of the expected contributions from non-exchequer sources, there would be a funding gap of £14.4 million (Figure 12). This estimate reflected the fact that some non-exchequer sources had indicated that they might

stop payments or even request repayment because of fears over the future usage and status of Guy's Hospital. For example it assumed a zero contribution from Sir Philip Harris and only £0.3 million from other private contributors. However, the NHS Executive noted that the Trust was confident about increasing the contribution from the Special Trustees and was making strenuous efforts to persuade other non-exchequer sources to maintain their contributions.

**NHS Executive's  
submission to Treasury  
on the funding position at  
the time of the negotiated  
settlement**

**Figure 12**

Source of Funding for Guy's Phase III	£ million	NHS Executive submission to Treasury October 1994 £ millions
October 1994 - Estimated Out-turn		146.9 <sup>(a)</sup>
<b>Funding Sources</b>		
Special Trustees	32.7	
Harris Trust	-	
British Kidney Patients Association	0.3	
Guy's Kidney Patient Association	-	
Sub -total private/charitable donations to NHS		33.0
exchequer funding from UMDS/Academic	11.0	
private donors to UMDS	5.7	
Sub Total UMDS/Academic		16.7
NHS Central Exchequer	73.0	
Trust Block Allocation	9.8	
Sub-total NHS Exchequer funding		82.8
<b>Total Agreed Funding</b>		<b>132.5<sup>(b)</sup></b>
<b>Shortfall<sup>(b)(a)</sup></b>		<b>(14.4)</b>

At the time of the submission for approval of the supplemental agreement there was a funding shortfall of £14.4 million based on a pessimistic estimate of the expected contribution from non-exchequer sources.

Source: NHS Executive

**2.54** After further discussion and review, Treasury accepted that the supplemental agreement appeared to represent value for money and in October 1994 gave approval for the Trust to finalise the negotiated settlement with Higgs and Hill for the main construction stage (Stage 2) at a value of up to



£83.9 million. This approval was conditional on the Trust making strenuous efforts to achieve a settlement below this figure. The Treasury asked the Trust to provide: a reconciliation of the project approval cost (£74.6 million) to the revised estimate of the total cost (£146.9 million); an analysis giving the detailed reasons for the cost over-runs; and information on the steps to be taken to ensure that the lessons of the case were learned and disseminated.

**2.55** The Treasury approval took the total project cost to £146.894 million. Under the terms of the agreement, eventually signed in December 1994, Higgs and Hill were committed to achieving practical completion of the building by 15 January 1995. If this date was not achieved, the Trust were given rights to deduct Liquidated and Ascertained Damages of £75,000 per week from its payment to Higgs and Hill, with effect from 16 January 1995. Both parties agreed not to pursue any claims against each other relating to events before the settlement date. This agreement was supported by the Trusts retained advisors, consultant quantity surveyors (Davis Langdon and Everest) and solicitors (Rowe and Maw), and their architects (Watkins Gray International). P&O Developments supported the intent of the settlement subject to reservations on time and costs.

**2.56** In January 1995, the Trust provided the Treasury with: a reconciliation of the project approval costs with the overall project costs (Figure 13); an explanation of the reasons for the cost over-runs; a summary of time extensions granted and delays to the completion date (paragraph 3.41 and Figure 22); and a statement of the steps taken to ensure that lessons were learned and disseminated (paragraph 1.21 and Appendix 2).

**2.57** One of the main concerns highlighted in the Trust's reconciliation, was the high level of disputes and claims that had occurred throughout the project. These had resulted in claims from the works contractors for disruption/prolongation totalling £13.9 million. Other issues highlighted in the reconciliation included the fact that there were more than £8.8 million of client variations and that the extra cost of building in Central London (which had not been allowed for in the revised Approval in Principle), overshadowed the effects of inflation, adding some £11 million to the overall costs. In addition there were large increases in the amount paid in respect of professional fees, which increased from £9.0 million to £19.2 million. Whilst this was in many ways linked to the fact that the overall cost of the project had increased, the increase in fee rate from 15 to 18.15 per cent was a contributory factor. In addition the reconciliation highlighted two items that were not included in the 1989 Approval in Principal figure, VAT of £18 million and Project Directorate salaries of £1.8 million. Finally, because the legal advice was that the amendment to the management contract may not be strong enough, the Trust bore the extra costs of securing completion of the mechanical and electrical

Cost Over-runs, Funding Problems and Delays on  
Guy's Hospital Phase III Development

**Figure 13**

**Guy's Phase III Development - Reconciliation of project approval cost with estimated overall project cost**

Item	Construction costs		Equipment	Professional	Project	VAT on	Other	Total
	£000'	£000'	(Incl. VAT)	Fees	Directorate Salaries	construction		
	£	£	£	£	£	£	£	£
<b>Revised AIP September 1989</b>		61,666	3,946	9,026	–	–	–	74,638
Cost increases above AIP								
Enabling works		654						
(a)								
Oil & VIE		289						
(b)								
Renal Unit		609						
(c)								
Stage 1		2,052						
(d)								
Stage 2								
Client variations								
■ Enclosed Atria	2,245							
■ HV ring main	925							
■ Statutory variations	1,279							
■ Interface	947							
(e)								
■ Asthma & Allergy	772							
■ Balance	<u>2,661</u>							
(f)								
Total client variations Stage 2	8,829							
Inflation/Location Adjustment	11,021							
(g)								
Less: Buying Gains	<u>(4,818)</u>							
(h)								
<b>Subtotal</b>		15,032						
Clause 3.21	3,200							
(i)								
Design team variations	4,604							
<b>Total</b> increase in Stage 2		22,836						
construction costs								
Claims for		13,921						
disruption/prolongation								
(all stages)								

Cost Over-runs, Funding Problems and Delays on  
Guy's Hospital Phase III Development

Other changes		(1,465)	10,204	1,853	17,992	3,311	
<b>Overall project costs</b>	102,02	2,481	19,230	1,853	17,992	3,311	146,89
<b>October 1994</b>	7						4

- Notes:
- a Increase in cost of enabling works due mainly to client variations
  - b Oil tanks had to be relocated underground and English Heritage imposed additional constraints on new oxygen tank location
  - c Increase partly due to client variations also due to 'extra over' costs of locating on top of link building
  - d Partly client variations plus changes in scope and dewatering problems
  - e Existing plans of building and engineering services plans were inaccurate, asbestos was discovered, ceilings needed to be demolished
  - f Around 50 or so other variations arising for a myriad of reasons during design and construction
  - g AIP cost was updated by separate indices for building, electrical and services work, however overall inflation allowance largely overshadowed by additional cost of building in central London
  - h Overall savings resulting from letting works packages in a falling market
  - i The balance of legal advice was that the protective clause (Clause 3.21) in the management contract was not strong enough and the Trust would be liable for the financial consequences of Kentz's insolvency.

This shows that, at the time the Department approached the Treasury for approval of the Supplemental Agreement with Higgs and Hill, construction costs had increased significantly with a corresponding increase in VAT and professional fees. Issues such as the addition of atria, HV ring mains, statutory variations and Asthma and Allergy Unit are discussed in the report as is the effect of VAT and increased professional fees. The responsibilities for the cost increases are the subject of litigation.

Source: Guy's and St. Thomas' Trust

**Comparison of NHS  
Executives submission to  
Treasury in October 1994  
and Trust Finance  
Director's funding profile  
in January 1995**

**Figure 14**

Source of Funding for Guy's Phase III	NHS Executive submission to Treasury October 1994 £ million	Trust Projection January 1995 £ million	Change in outturn and funding £ million
<b>Project Out-turn</b>	<b>146.9</b>	<b>148.6</b>	<b>1.7</b>
<b>Funding Sources</b>			
Special Trustees	32.7	23.7 <sup>(1)</sup>	(9.0)
Harris Trust	0	2.5	2.5
British Kidney Patients Association	0.3	0.4	0.1
Guy's Kidney Patient Association	0	1.0	1.0
<b>Sub -total private/charitable donations to NHS</b>	<b>33.0</b>	<b>27.6</b>	<b>(5.4)</b>
exchequer funding from UMDS/Academic	11.0	10.5	(0.5)
private donors to UMDS	5.7	5.5	(0.2)
<b>Sub total UMDS/Academic</b>	<b>16.7</b>	<b>16.0(2)</b>	<b>(0.7)</b>
Central Exchequer	73.0	73.0	-
Trust Block Allocation	9.8	9.8	-
<b>Sub-total NHS Exchequer</b>	<b>82.8</b>	<b>82.8</b>	<b>-</b>
<b>Total Agreed Funding</b>	<b>132.5</b>	<b>126.4</b>	<b>(6.1)</b>
<b>Shortfall</b>	<b>(14.4)</b>	<b>(22.2)</b>	<b>(7.8)</b>

Notes: 1. At the end of 1994, the Special Trustees informed the Trust that, pending the decision on the future of Guy's Hospital, they were freezing their contribution and would not be providing the additional £9 million sought by the Trust.

2. The UMDS and Academic Funding element were provided mainly from public funds from the Department for Education, but included £5.5 million from charitable sources

Between October 1994 and January 1995, estimated available funding reduced by £6.1 million, and the funding shortfall increased by £7.8 million, mainly due to the decision by the Special Trustees in December 1994 to refuse the Trust's request for further funding. However, the January 1995 package was more optimistic about keeping the funds from Sir Philip Harris and other non exchequer sources.

Source: NHS Executive

engineering works, following the works contractors receivership. At this time the Trust estimated that this would add a further £3.2 million to the overall cost of the project. The Trust told the Treasury that they were preparing the grounds for litigation to recover some of these costs.

### **By September 1996, estimated out-turn costs (excluding modification works) had risen to £152.3 million but without resolution of the funding issue**

**2.58** In January 1995, the Trust Finance Director reported to the Trust Board that anticipated sources of funding totalled £126.4 million, £6 million less than the estimate presented to Treasury three months earlier (Figure 14). The main reason for the decrease was the Special Trustees decision to refuse the Trust's request for further funding. The Trust Finance Director concluded that as the cost and use issues were close to being resolved, the parties should discuss how the deficit should be addressed. In the meantime the NHS Executive continued to make brokerage funds available to cover the project's funding needs.

**2.59** At the same time, Higgs and Hill informed the Trust that they were unable to keep to the terms of the agreement, signed in December 1994, and would not be completing in January as agreed (paragraph 3.43). The Trust therefore activated the Liquidated and Ascertained Damages clause. Higgs and Hill began to incur damages of £75,000 per week for delays after the agreed deadline.

**2.60** Over the next few months new problems of a technical nature began to emerge, including serious corrosion of new copper pipe-work. Expert examination led the Trust and its professional advisors to conclude that a large proportion of the three or so miles of copper pipe work would need to be replaced and that the £3 - £5 million cost of replacement should be borne by the contractor. Higgs and Hill, however, disputed their liability for this matter. They also claimed that this was a material event which invalidated the negotiated settlement.

**Comparison of NHS  
Executives submission to  
Treasury in October 1994  
and Trust Finance  
Director's funding profile  
in January 1995**

**Figure 14**

Source of Funding for Guy's Phase III	NHS Executive submission to Treasury October 1994 £ million	Trust Projection January 1995 £ million	Change in outturn and funding £ million
<b>Project Out-turn</b>	<b>146.9</b>	<b>148.6</b>	<b>1.7</b>
<b>Funding Sources</b>			
Special Trustees	32.7	23.7 <sup>(1)</sup>	(9.0)
Harris Trust	0	2.5	2.5
British Kidney Patients Association	0.3	0.4	0.1
Guy's Kidney Patient Association	0	1.0	1.0
<b>Sub -total private/charitable donations to NHS</b>	<b>33.0</b>	<b>27.6</b>	<b>(5.4)</b>
exchequer funding from UMDS/Academic	11.0	10.5	(0.5)
private donors to UMDS	5.7	5.5	(0.2)
<b>Sub total UMDS/Academic</b>	<b>16.7</b>	<b>16.0(2)</b>	<b>(0.7)</b>
Central Exchequer	73.0	73.0	-
Trust Block Allocation	9.8	9.8	-
<b>Sub-total NHS Exchequer</b>	<b>82.8</b>	<b>82.8</b>	<b>-</b>
<b>Total Agreed Funding</b>	<b>132.5</b>	<b>126.4</b>	<b>(6.1)</b>
<b>Shortfall</b>	<b>(14.4)</b>	<b>(22.2)</b>	<b>(7.8)</b>

Notes: 1. At the end of 1994, the Special Trustees informed the Trust that, pending the decision on the future of Guy's Hospital, they were freezing their contribution and would not be providing the additional £9 million sought by the Trust.

2. The UMDS and Academic Funding element were provided mainly from public funds from the Department for Education, but included £5.5 million from charitable sources

Between October 1994 and January 1995, estimated available funding reduced by £6.1 million, and the funding shortfall increased by £7.8 million, mainly due to the decision by the Special Trustees in December 1994 to refuse the Trust's request for further funding. However, the January 1995 package was more optimistic about keeping the funds from Sir Philip Harris and other non exchequer sources.

Source: NHS Executive

**2.61** Higgs and Hill received no payment from the Trust during 1995 as, cumulatively, the weekly damages of £75,000 exceeded payments due. By September 1995 the Trust and Higgs and Hill had reached an impasse. The Trust were holding firm to the terms of the supplemental agreement but had secured no greater certainty about the time-scale for completing the building. Meanwhile, Higgs and Hill continued to work on the project but without any cash flow from the Trust. They seemed unable to resolve the engineering problems and faced an escalating bill in relation to Liquidated and Ascertained damages and on the copper pipe-work. Higgs and Hill felt that they should have extensions of time and cost for their work in attempting to resolve the technical problems; they accepted that the pipe-work needed to be made good, but that this should be done under the terms of an insurance policy jointly held by the Trust and Higgs Hill for rectification of damage; and they contested the Trust's rights to levy Liquidated and Ascertained Damages.

**2.62** Higgs and Hill's view was that "as a consequence of variations issued by the Trust, in particular on the discovery of the defective pipe-work in March 1995, they were entitled to loss and damages from the Trust". The Trust challenged the basis of Higgs and Hill's assertion and indicated that it had no authority to go beyond the £83.9 million agreed with Treasury in settling the dispute. In December 1995 a meeting was held between the Chairman of the Trust, the Chairman of the NHS Executive South Thames Region and Higgs and Hill. As a result of the meeting the Trust was authorised by the NHS Executive to negotiate above the £83.9 million in the interests of securing an early resolution of the contract. In January 1996, the Trust, NHS Executive and Higgs and Hill agreed that the Trust would pay £85.9 million in full and final settlement of the Stage 2 construction costs.

**2.63** In July 1996, the NHS Executive wrote formally to the Treasury seeking agreement to proceed with a second supplemental agreement. Treasury agreed that the Trust should proceed to conclude the commercial settlement with Higgs and Hill. The cost of the main elements in the second agreement were:

- the Trust agreed to pay Higgs and Hill £2.409 million including VAT and waived its entitlement to liquidated and ascertained damages;
- the Trust granted Higgs and Hill a £3.31 million (excluding VAT) contract for the modification of Phase III, required to meet both the rectifications necessary to meet shortcomings in the original design and the revised purposes envisaged in the decision to make St Thomas' the main site for in patient services, the price to be determined on a cost plus basis under agreed terms;

- Higgs and Hill took responsibility for rectifying the damaged copper pipe-work and for any shortfall in the insurance settlement that covered the cost of this;
- an additional sum of £0.497 million was included for miscellaneous items including security and insurance costs; and
- the Trust relieved Higgs and Hill from their obligation to undertake work, agreed in the first supplemental agreement, of approximately £2.5 million.

**2.64** The second supplemental agreement, excluding the modification works, increased the overall cost of Phase III to £152.3 million. This was £5.4 million more than the approved cost of the project following the first supplemental agreement in November 1994 (Figure 15). Meanwhile agreed funding on the original contract was £125.3 million (Figure 16 on page 44). This was £7.2 million less than the funding reported to Treasury during the submission for approval of the first supplemental agreement in October 1994 (paragraph 2.53 and Figure 13). As a result, between October 1994 and July 1996, the funding shortfall increased from £14.4 million to £27 million (Figure 16 on page 44). The main reason for the discrepancy in funding was the decision by the Special Trustees, in December 1994, to refuse the Trust's request for further funding pending the decision on the future of Guy's Hospital. Also, the United Medical and Dental Schools' and Academic estimated contribution was reduced by £3.3 million. By July 1996, the Trustees' position on providing any additional funding remained unchanged, but the Trust were successful in their efforts to persuade non-exchequer contributors to maintain their contributions.

## **By December 1997, the total cost of the project was £159.9 million and funding was £133.1 million**

**2.65** By December 1997, following completion of the contract in April 1997, and hand-over in July 1997, the projected costs of the original contract had reduced slightly to £151.8 million. However, the expected cost of the modifications work contract had increased to £8.1 million. This took the overall cost of Phase III to £159.9 million. At the same time the agreed funding for the original contract remained £125.3 million (paragraph 2.64) and the funding for the modifications work was £7.8 million, a total of £133.1 million. In accepting the need for modification works, to reflect the revised use of Guy's Phase III, the Trust negotiated a separate funding package with the NHS Executive comprising £0.7 million private donations and £7.1 million public funding. Overall, there remained a funding deficit of £26.8 million on the Phase III development project (Figure 17 on Page 45). This is mainly being met from EFL brokerage.



**Reasons for the cost increases between Treasury's revised approval in October 1994 and the cost estimate at the time of the second supplemental in July 1996 - excluding Modifications work(1)**

**Figure 15**

	£ million	£million
<b>Costs approved as part of first supplemental agreement signed in December 1994 (based on October 1994 submission)</b>		<b>146.900<sup>(a)</sup></b>
<b>Stage 2</b>		
Heads of terms wrap- up	2.050	
VAT (on above)	0.359	
	2.409	
Miscellaneous		
Insurance	0.267	
Security	0.047	
Sundry minor changes	0.183	
	0.497	
Sub-total (additional cost of management contract)		149.800
Value of work which the Trust assumed responsibility for having relieved Higgs and Hill from obligation agreed as part of first supplemental	2,500	
<b>Total costs approved as part of second Supplemental Agreement<sup>1</sup></b>		<b>152.300<sup>(a)</sup></b>
<b>Cost increase between first and second supplemental agreement<sup>(b)(a)</sup></b>		<b>5.406</b>

Note: 1. The cost of modifications work has been excluded from this comparison as it is a separate contract and is not directly comparable with the first supplemental agreement which was approved before the final decision on the future of Guy's Hospital and therefore made no reference to modifications work.

The main reasons for the £5.4 million increase in cost between the first and second supplemental agreements are the costs associated with the Heads of Terms agreement and the additional costs of rectification work.

Source: As calculated by Guy's and St Thomas' Trust

**2.66** At the outset of the Phase III project, a key feature of the project was the fact that some £16 million (45 per cent of funding) was to be provided by private and charitable donors (paragraph 1.3, 2.8 and Figure 7). However, as demonstrated in the preceding paragraphs, during the course of construction the balance of funding has changed. By December 1997, the total agreed funding provided by private and charitable donors, excluding modifications work, was £32.7 million (26 per cent) with exchequer sources providing £92.6 million (74 per cent) – Figure 17.

**Changes in the funding position from submission to Treasury for approval of first supplemental in October 1994 and submission of second supplemental agreement in July 1996**

**Figure 16**

	NHS Executive to Treasury for approval of first supplemental October 1994	Trust's analysis of funding for second supplemental in July 1996	Change in outturn and available funding
	£ millions	£ million	£ million
<b>Projected Outturn<sup>(1)</sup></b>	<b>146.9</b>	<b>152.3</b>	<b>5.4</b>
<b>Source of Funding for Guy's Phase III</b>			
Special Trustees	32.7	25.2	(7.5)
Harris Trust	0	2.5	2.5
British KPA	0.3	0.3	-
Guy's KPA	0	1.0	1.0

**Total projected out-turn costs of the Phase III development - including modification works, as at December 1997**

**Figure 17**

	<b>Trust Projection on original contracts December 1997</b>	<b>Approved Modifications Contracts</b>	<b>Total Projected Costs December 1997</b>
	<b>£ million</b>	<b>£ million</b>	<b>£ million</b>
<b>Total out-turn</b>	<b>151.8</b>	<b>8.1</b>	<b>159.9</b>
<b>Sources of Funding</b>			
Special Trustees	25.2		25.2
Harris Trust	2.5		2.5
British KPA	0.3		0.3
Guy's KPA	1.0		1.0
One Small Step	-	0.7	0.7
<b>Sub total private donations</b>	<b>29.0</b>	<b>0.7</b>	<b>29.7</b>
exchequer funding from UMDS/Academic	9.8	0.4	10.2
charitable donors to UMDS	3.7		3.7
<b>Sub total UMDS /Academic</b>	<b>13.5</b>	<b>0.4</b>	<b>13.9</b>
NHS Central Exchequer	73.0	6.7	79.7
Trust Minor Block	9.8	-	9.8
<b>Sub-total NHS Exchequer</b>	<b>82.8</b>	<b>6.7</b>	<b>89.5</b>
<b>Total Agreed Funding</b>	<b>125.3</b>	<b>7.8</b>	<b>133.1</b>
<b>Shortfall</b>	<b>(26.5)</b>	<b>(0.3)</b>	<b>(26.8)</b>

By December 1997, the total agreed funding for the original project (excluding modification works) was comprised of: £32.7 million (£29 + £3.7 million) or 26 per cent private and charitable donations; and £92.6 million (£82.8 + £9.8 million) or 74 per cent - exchequer funding. The majority of funding for the modification works was provided by exchequer sources. The Trust, however, had still not identified any further funding to meet the overall deficit and the shortfall of £26.8 million was being met by EFL brokerage of £26.4 million.

Source: Guy's and St Thomas' Trust

## Part 3: Reasons for the delays to Phase III

### Key Findings

- When the Treasury first approved the project, the completion date was December 1993. Construction was completed in April 1997.
- The reasons for this delay are many and complex, but key factors were: delays in putting the design team in place; delays in resolving cost and funding problems; the failure to freeze the design, and significant subsequent design changes; delays in designing the engineering services and producing associated drawings; problems with the services installation; the insolvency of works package contractors; technical problems, for example defective pipe-work; and rectification and modification works. These matters are currently the subject of litigation.
- The project has been marked by numerous changes in management and control. Between 1986 and 1993 there were four changes in client body with overall responsibility, six project sponsors responsible for day to day issues on behalf of the client, and five project managers.
- Attempts to mitigate the delays, and to deliver the project as early as possible, included changes to the project management arrangements and the adoption of an accelerated programme and subsequently a management contract for the main construction stage.
- When the decision was taken to use a management contract, the main perceived advantages were early commencement and a shorter construction period. However, it was recognised that experience with this approach in the NHS had not been wholly successful and that it carried additional risks and greater uncertainty over costs. The management contract provided for completion of Stage 2 in May 1993. In the event, deemed practical completion for Stage 2 was in June 1996 and final completion April 1997.
- Following the receivership of the mechanical and electrical engineering subcontractors in January 1994, the Trust agreed a supplemental agreement with the management contractors to bring more certainty to the project in terms of time and cost. However delays continued and the terms of the agreement were not met. In September 1996 a second supplemental agreement was needed to ensure completion.
- At the time of completion in April 1997, the management contractors (Higgs and Hill) still had various modification works to complete. This work, and the commissioning work, was completed in July 1997.

## Part 3: Reasons for the delays to Phase III

**3.1** This Part of our report examines the reasons for the delays to Guy's Phase III. A detailed chronology of events is at Appendix 1.

**3.2** The estimated project completion date changed many times during the period 1989 to 1996, and construction of Guy's Phase III was completed on 14 April 1997, some three years and four months late. Figure 18 overleaf records the timing of these changes and the effect on the expected completion date.

**3.3** A factor in understanding the events that took place and the delays that occurred, was that during the project, the National Health Service went through a number of major changes, and there were six different project sponsors representing the clients' interests in the project, and five changes in the project manager (Figure 19 on page 49).

### **Between the original approval in principle in 1986 and the revised approval in principle in 1989, delays occurred but the final target delivery date remained December 1993**

**3.4** In November 1986, when the Treasury granted the original Approval in Principle to the Region, the forecast practical completion date was December 1993, with final completion in late 1994.

**3.5** More than eight months after the approval to proceed, the Region had still not appointed the design team. The Guy's Special Trustees, Sir Philip Harris and the United and Medical Dental Schools, were concerned that the scheme was losing momentum and that the timetable was slipping. They suggested that the Region should appoint an external project manager, expedite the design team appointments and streamline the contracting methods. As a result, in September 1987, following a competitive tendering exercise, the Region appointed Conspectus as the Guy's Phase III project manager, and in November 1987 they appointed the design team (Figure 8 and paragraph 2.11). The Region then delegated client responsibility to the District, with a remit to concentrate their efforts on finalising the outline design and agree a robust budget cost estimate (Capricode Stage 2).

**Figure 18**

### Responsibilities in the Calf Processing Aid Scheme

**The Intervention Board** is responsible for operating the Calf Processing Aid Scheme by:

- registering abattoirs
- publishing scheme literature and forms
- checking and processing claims for calves from abattoirs
- initiating verification programmes at abattoirs
- arranging necessary inspection visits to farms

**The State Veterinary Service** checks that abattoirs applying for approval under the scheme have the facilities suitable for processing calves.

**The Meat Hygiene Service** acts on behalf of the Intervention Board to:

- check the eligibility of every calf (ante-mortem)
- safeguard animal welfare
- oversee all slaughtering and disposal of material
- complete appropriate paperwork
- ensure that resultant material is dispatched in a secure form

**The Meat and Livestock Commission** acts on behalf of the Intervention Board by:

- checking the eligibility of every calf (post-mortem) in high throughput abattoirs
- in conjunction with the Meat Hygiene Service, completing scheme documentation

**Abattoirs registered to participate in the scheme** are responsible for:

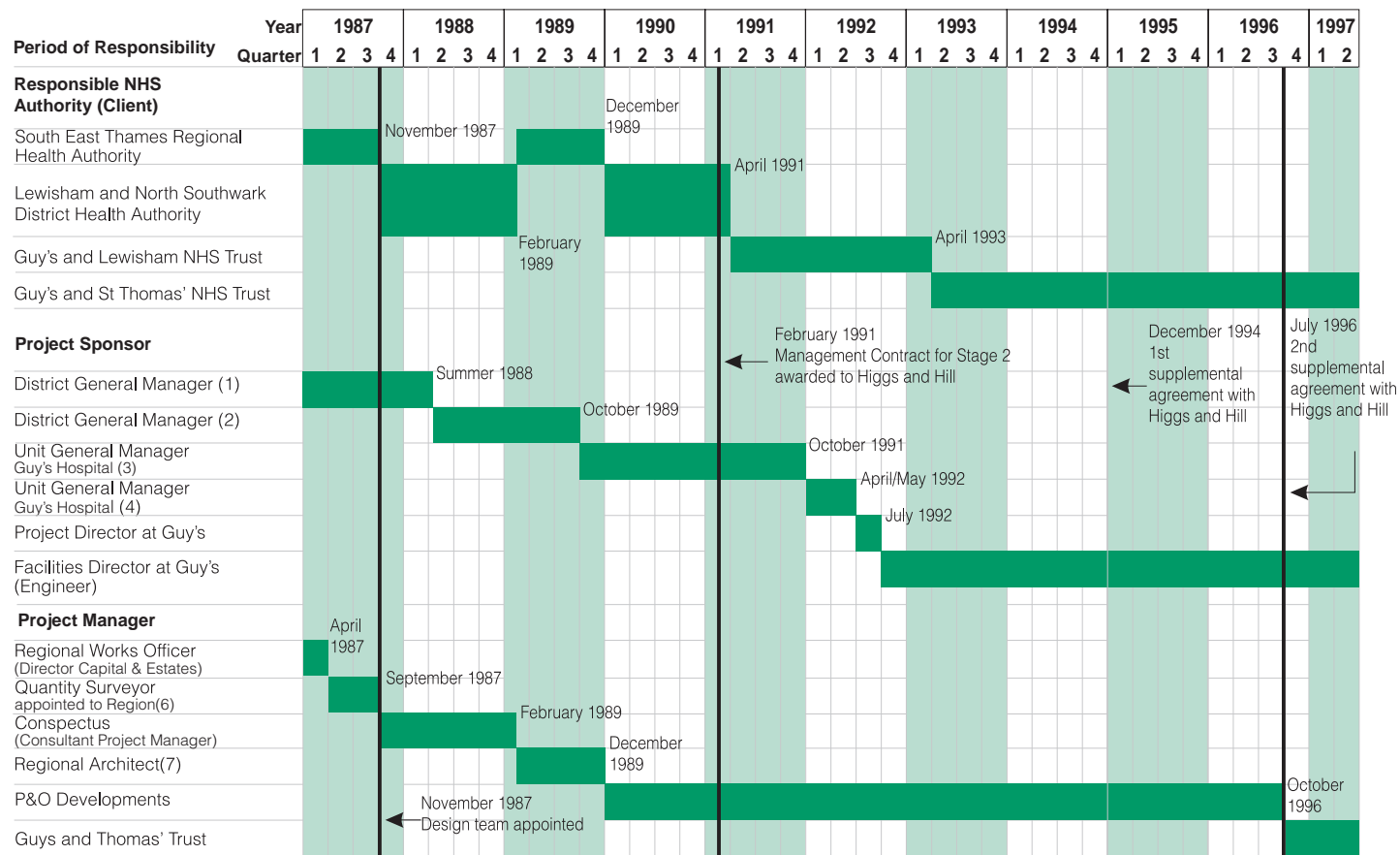
- notifying the Board of intended slaughter times
- checking the eligibility of calves
- slaughtering the calves
- disposing of the carcasses
- maintaining good records
- paying the Meat Hygiene Service for its services

**Farmers/producers** negotiate direct with markets and abattoirs on the sale of eligible calves.

Note: In Northern Ireland, the appropriate checks are carried out by the Department of Agriculture Northern Ireland.

**Changes in the management and control responsibilities for the Guy's Phase III Development Project**

**Figure 19**



- Notes:
1. Promoted to South East Thames Regional General Manager
  2. A psychogeriatrician by profession
  3. Unit General Manager Guy's, previously Finance Director
  4. Previously a Department of Health Civil Servant
  5. A Capital planner involved in the project since early 1986 and now works for the Facilities Director
  6. Quantity Surveyor appointed to Regional Health Authority from Welsh Development Agency
  7. Director of Capital and Estates Management – Architect acting Project Manager working with Quantity Surveyor (6) so maintaining some continuity

Source: The chart shows the roll-over of management responsibilities for the Phase III development. Not only were there five changes in project managers but the changing process from District to Guy's and Lewisham to the Guy's and St Thomas' Trust meant that there were significant changes in the approach of the client and consequent changes in the project sponsor. Indeed the first four project sponsors had little or no construction experience or understanding.

**3.6** In September 1988, the Guy's Trustees raised further concerns with the Region about keeping the project to the agreed timetable. In particular, they were concerned that the design team would come to a halt in mid-October unless authority to proceed to the next stage was assured by no later than 1 November 1988. In response, the General Manager's Group authorised the design team to "proceed at risk" with the design development and detailed design. During this time the design team put forward proposals to enable practical completion to be achieved at an earlier date than if a conventional contract and associated programme were adopted. Their report recommended that further consideration should be given to a two stage contract or alternatively a management contract.

**3.7** In January 1989, the external project manager, Conspectus, indicated that if the project was built in accordance with the original Approval in Principle programme, the completion date would be February 1995. The General Managers Group considered that this delay to the completion date was unacceptable and asked the design team for suggestions for achieving an earlier project completion date. In response, the design team proposed an accelerated timetable that would allow the work to be arranged in specific elements. This created a phased or staged construction in which design of one stage could be overlapped with the construction of another, thereby achieving completion by December 1993 (Figure 10 and paragraph 2.26). The client agreed to adopt the accelerated approach as it ensured that they could meet the required original timetable. In February 1989, the General Managers Group terminated Conspectus's contract on the grounds that they needed stronger management control (paragraph 2.15).

**3.8** In February 1989 the Certificates of Readiness to proceed to Design (Capricode Stage 3) were issued by the project manager and design team. This suggested that the scheme brief had been completed and accepted by all. However this was not the case as the Budget Cost had yet to be approved.

**3.9** Following the Region's termination of Conspectus's contract, the regional architect, as acting project manager, prepared a Management Control Plan. This plan assumed a start on site for main construction (Stage 2) of April 1991, with practical completion of the main works in December 1993 and commissioning during the first half of 1994.

**3.10** During 1989, the design team proceeded with the Design Development and Detailed Design "at risk" and in the absence of a completed design brief. In June 1989, the site clearance (the first part of the enabling works) commenced.



The enabling works encompassed a number of separate contracts, generally let by competitive tender, with the objective of allowing the Phase III development to progress according to programme.

**3.11** By August 1989, the Region had finalised a revised Approval in Principle and Budget Cost submission. The Treasury approved the revised Approval in Principle in September 1989 and the Department agreed the Budget Cost figure in November 1989 (paragraphs 2.18 - 2.21).

### **By April 1991, the appointment of P&O Developments and a change to the contract strategy for Stage 2 led to a revised planned completion date of May 1993**

**3.12** The Region tendered for the new project manager during 1989 and appointed P&O Developments following a competitive tender exercise. Although P&O Developments were the highest bidder, the Trust considered that they offered the best value as they were advocating strong management control, competent engineering staff on site and also suggested that they could reduce the overall timetable. P&O Developments' assertion that they could reduce the overall timetable was instrumental in obtaining the General Managers Group's backing. As a result, the Region appointed them as the project managers on Phase III in December 1989.

**3.13** In December 1989, P&O Developments produced a strategic programme which indicated that they would reduce the overall development period by six months by: bringing forward the start on site of main construction (Stage 2) by three months to January 1991 and shortening the overall construction phase by three months. This gave an estimated completion date of June 1993.

**3.14** On the recommendation of P&O Developments, and in line with the earlier recommendation of Conspectus, the Stage 1- foundation and substructure works - was let as a management contract. This enabled work to start on the substructure prior to the completion of the detailed design for the main contract. After competition, Higgs and Hill were awarded the Stage 1 contract in February 1990, but it was May before the final contract was signed. Stage 1 commenced on site in July 1990. On the recommendation of P&O Developments, it was agreed that the construction of the frame should be brought forward from the main contract and added onto the Stage 1 works. The extended Stage 1 works were completed in September 1991, some six weeks late. The architects granted an extension for this period to cover:

- the discovery of a suspected wartime bomb;
- clash of contiguous pile wall with existing services;
- late footbridge diversion; and
- late information from design engineers.

**3.15** The procurement route for Stage 2 began along traditional lines, using a form of contract based on complete and fully costed detailed drawings, taking information from the Quantity Surveyor's Bills of Quantities (known as the JCT 80 contract).

**3.16** During the first half of 1990 the service engineers, Austen Associates, considered that their design process was being hampered by the fact that the client was still developing the brief. In particular, the client's decision in early 1990, to re-introduce atria, and enclose previously un-enclosed space, had significant design implications for the mechanical and electrical services. For example "atria were likely to increase heat build up, requiring additional mechanical ventilation, extra cooling plant and smoke extraction ventilation". This led to delays in producing the mechanical and electrical engineering drawings and threatened the June 1993 completion date.

**3.17** In August 1990, Austen Associates told the project manager that the planned date for the issue of mechanical and electrical engineering tender documents would not be met unless the client brief was frozen by 31 August 1990. P&O Developments agreed with Austen Associates that, as of 24 August 1990, they could assume that the client's brief was frozen for the purposes of producing tender documents by 7 January 1991.

**3.18** In September 1990, P&O Developments told the Region that a key issue was the contract methodology for Stage 2, and whether they should switch from the traditional construction contract to a management contract, for the main construction stage (paragraph 2.30). After review and discussion, P&O Developments presented a report to the General Managers Group which set out the advantages and disadvantages of four options. The report recommended that the fastest method of construction would be to negotiate the Stage 2 works with the existing management contractor but that "they understood the possible difficulty in being able to empirically satisfy public accountability." P&O Developments summarised their recommendations in a bar chart which showed that two options could achieve a July 1993 completion date. These were:

negotiation with the existing Management Contractor; or procuring the remaining Stage 2 works by tendering a management contract. P&O Developments' report concluded that tendering a management contract would allow the contractor to start on site at a much earlier stage (approximately 22 weeks) than the traditional contract approach; and, in a falling tender market, this would allow the client to take advantage of favourable market conditions.

**3.19** There is no overall consensus within the construction industry as to which contract strategy is correct for any given situation. Rather, different strategies suit different situations and their advantages and disadvantages need to be considered when deciding which strategy to adopt. Figure 20 shows the advantages and disadvantages of a management contract, based on an assessment of good practice guidance, including the Treasury's Central Unit on Procurement guidance and the National Audit Office's analysis of past construction projects. For the advantages of a management contract to be fully realised, the management contractor should ideally be employed at the outset in order to input to the brief and design as well as the construction.

**3.20** The client sought advice from NHS Estates who advised that "although management contracting was allowed, experience of it in the NHS had not been good". NHS Estates considered that management contracts had performed badly compared with conventional contracts in terms of cost and time overruns. The latter was of the essence, as in a management contract more of the cost risk was taken by the client and the extent of commitment was less well known at the outset. NHS Estates stated that generally their view was that they would not support management contracting but would raise no objections if the client felt strongly about the matter and the contract could be amended to transfer the risk of a package contractors receivership to the management contractor (paragraph 2.48).

**3.21** P&O Developments were strongly advocating a management contracting procurement strategy. After detailed discussion the consensus of the General Managers Group was that, based on P&O Developments presentation, the advantages of a management contract clearly outweighed the disadvantages. They agreed that the potential time and costs savings resulting from a management contract were of paramount importance. As a result, in October 1990, an advertisement was placed in the Official Journal of the European Communities asking companies to register their interest in a 112 week Management Contract for Stage 2.

**Comparison of the  
advantages and  
disadvantages of a  
management contract**

**Figure 20**

**Advantages**

**Disadvantages**

The management contractor takes no risk or profit from the construction operations and therefore the approach can help avoid adversarial situations

Controlling costs can be difficult when the design and construction overlap

The management contractor plans the contract in collaboration with the design team and advises on the buildability and the latest technology

Accurate pricing is required in the absence of a final design

The risk of contractors' claims is reduced as the management contractor and the design team co-operate in settling claims

With the overlapping of design and construction, design information must be completed on time and with sufficient detail otherwise delays and increased costs occur

The management contract minimises design variations since it allows the development of design during construction without any claims from the contractor

The management contract requires high calibre staff within the management contractor's team, the design team and the client

Deadlines and rigid timetables imposed by fast track construction instil implicit urgency

The client has to make high quality decisions, quickly

Time saved due to overlapping of brief, design and construction

The management contract increases administration by the design team

The appropriateness of the contract strategy is not clear cut and has to be weighed against the project's overall requirements. For the advantages of a management contract to be fully realised it is important that the management contractor is employed at the outset so as to input to the design brief and design development as well as construction. At the same time, firm management and control by the client can minimise the disadvantages.

Source: National Audit Office and  
Treasury's Central Unit on  
Procurement guidance

**3.22** Ten companies were invited to attend pre-tender discussions and five companies were invited to tender. The tenders were evaluated by the project sponsor (Guy's Hospital Unit General Manager), the project manager (P&O Developments), representatives from the Guy's Project Directorate, the Director of Works, the architects (Watkins Gray International) and the quantity surveyors (Beard Dove). These, together with a representative from the service engineers (Austen Associates) and the Guy's Special Trustees, formed the interview panel.

**3.23** At a meeting on 8 January 1991, the tender assessment team considered that only two of the contractors had the capacity to carry out the work to the required quality and standard: Higgs and Hill and Taylor Woodrow. P&O Developments recommended that the contract should be awarded to Higgs and Hill, as they were the cheapest by £650,000 and proposed a shorter, 106 week, programme. Watkins Gray International, Austen Associates and Beard Dove, however, were unanimous in favouring Taylor Woodrow, who proposed a 112 week programme and who in their view had a better grasp of the project requirements and better project procedures. They also considered that Higgs and Hill's proposed programme of 106 weeks was impractical and unachievable.

**3.24** The General Managers Group sought further substantiation of the different views and held further discussions with Higgs and Hill about areas of concern, notably a perceived shortage of engineering and surveying staff. At a meeting on 1 February 1991, Higgs and Hill agreed to increase the number of engineering staff employed, at some additional cost, but with a percentage of the cost being absorbed within their fee. Following the meeting, each member of the design team was asked for their views of Higgs and Hill's bid. The overall view was that Higgs and Hill had responded well to their concerns and should be selected for the Stage 2 works. The Special Trustees and client representatives also endorsed the decision. Because they had the advantage of being able to start on site some 6 weeks earlier due to their involvement with Stage 1, Higgs and Hill subsequently proposed reducing the elapsed time to 104 weeks.

**3.25** The design team signed the certificates of readiness to proceed to tender for the management contractor during January and early February 1991. These certificates gave assurance to the client on the adequacy and integrity of the preliminary design and cost planning information and that the project could reasonably proceed into the pre-construction period. At the same time, the project manager and project sponsor signed their certificate of readiness to proceed. This stated that the scheme had been prepared in conformity with Capricode procedures adapted to reflect the requirements of management contracting, and that all reasonable steps had been taken to ensure that once the contract was let, the scheme could proceed to completion without delay. In particular the client signed the certificate to confirm that it was satisfied that:

- the design brief would not be altered during the course of the contract other than in exceptional circumstances;
- the project had been or could be designed within the budget approved for the project;

- there were no causes of delay currently foreseeable; and
- the client had received assurances from the design team on the adequacy and integrity of the tender documentation.

**3.26** In February 1991, Higgs and Hill were appointed as the management contractors for Stage 2. The contract was planned to start in May 1991 with the project completed in May 1993. At the time of Higgs and Hills' employment, the design brief was substantially complete - architecturally there were only a few design items outstanding, such as the atria waterfall and access requirements - and Austen Associates had completed the bulk of their design, and were incorporating variations received since the August freeze date. As the procurement route for the main construction stage had begun along traditional lines (paragraph 3.15), the design team had to carry out additional work to re-package design/tender information following the agreed change to a management contracting route.

### **In May 1993, the Trust secured a negotiated agreement based on a 43 week extension to the original programme and the completion date was formally changed to March 1994**

**3.27** The main subcontract for Stage 2 was the mechanical and electrical engineering works. Higgs and Hills' programme assumed that the tender documents would be issued in March 1991 and the contract placed by 25 May 1991. In the event, Higgs and Hill had to allow extensions to the tender period and additional time for the tender assessment. There were therefore, some delays in appointing the mechanical and electrical engineering contractor.

**3.28** The original intention had been to award two separate packages in respect of the mechanical and electrical contracts. However, M F Kent were invited to tender for both contracts and, following the tender reviews and interviews, M F Kent were deemed to be the most suitable contractor for both contracts. The Trust sought the views of the design team and the project manager as to whether both contracts should be let to M F Kent. Formal confirmation from all parties was obtained by 23 July and the Architect's Instructions to enter formally into a contract with M F Kent was issued on 31 July 1991. Therefore, some 11 weeks later than planned, Higgs and Hill appointed M F Kent as subcontractor for the mechanical and electrical engineering works. This subcontract was worth £27 million, about 40 per cent of the Stage 2 contract. As the management contract was

“tightly programmed with limited scope for contingencies”, M F Kent agreed to absorb as much of the delay as possible. Because of these delays, the architects awarded a five week extension of time.

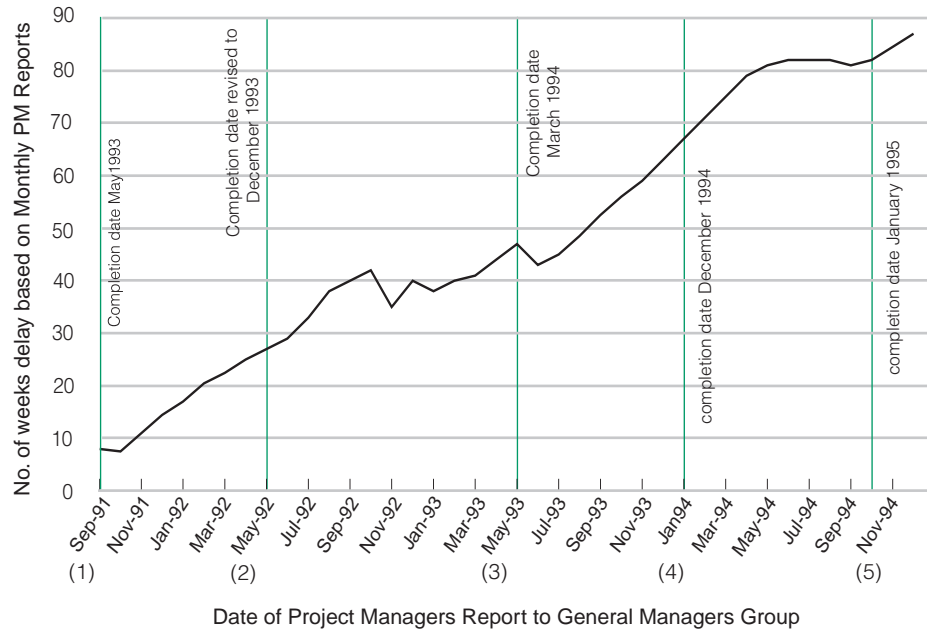
**3.29** In September 1991, the project manager’s report to the General Managers Group indicated that initial progress on the mechanical and electrical package was slow, due to problems with information flow, and that Higgs and Hill might put in a claim due to the late appointment of MF Kent. At the same time, the project sponsor confirmed that one adult mental ward was to be released and that this space would be used for new Asthma and Allergy Laboratories. The project manager reported that this alteration would entail service alterations and that his initial estimate was that this would involve a further 8-12 weeks delay. The project manager was asked to provide a detailed report on the consequences for presentation to the Trust Board on 30 October 1991. P&O Developments produced two versions of a report. Both reports, dated 24 October 1991, concluded that the change to Asthma and Allergy Laboratories would cause up to eight weeks disruption to the works programme. However the reports were inconsistent with regard to the advice on the impact of the change on the completion date (one report concluded that the delay could be covered by the current delays the other did not). Subsequently, in a letter dated 29 October 1991, P&O Developments indicated that the Trust Board should be informed that the project completion date could be delayed by up to five weeks (paragraph 2.36).

**3.30** At the same time, P&O Developments’ October 1991 report to the General Managers Group stated that “the mechanical and electrical package which had begun on the 23 September was being delayed because of the quality and quantity of information from the Design team. This work was now on the critical path and the trend in delay appears to be worsening”.

**3.31** Figure 21 overleaf shows how the delays on the Stage 2 contract escalated from start on site of the management contract up to submission for approval of first supplemental agreement. In December 1991 the project manager’s report to the General Managers Group identified a lack of progress on the mechanical and electrical services due to the slow production of installation drawings and that the corresponding site start dates were being hindered by information problems. The architect awarded a five week extension for the late placement of the M F Kent package, and four weeks for the late issue of co-ordinated drawings. The completion date was changed to July 1993.

**The increasing delays on the management contract for Stage 2 - from the start on site to the first supplemental agreement**

**Figure 21**



- Notes:
1. By the time Kentz, the mechanical and electrical engineering contractors started on site, the project manager was reporting 8 weeks delay against the Stage 2 management contract: Completion date still May 1993.
  2. By May 1992, the architect had granted claims for a series of extensions totalling, 24 weeks due to: the late placement of the Kentz contract; the late issue of Austen Associates' drawings; and the late introduction of the Asthma and Allergy Clinic. The completion date was formally revised to December 1993.
  3. In May 1993, the new Guy's and St.Thomas' Trust secured a negotiated agreement with the Management Contractors Higgs and Hill, based on a 43 week extension on the original programme. As a result the completion date was formally revised to March 1994.
  4. In January 1994, Kentz went into receivership and Higgs and Hill agreed to form a subsidiary company to take over the mechanical and electrical engineering works. The project was more than 67 weeks late and the completion date was now expected to be December 1994.
  5. In October 1994, Treasury approved a supplemental agreement between the Trust and Higgs and Hill to achieve practical completion by January 1995.

Source: Project Managers Report to the General Managers Group

Over the course of the management contract the completion date was revised several times as the delays on the Stage 2 contract increased, culminating in a supplemental agreement with a January 1995 completion date.



**3.32** In February 1992, P&O Developments reported that the programme was delayed by a total of 21 weeks, mainly because the release dates for the production of installation drawings and mechanical and electrical engineering site work continued to slip. Higgs and Hill put forward various proposals to resolve the situation. By March 1992 the delay had increased to between 23 and 28 weeks, and the General Managers Group approved the project manager's proposal to negotiate a revised programme between Higgs and Hill and MF Kent. Meanwhile, in April 1992, the architects, Watkins Gray International, granted claims for extensions totalling 21 weeks. This meant that the completion date was formally revised to the end of October 1993.

**3.33** The architect then granted a further 3 week extension in respect of the Asthma and Allergy Laboratories. In May 1992, the completion date slipped to December 1993.



Photographs showing the complexities of the mechanical and electrical engineering works

**3.34** The Trust were concerned about the increasing delays, the consequent cost increases and the management and control of the project. They therefore appointed an engineer to the post of Facilities Director. He recommended, amongst other things, that no further variations be made to Stage 2, and that the variations already actioned be confirmed. The General Managers Group endorsed these recommendations.

**3.35** By September 1992, the project manager reported that the total delays had increased to 35 weeks. Negotiations between Higgs and Hill and MF Kent were therefore changed to accommodate a 35 week extension programme, but M F Kent (now renamed Kentz) failed to obtain a security bond and the negotiations broke down. Kentz's financial problems mounted and in January 1993, their subcontractors withdrew their labour from the site. As a result, certain parts of the Stage 2 work effectively ground to a halt.

**3.36** On assuming responsibility for the project in April 1993, the new Guy's and St Thomas' Trust were concerned at the increasing delays and cost increases. In May 1993, they secured a negotiated agreement between Higgs and Hill and Kentz based on a 43 week extension to the original programme. As a result the completion date was formally changed to March 1994.

### **In October 1994, the Treasury approved a supplemental agreement, between the Trust and Higgs and Hill - based on a revised completion date of January 1995**

**3.37** In August 1993, the Trust were advised that Stage 2 was heading towards a further delay of 10 - 12 weeks, a total projected delay of 53-55 weeks. This was based on a review of the project manager's monthly reports to the General Managers Group which showed a trend of mounting delays. At the same time, Davis Langdon and Everest, in their report to the Trust, confirmed that the project was heading for a total over-run of some 55 weeks (paragraph 2.45).

**3.38** By October 1993, Kentz were failing to keep to the terms of the agreement, resulting in further delays to the mechanical and electrical engineering works. In addition Kentz had financial disputes with more than half of their subcontractors, many of whom were either once again absent from the site or were refusing to deliver equipment.

**3.39** In January 1994, Kentz went into receivership. The receivers, Ernst & Young, declined to take over the mechanical and electrical engineering sub-contract and Higgs and Hill's contract with Kentz was legally determined in February 1994.

**3.40** Higgs and Hill agreed to take over the mechanical and electrical engineering work. In April 1994, the Trust accepted the recommendation of the Facilities Director to negotiate a supplemental agreement with Higgs and Hill for the Stage 2 contract. Commenting on the Trust's submission for Treasury approval of the supplemental agreement (paragraphs 2.50 - 2.51) the NHS Executive noted that: "At an early stage in the process it was apparent that there were shortcomings in the design information provided by the consulting engineers, and although considerable resources were employed, it was not possible to avoid serious delays to the overall programme."

**3.41** The Trust informed the Treasury that an analysis was being undertaken to determine where a proportion of the liability for time over-runs might lie. They told the Treasury that the preliminary explanation for the large cost over-runs were the 64 weeks extensions of time that had been granted prior to the supplemental agreement (Figure 22).

**3.42** The Treasury accepted the Trust's view that the terms of the proposed commercial settlement (the supplemental agreement) represented value for money. Under the terms of the supplemental agreement, signed in December 1994, Higgs and Hill were committed to achieving practical completion of the building by 15 January 1995. The revised completion date meant that the original contract was extended by a further 24 weeks, a total of 88 weeks delay.

**Preliminary analysis of  
extensions of Time  
awarded up to the end of  
July 1994**

**Figure 22**

<b>Award Date</b>	<b>Reason for Award</b>	<b>Extensions of time granted</b>
2.11.91	Late placement of Kentz engineering services package	5 weeks
	Late issue of Austen Associates' co-ordinated drawings	4 weeks
26.3.92	Late issue of Austen Associates' co-ordinated drawings	12 weeks
9.6.92	Introduction of 5th Floor Asthma and Allergy Clinic	3 weeks
29.9.93	Christmas shutdown 1993	2 weeks
29.9.93	Late issue of Austen Associates' base information/ quality thereof	12 weeks
16.12.93	Late issue of Austen Associates' co-ordinated drawings	2 weeks
	Late issue of Austen Associates' base information/quality thereof	1 week
20.7.94	Inadequacy of Austen Associates' co-ordinated drawings	9 weeks
	Volume of work increased due to services variations (Asthma and Allergy)	6 weeks
	Additional operations following change of partition facing material	3 weeks
	Re-sequencing of blockwork due to delay in services information	4 weeks
	Easter Shutdown 1994	1 week
<b>Total time extensions on the original 104 week management contract</b>		<b>64 weeks</b>

The Department informed the Treasury, in their submission for approval of the first supplemental agreement, that the Trust's advisers' - consultant quantity surveyors (Davis Langdon and Everest's) - preliminary assessment of time extensions indicated that some 64 weeks of extensions had been formally awarded by the architects.

Source: Guysand St Thomas' Trust and Department of Health

## **In July 1996, technical problems and a series of missed completion dates led to a second supplemental agreement - based on a May 1997 completion date**

**3.43** When the supplemental agreement was signed in December 1994, P&O Developments' report to the General Managers Group estimated that Higgs and Hill were already 10 weeks behind the revised timetable. In January 1995, Higgs and Hill issued a revised summary programme showing a target completion date of May 1995. They acknowledged that there were major problems with a number of the basic mechanical and electrical engineering systems which they had inherited from Kentz.

**3.44** P&O Developments produced their last progress report to the General Managers Group in January 1995, and noted their concern about Higgs and Hill's ability to achieve the May 1995 completion date. The Facilities Director told the Trust that the completion date was more likely to be July or August 1995. At this point the General Managers Group was disbanded and the Trust told P&O Developments that they did not require any further project management reports, except on an "as required" basis.

**3.45** In addition to the problems with the engineering systems, a serious problem emerged in March 1995 when tests of the hot and cold water pipe-work indicated extensive and deep corrosion (paragraph 2.60). By September 1995, a series of revised completion dates had passed without any progress on site. The Trust were therefore faced with a position in which it had secured no greater certainty about the timescale for acquiring the building, but financially was holding firm to the terms of the supplemental agreement. While the Trust's position was strong in legal terms, in practical terms its foremost need was a completed building against which Higgs and Hill were making no progress. Higgs and Hill considered that the problems with the copper pipe work and other technical problems invalidated the supplemental agreement and, if necessary, were resolved to enter lengthy and complex litigation rather than progress matters on site.

**3.46** The Chief Executives of the Trust and Higgs and Hill met several times during September and October to attempt to forge an agreed way forward. Over the next few months attention was focused on agreeing an acceptable financial package. The Trust's view was that it had done nothing to deviate from the terms of the December 1994 agreement, and had issued no variations or directly caused extensions of time which would warrant additional payments into the contract. However, they acknowledged that there was justification for negotiating above the contract sum because:

- there was dispute about a number of the engineering problems and the Trust could potentially face claims for extensions being granted if it was proved in court or decided in arbitration that some fault lay with the Trust's engineering designers;
- it was clear that Higgs and Hill were not prepared to sign a new agreement without more money in the contract;
- the Trust and the NHS Executive had to balance the costs involved in settling early against the potential cost of claims being allowed subsequently and the prolonged delay in acquiring the building.

**3.47** The Trust's legal and other expert advisors assessed the various options open to the Trust and concluded that the Trust would secure greater advantage in terms of time-scale and certainty of outcome by pursuing a second supplemental agreement. In March 1996, the Trust and Higgs and Hill agreed the basis of a second supplemental agreement which included a new £3.6 million modifications work contract, excluding fees and VAT. The details of the second supplemental agreement were submitted to Treasury for information and briefing in June 1996 and for formal approval in July 1996 (paragraph 2.63).

**3.48** The Treasury required various issues to be addressed (for example, agreements on the amendments to the modifications works contract and parent company guarantee). Treasury also sought further information from the Trust on their assessment that the proposal for a second supplemental agreement offered the best value for money. Finally, in July 1996, Treasury approved the terms of the second supplemental agreement between the Trust and Higgs and Hill in order to ensure the completion of Phase III. This second supplemental agreement provided for completion of the main scheme in May 1997, and hand-over in July 1997.

**3.49** During the time that the second supplemental was being considered by the Treasury, a Deemed Practical Completion Certificate for the Phase III project was issued. This allowed Higgs and Hill to complete some 40 major items outstanding from the existing Contract, as detailed in an appendix to the Supplemental Agreement. At the same time they agreed to correct the copper pipe defects and carry out modifications required by the Trust. The Deemed Practical Completion date of June 1996, was some 74 weeks later than the completion date provided for in the first Supplemental Agreement and a total of 162 weeks later than the date in the Management Contract

## **Construction was completed in April 1997**

**3.50** In the event Phase III was completed in April 1997, including some of the modification works (in particular, Higgs and Hill completed the modification works defined in their contract). The remaining modifications work and commissioning work was completed in July 1997 and the Phase III building was opened to patients.

## Glossary of terms

<b>Approval in principle</b>	the first formal calculation of the expected costs of the project used to obtain agreement to the broad general content and costs. It was the first stage of the mandatory departmental procedures known as Capricode that, at the time of the Guy's project, all hospital building projects had to comply with - now superseded by the business case process.
<b>Architect</b>	a person registered with the Architects' Registration Council to practise as an Architect in the United Kingdom. The architect designs and supervises the construction of buildings including preparing designs, plans and specifications, inspecting sites, obtaining tenders for work and undertaking administration of the site.
<b>Bills of Quantities</b>	a set of descriptions of the materials and labour needed for construction work, with the quantity and unit price listed as numbered items.
<b>Brief</b>	a document which defines precisely the client's requirements and which forms the basis of all subsequent design, procurement and construction.
<b>Budget cost</b>	a detailed calculation of costs -the budget cost stage was the second approval stage in the NHS procedures known as Capricode.
<b>Business Case</b>	a document that supports a proposal for capital investment. It must convincingly demonstrate that a project is economically sound, financially viable and will be well managed. It consists of three phases: Strategic Content- which makes the case for change; Outline Business Case - which identifies the preferred option; and Full Business Case - which assesses and plans the preferred option in detail. The second and third phases replace the approval in principle stage of Capricode.
<b>Capricode</b>	the Department of Health's mandatory health building procedures which provided a series of interconnected stages through which all projects were expected to pass - now replaced by the Business Case.
<b>Capital Investment Manual</b>	provides detailed guidance to the NHS for each main stage of a capital scheme including practical guidance on the technical considerations of the full capital appraisal process and a framework for establishing management arrangements to enable benefits to be identified, evaluated and realised.



<b>Central Unit on Procurement (CUP)</b>	a Treasury unit which provides advice to departments on procurement, including the procurement of construction services.
<b>Certificate of Readiness to Proceed</b>	a document signed by the design team to certify that they have provided all the design information necessary for the invitation of reliable tenders.
<b>Claim</b>	a contractor's application for an extension of time or additional payment.
<b>Commissioning</b>	starting a completed building system and checking that it works correctly. Relates mainly to mechanical and electrical services.
<b>Clinical Directorate Management</b>	a system of management which is now the NHS standard whereby the clinical and administration aspects of patient care are located together.
<b>Concise</b>	a software system for NHS capital programmes. It comprises a suite of computer programmes designed to assist project managers, finance managers and construction specialists.
<b>Concode</b>	guidance on the procurement of, and contractual arrangements for, NHS building and engineering work and on the commissioning of consultants (issued by NHS Executive).
<b>Contingency</b>	an allowance in a project budget or cost estimate over and above the base estimate, to provide the most likely outcome of time and cost after taking risks into account, and assuming that management action is taken to minimise their effect.
<b>Contract administrator</b>	consultant responsible for administering the terms of the contract with the contractor.
<b>Contract Procurement Strategy</b>	determines the allocation of risks and responsibilities for design and construction between the client, their consultants and the contractor(s). Also the number, scope and type of contracts to be placed.
<b>Deemed Practical Completion</b>	an artificial means of certifying completion to enable one or a number of the steps which follow completion, ie payment or possession to be taken advantage of before the works are fully completed.
<b>Departmental Cost Allowance (DCA)</b>	a reference cost issued by NHS Executive for the provision of a defined amount of functional accommodation based on Health Building Notes. Used to assist estimating.

<b>Design Brief</b>	the document that defines the client's requirements and which forms the basis of all subsequent design, procurement, and construction.
<b>Design Team</b>	the client's team of consultants (architect, services and structural engineers) whose main responsibility is to design the building, having full responsibility for the technical content of the design.
<b>Design:</b>	
■ <b>outline</b>	design developed from the brief to provide an outline of proposals.
■ <b>detailed</b>	detailed design includes the working information needed for site works to begin.
<b>Extension of time</b>	extra time added to the contract completion date because of reasons beyond the control of the contractor.
<b>External Finance Limit (EFL)</b>	a means of controlling public expenditure in trusts. It represents the difference between the resources a trust can generate internally and its approved capital spend. If its internal resources are insufficient to meet its approved capital spend then it is able to borrow the difference. EFL can be positive or negative. A positive EFL is a cash limit or net borrowing for a trust where external is defined as finance outside the trusts normal operating activities.
<b>EFL brokerage</b>	a temporary method of financing capital expenditure in one trust by using underspends on capital programmes elsewhere in the NHS. This allows the EFL of that trust to be increased to enable it to meet payments due.
<b>Estimate of Prime Cost (EPC)</b>	cost estimates based on preliminary design proposals under a management contract.
<b>Form of Contract</b>	the form of contract is the legal document usually between the client and the contractor through which the building is procured.
<b>General Managers Group</b>	a group consisting of representatives of all the funding sources for the project, including representatives from the Department, Region, District, Guy's Special Trustees, Sir Philip Harris and the United and Medical Dental School.
<b>Handover</b>	giving possession of a completed building to the client.
<b>Heads of Terms</b>	set out the rules of engagement for each of the parties to a contract.

<b>Health Building Notes</b>	documents prepared by NHS Executive which set the standards of accommodation and environmental services for health buildings.
<b>Instructions to Contractors</b>	the formal contractual method for directing the contractor to undertake work. Instructions should only increase costs if they involve changes in the scope of the work or increase the contractor's expenses.
<b>JCT (Joint Contracts Tribunal)</b>	the Joint Contracts Tribunal drafts various standard forms of contract and JCT contracts are the most commonly used contracts for building work in the UK. The standard contract forms are frequently amended to reflect the needs of each project.
<b>JCT 80</b>	form of contract used for traditional methods of constructions.
<b>JCT 87</b>	form of contract used for management contracting.
<b>Liquidated and Ascertained Damages</b>	a sum of money specified in the contract as a fair and reasonable amount to compensate the client for a building's late completion.
<b>Lead Consultant</b>	a member of the design team appointed to be a representative of the design team. The obligations on the Lead Consultant will depend on the terms of his contract.
<b>Management Contracting</b>	a fast track building strategy which overlaps design and construction with the work being let gradually in a series of works packages to a range of trade contractors such as electricians, engineers etc.
<b>Management Contractor</b>	a management contractor is engaged by the project sponsor to manage the building process and is paid a fee. The management contractor is responsible for all the construction work and has direct contractual links with all the trade contractors, bearing the financial risk and responsibility for the construction works without carrying out that work.
<b>Mechanical and Electrical service engineers</b>	a consultant appointed to design the building's mechanical and electrical services (heating, power, lighting, air conditioning, communications etc.).
<b>Mechanical Services</b>	building services such as heating, ventilation, air conditioning and electricity, water and gas supply.

<b>Notification of prolongation and disruption</b>	the contract requires the contractor to inform the contract administrator of matters which have or are likely to prolong or disrupt the progress of the building's construction.
<b>Nucleus design</b>	a system for hospital planning and design supported by comprehensive briefing material and planning documentation.
<b>Planned Care Centre</b>	a new arrangement for the provision of care - intended to reflect the modern face of medicine - housing general and specialist out-patients clinics, a day surgery and endoscopy unit, planned inpatient beds and integrated diagnostic and support facilities. In the planned care centre, diagnostic tests will be integrated to ensure that patients have their tests in a logical and rapid sequence, resulting in a minimum number of visits.
<b>Post Project Evaluation</b>	a review carried out soon after completion of a project to learn lessons for application to future projects.
<b>Practical Completion</b>	the stage when the building is reasonably fit for occupation. Minor faults may still need to be put right provided they do not inconvenience the occupier.
<b>Project Evaluation</b>	a technique to review the current status of a project against plan and make recommendations for corrective action where necessary.
<b>Project Execution Plan</b>	a document which details a project's objectives, the contract strategy, and the responsibilities of those involved, and lays down a detailed timetable with milestones to be achieved.
<b>Project Manager</b>	a professional appointed by the client to: manage the design, construction and commissioning of work on behalf of the project sponsor; plan and control the project; and co-ordinate the project team for the project's duration. The project manager has no responsibility for the technical content of a project's design other than to ensure that it complies with the client's brief but has authority over the design team in matters of design management.
<b>Project Sponsor</b>	the individual within the client organisation appointed to take personal responsibility for the success or failure of the project (sometimes termed project director).

<b>Project Team</b>	the project manager, designers, quantity surveyor, contractors and other people appointed by the project director to manage design and build the project. All are usually external appointments.
<b>Provisional sum</b>	an allowance in the contract price to provide for work for which an exact price cannot be obtained.
<b>Quantity surveyor</b>	a person trained in accounting for building materials who estimates the cost of the design, prepares the bills of quantities, and advises the client on financial control during the work.
<b>Services Engineer</b>	a consultant appointed to design the building's mechanical and electrical services (heating, power, lighting, air-conditioning, communications electricity, gas water etc).
<b>Site Location Factor</b>	a factor added to the departmental cost allowances to reflect the location of the site.
<b>Structural Engineer</b>	a consultant appointed to design the load-bearing frame of the building, its walls, floors and roof.
<b>Variation</b>	a change in the quantity or quality of the work agreed in the contract.

# **Appendix 1**

## **Chronology of Events**

## Appendix 2

### Comparison of the PAC Recommendations and Treasury Minute response on the Chelsea and Westminster Hospital Project with the findings on the Guy's Phase III Project and the lessons reflected in the NHS Capital Investment Manual

Committee of Public Accounts 26th Report -Session 1992-93 - PAC Conclusions on the Chelsea and Westminster Hospital Project which have some relevance to Phase III-	Treasury Minute response -dated 11 May 1993	Findings on Guy's Phase III	Revised NHS Capital Investment Manual (August 1994)
(i) In view of the very high costs of building in London and the generally recognised view at the time that surplus beds were increasing in the capital, we are surprised that the Management Executive, in deciding to build this hospital, did not have regard for the wider pattern of hospital facilities in London and the relevant areas of the home counties.	2. The Department took account of the effect of the project on hospitals in the North West Thames Regional Health Authority and other Thames Regions before approving the project in December 1988. The project was approved because "it...was in line with the district's strategy and would lead to revenue savings".	The high cost of building in London was not taken into account in preparing the original Approval in Principle, nor included in the 1989 Approval in Principle figure. However the original and revised strategies, supporting the proposal to build Guy's Phase III, were based on a strategic analysis of hospital bed provision in the Lewisham and North Southwark District and were predicated on the closure of other hospitals in the District which would lead to revenue savings	The new manual is intended to minimise effort in bringing capital projects forward for approval. It introduces a three phase approach for capital investment Phase I, the Strategic Context, makes the case for change. Phase II, the outline business case, identifies the preferred option; Phase III, the Full Business case, only occurs once capital funds are identified and purchaser support obtained. Phase III, validates Phase 1 and II and develops the preferred option. In the past Phase II and III were part of the Approval in Principle proposal, "the result of which has often been a long and costly exercise". The aim of presenting the business case in two phases is to minimise abortive work.
(ii) We look to Treasury, in giving their approval for major capital expenditure to ensure that such wider considerations have been properly taken into account by the department or body concerned	3. The Treasury notes the Committee's comments. It is important that wider considerations are taken into account in the initial appraisal of the options and the assessment of the business case.	The Department approached Treasury for approval in December 1986 and again in August 1989. In both cases Treasury gave consideration to the wider strategic issues, mainly in relation to the fact that the new building was to be financed in part by the closure of other hospitals in the District.	The question of availability of hospital beds in London should be considered during preparation of the Phase I- strategic context and again during Phase II and III. The cost of building in London would be considered at each phase, in particular, in Phase II as part of the investment appraisal.

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Cost Over-runs, Funding Problems and Delays on  
Guy's Hospital Phase III Development

Committee of Public Accounts 26th Report -Session 1992-93 - PAC Conclusions on the Chelsea and Westminster Hospital Project which have some relevance to Phase III-	Treasury Minute response -dated 11 May 1993	Findings on Guy's Phase III	Revised NHS Capital Investment Manual (August 1994)
(II) continued	<p>The Treasury reminded Principal Finance Officers of departments in December 1991 that in the case of projects outside a departments delegated authority it expects to be involved at this stage.</p> <p>4. The Treasury's Central Unit on Purchasing has since issued to departments Guidance no 38 Approval of Works Projects which reinforces this point</p>	<p>Also that these closures would therefore add support to the demand for the additional beds provided in the Phase III building. However the 1986 request for approval did not make any allowances for the additional cost of building in London on a constrained site. The 1989 request included a reference to this but on the basis that the "site location factor" could go up or down. It was not part of the approval in principle submission.</p>	
(iv) We consider that the planning of major projects, especially those involving management contractors, should include contingency arrangements to avoid serious delay and increased costs.	<p>6. The Department accepts that rigorous control of building contracts is necessary, including appropriate means of avoiding time and cost over-runs. The management contract method of contracting adopted by the health authority allowed for the management of contingencies during the course of the project. In appropriate cases the Department will continue to use management contracts in line with the Committees recommendations (in its Eighteenth report) to adopt good practice from outside the NHS</p>	<p>The client's need for early completion was a key priority. The changes, first to a staged approach, followed by a late change to a management contract for Stage 2 (main construction) works, were mainly to achieve earlier completion. However "the management contract was tightly programmed with limited scope for contingencies". In the event delays occurred. The Stage 2 works, which started in May 1991 with an expected completion date of May 1993, were deemed to be practically complete in June 1996, with final completion in April 1997. One problem was that the design brief was not frozen when the management contract was let.</p> <p>NHS Estates advised that NHS experience in using management contracting had not been good.</p>	<p>The Management of Construction Projects document, which forms part of the new Capital Investment Manual, reflects perceived best practice for management contracts and states that the use of a staged approach is intended to minimise the potential for delays. It stresses the importance of the brief being complete and frozen before the management contract is let.</p> <p>Reference is made to the need to refer to Concode for guidance on management contracts. In addition it details requirement to prepare Estimates of Prime Cost in conjunction with the design team.</p>

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(iv) continued		<p>The client, following advice from the project manager, decided that the advantages of potential time and cost savings clearly outweighed the disadvantages. Initial reservations from the design team about the practicality of a 106 week programme were overcome and the contract was let to the cheapest tenderer who subsequently reduced the programme to 104 weeks</p> <p>The mechanical and electrical engineering works, which were on the critical path for Stage 2, showed a trend of increasing delays. Despite a negotiated agreement, for a 43 week extension to the programme, the completion date continued to slip."</p>	
<p>(v) We share the Treasury's doubts as to whether the role of the project development manager could be adequately discharged on the basis of one day a week.</p>	<p>7. Throughout the project four full time project management consultants were on site who supervised the day to day construction. The health authority also appointed a project sponsor who worked full time on the project apart from nine months of the projects life. Nevertheless, the Department accepts that on a project of this scale continuous full time involvement would have been preferable. The Department will continue to recommend that health service bodies identify an individual project sponsor, with adequate time to devote to the task full time and undivided when on major projects.</p>	<p>There were four changes in project manager during the first three years of the life of the project. The last two were external appointments from professional firms. These changes caused a degree of inconsistency in the approach to management and affected the dynamics of the design team. Similarly by April 1991 there had been three changes in the client body and three different project sponsors. There then followed a further three changes in project sponsor. Until the last appointment in 1992, none of the project sponsors had any experience of building large construction and all had other work responsibilities.</p>	<p>The guidance promotes the need for a dedicated project manager and project sponsor and the value of their continuity on a project.</p>
<p>(vi) We therefore endorse the Management Executive's conclusion that, in future, project development managers should give full and undivided attention to the management of major schemes.</p>			
<p>(xvi) (c) There should a full time qualified and experienced manager with overall responsibility for delivering the project to time and cost.</p>			

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Cost Over-runs, Funding Problems and Delays on  
Guy's Hospital Phase III Development

Committee of Public Accounts 26th Report -Session 1992-93 - PAC Conclusions on the Chelsea and Westminster Hospital Project which have some relevance to Phase III-	Treasury Minute response -dated 11 May 1993	Findings on Guy's Phase III	Revised NHS Capital Investment Manual (August 1994)
(xvi) (c) continued	18. Existing Government guidance recommends that a full-time qualified and experienced project manager is in place. The Department will continue to stress the need for an identified individual to take on the responsibility as project sponsor for accounting to departmental management for the successful conclusion of each Major NHS capital scheme.	In 1993, the formation of the Guy's and St Thomas' Trust resulted in a final client change. Following the appointment of the first external project managers, Conspectus, in 1987, they were told that a General Managers Group (consisting of representatives of some 11 funding sources) was effectively the client and would be responsible for approving the functional content and cost increases.	
(vii) We look to the Management Executive to take prompt action to establish who was responsible for the delays in construction and consequent over-run in completing the projects and to seek compensation for the financial consequences.	8. It is the Department's normal practice to take appropriate action on these matters. The Department and health authority will take action on the project in the normal practice.	In July 1993 the Guy's and St Thomas' Trust engaged lawyers(Rowe and Maw) to advise them on the prospects of litigation . They in turn commissioned quantity surveying consultants (Davis Langdon and Everest) to undertake a retrospective delay analysis. As a result of the work of these two parties, the Trust responded to a writ issued by the project manager (P&O Developments) and claimed against the service engineers (Austen Associates) in January 1997 to try and recover some of the cost over-runs.	The guidance provides some advice on seeking redress for poor management and construction on building projects.
(xi) We expect the NHS in future to take a more cautious approach to projects which rely on the property market to fund developments. We also expect to see a full sensitivity analysis on all major projects to establish the impact of any problems in financing the projects	11. The Department accepts that the risks associated with any projects which rely on property values should be carefully assessed....The Department's forthcoming guidance to health service bodies will reiterate the importance of sensitivity analysis	The Guy's project was funded by a unique agreement between the private and public sector. However a formal funding package was never agreed. This meant that the timing of payments, whether they were to be inflation linked and whether there were any conditions attached, was never established.	

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Committee of Public Accounts 26th Report -Session 1992-93 - PAC Conclusions on the Chelsea and Westminster Hospital Project which have some relevance to Phase III-	Treasury Minute response -dated 11 May 1993	Findings on Guy's Phase III	Revised NHS Capital Investment Manual (August 1994)
(xi) continued		Despite various attempts to agree a funding package the project has had a funding shortfall since 1990. Revised funding scenarios were developed but these failed to keep pace with the cost increases. At the same time the proportion of funds provided by NHS exchequer sources has increased significantly when compared by the funds from non-exchequer sources. Following the change in use of Guy's several private donors withdrew their funding which exacerbated the problem. To date the funding gap has been met by EFL brokerage and a full and final solution to the problem is awaited.	The need for a full sensitivity analysis on funding is a mandatory requirement in the new manual.
(xi) ...We expect to see a full sensitivity analysis on all major capital projects to establish the impact of any problems financing the projects.	11....The Department's forthcoming guidance to health service bodies will reiterate the importance of sensitivity analysis	At the outset, the unique public/private sector funding arrangements meant that the NHS would obtain a state of the art hospital building for a minimum of public sector investment. A sensitivity analysis was not carried out. Even after the client body acknowledged that there was a funding shortfall, there does not appear to have been any attempt at a sensitivity analysis. The underlying assumption was that the project must go ahead. Therefore, throughout the course of the project all efforts were concentrated on attempting to resolve the funding issue through: identifying additional sources; uplifting those funds	A full sensitivity analysis is a mandatory requirement of the Business Case submission.
(xvi) (e) there should be a full sensitivity analysis to establish the impact of any problems in financing the project.	20 Existing guidance already requires departments to undertake risk assessments.		

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Cost Over-runs, Funding Problems and Delays on  
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<b>Committee of Public Accounts 26th Report -Session 1992-93 - PAC Conclusions on the Chelsea and Westminster Hospital Project which have some relevance to Phase III-</b>	<b>Treasury Minute response -dated 11 May 1993</b>	<b>Findings on Guy's Phase III</b>	<b>Revised NHS Capital Investment Manual (August 1994)</b>
(xvi) (e) continued		<p>that had already been promised; and obtaining a commitment to release the private funds that had originally been promised. The Department suggested, on several occasions, that the Region/Trust should undertake a risk assessment but this does not appear to have been done.</p>	