



HM TREASURY

Financial Reporting Advisory Board Paper

Secretariat Paper

Final Report from the PFI Technical Note Working Group

Issue:	Final Report on PFI from the PFI Technical Note Working Group.
Impact on guidance:	Yes
UK GAAP adaptation?	No
IAS/IFRS compliant?	N/A
IPSAS compliant?	N/A
Impact on budgetary regime?	No
Recommendations:	<p>The PFI Technical Note Working Group concludes that the withdrawal of the HM Treasury PFI Technical Note would lead to increased consistency in accounting for PFI projects in the public sector and recommends that</p> <ul style="list-style-type: none">▪ the FRAB advises HM Treasury to withdraw its TN at the earliest time, but no later than 2008-09;▪ the AN should be the sole source of guidance on accounting for PFI in the public sector, and that the FReM is amended to reflect this;▪ the FReM does not contain any interpretative guidance related to the AN.
Timing:	No later than 2008-09.

DETAIL

Terms of Reference

1. The PFI Technical Note Working Group (working group) was formed at the request of the FRAB to discuss how the Treasury PFI Technical Note No 1 (Revised) *How to account for PFI transactions* (TN) might be revised or withdrawn to bring about greater consistency within the public sector in accounting for PFI. At the FRAB meeting held on the 29 June 2006, the working group was asked to proceed on the basis that the FRAB will recommend to HM Treasury that the TN be withdrawn.
2. In this context, the responsibilities of the working group were to:
 - Consider the implications of withdrawing the TN;
 - Consider how any differences in the interpretation of FRS 5 Application Note F (AN) in its application to the public sector may be resolved;
 - Produce a final report and recommendations to the FRAB by February 2007.
3. The working group comprises a nominated Chairman and member from HM Treasury and includes representation from:
 - The Audit Commission;
 - The National Audit Office;
 - Deloitte;
 - Ernst & Young;
 - KPMG; and
 - PwC.
4. The membership of the working group was expanded as its work progressed. Representatives from Ernst & Young and KPMG joined the working group only after June 2006.

Background

5. Over the course of several meetings the working group has discussed the following, as previously reported to the FRAB:
 - The Objective and Scope of the TN;
 - The differences in accounting judgement arrived at between using the TN and the AN;
 - Areas of possible differing interpretation of the AN in its application to the public sector;
 - The principled positions of the firms and audit agencies;

- Consideration of and the narrowing of initial options to increase consistency in accounting for PFI;
- The use of PFI case studies to test the scope for narrowing differences in interpretations between the firms and audit agencies in solely applying the AN to the public sector.

The Objective and Scope of the TN

6. The Objective of the TN was to provide additional practical guidance for public bodies on areas of the AN to ensure the over-arching principles of the AN are consistently applied.

7. The Scope of the TN results in it being mandatory for all bodies preparing their financial statements in accordance with the Government Financial Reporting Manual (FReM). The TN is also mandatory for NHS Trusts and those Public Corporations that prepare their financial statements in accordance with an Accounts Direction issued with the approval or consent of the Treasury. To varying degrees, other public sector bodies that are not directly within the Scope of the TN refer to the TN as a source of interpretive guidance when applying the AN. The TN notes (para 1.6) that it provides additional practical guidance on areas of the AN, and should be read in conjunction with the AN. This is echoed in the FReM (para 5.2.28) which notes that the TN supplements the FRS (it does not supersede it).

Differences in accounting judgement arrived at between using the TN and the AN

8. Within the working group differences were identified between the approaches adopted in assessing the accounting treatment of a PFI transaction within the public sector (i) under the AN as interpreted using the TN and (ii) under the AN as applied without reference to the TN. The working group identified that in some cases the differences were material to the overall conclusion on the balance sheet treatment of the PFI asset.

9. As previously reported to the FRAB, the identified inconsistencies arising in the public sector in accounting for PFI can be largely attributed to the different accounting conclusions reached in similar PFI deals because many public sector organisations have applied and interpreted the TN as the main source of guidance, while others have given precedence to the principles as set out in the AN. The working group noted that in the private sector where only the AN applies the firms agreed they came to the same accounting conclusions for similar deals.

Areas of possible differing interpretation of the AN to the public sector

10. The working group identified the principal areas of the AN to which differing interpretations are being applied in the public sector, apparently caused by reliance on the TN when interpreting the AN. These areas of difference were less of an issue when interpreting the AN in its application to the private sector, where the TN is not applied and where differences in the treatment of similar PFI deals are less marked.

11. The principal differences in interpretation of the AN in the public sector revolved around the issues of determining when demand risk is deemed to be 'significant', particularly when the purchaser has a 'commitment to pay' under a PFI contract, and the circumstances in which it is appropriate to employ quantitative modelling techniques to value and compare risks, rather than apply a more qualitative approach. The principled positions of the firms were previously reported in detail to the Board, but is summarised below.

Summary of the principled positions of the firms and audit agencies

12. In analysing property related risks in PFI deals, the firms and audit agencies have identified specific differences related to the definition and measurement of significance in relation to demand risk. How demand risk is assessed has proved to be a difficult and problematic area in forming an accounting judgement in PFI deals.

13. In that context, some firms and audit agencies view the allocation of demand (and residual value) risk (when deemed significant) as being usually pre-eminent in deciding on whose balance sheet the PFI property should appear as an asset.

14. An alternative view held by some firms and audit agencies is that it is important to assess the effects of all relevant property related factors and the interaction between them, giving greater weight to those that are more likely to have a commercial effect in practice.

15. Whilst the firms and audit agencies would not disagree that where demand risk is deemed significant it forms an influential factor in determining the accounting treatment of a PFI project, there remain differences in opinion around determining the significance of demand risk in relative and absolute terms.

Consideration and narrowing of initial options to increase consistency in accounting for PFI

16. The working group, in its initial deliberations, concluded that there were several possible options to increase consistency in accounting for PFI, including:

- Withdrawal of the TN completely; or
- Withdraw the TN but retention of some selected content to be placed elsewhere (e.g. the FReM); or
- A major re-write of the TN.

17. The later work of the group focused on complete withdrawal of the TN, on the basis that this would increase consistency provided that there was general agreement amongst the firms and audit agencies on how the AN should be interpreted in its application to the public sector in the absence of the TN.

18. To test whether all four firms would arrive at the same accounting opinions when applying the AN only to PFI projects, the working group agreed that PFI case studies be prepared by the audit agencies and distributed within the working group. The representatives of the firms were asked to give their views as to the accounting treatment of the PFI case studies under the AN on the basis that the TN had never existed and so had never influenced accounting practice within the public sector.

The use of PFI case studies to narrow the scope for differing interpretations between the firms and audit agencies in applying the AN only to the public sector

19. The working group considered three case studies, comprising a prison, a school and a hospital project. These are attached at Annex A. This exercise permitted the firms, in particular, to readily identify their initial differences, confirming that generally these were within the scope of 'reasonable professional judgement'.

20. This paper does not repeat the detailed comments of the firms. However, the outcome of the work revealed that all four firms reached a similar conclusion on the prison and school projects, in that both projects were considered by all firms to be on the public sector balance sheet. Although there was a difference in opinion between the firms on the remaining hospital project, with some firms indicating on balance sheet and others off balance sheet (while noting that they would need more information to be able to conclude definitively), it was recognised by all firms that their views were finely balanced, and the differences in view were within the scope of reasonable professional judgement.

21. The results of this case study exercise suggest that the withdrawal of the TN, and the sole application of the AN to both the public and private sectors, will produce both greater consistency within the public sector and increased symmetry between the public and private sectors in accounting for PFI, with remaining differences anticipated to be within the scope of reasonable professional judgement.

The implications of withdrawing the TN

22. The working group in its consideration of the implications of withdrawing the TN has considered several issues:

- Whether the AN needs to be interpreted for the public sector context in the FReM;
- Whether the withdrawal of the TN and the sole application of the AN would represent an accounting policy change for some public sector bodies previously accounting for PFI using the TN;
- Retrospection;
- Timing of the withdrawal of the TN.

The need to interpret the AN for the public sector context in the FReM?

23. The working group is agreed that interpretative guidance of the AN should not be included within the FReM. To do so would inevitably suggest that some parts of the AN have precedence over others, when in fact the AN should be applied equally in entirety.

24. There is also the potential danger of creating a substitute mini Technical Note by including interpretative guidance within the FReM, which would have the potential to lead to continued inconsistency in accounting for PFI projects, rather than the expected achievement of greater consistency in PFI accounting following withdrawal of the TN. The working group is of the opinion that the FReM should merely state that the AN applies.

Whether the withdrawal of the TN, and the sole application of the AN, would represent an accounting policy change for some public sector bodies accounting for PFI using the TN?

25. The working group is of the view that for some bodies that have given precedence to the TN in accounting for PFI, the withdrawal of the TN and the subsequent sole application of the AN, will represent a change in accounting policy.

26. An accounting review of a PFI project resulting from the withdrawal of the TN (which is currently mandatory guidance for much of the public sector) and which results in a prior period adjustment and the need to adjust opening balances, cannot be viewed as a fundamental error. In the view of the working group this represents a change in accounting policy. The accounting result arrived at was correct when it was initially determined through the application of the TN, and there is no material change in detail in the PFI project. At bodies where the TN is not currently mandatory, this will need to be considered on a case-by-case basis, by reference to the body's stated accounting policies.

Retrospection

27. In its discussions on retrospection the working group considered whether there could be a pragmatic approach in applying the accounting policy change prospectively, but recognised that this course would have National Accounts and fiscal implications.

28. The working group drew a parallel to the principles outlined in the transition rules for adoption of IFRIC Interpretation 12 *Service Concession Arrangements*, where changes in accounting policies are generally accounted for retrospectively (IAS 8). Whilst IFRIC 12 includes a limited transitional relief regarding measurement, if for any particular service concession arrangement it is impracticable to apply the Interpretation retrospectively, it includes no transitional relief in relation to asset recognition.

29. The working group also considered whether a high level view could be taken on retrospection using representative standardised projects, but acknowledged that there is a contextual issue. Whilst a high level approach to retrospection may be simpler from a central government public sector perspective, some bodies would want a fundamental review undertaken of individual projects, and there is also the local government perspective that requires consideration. The working group likened this issue to viewing the retrospection issue from both ends of a telescope, with a high level standardised review on one end, and a detailed individual project review on the other. The group further acknowledged that there would be materiality and funding implications (particularly where approved funding has in the past been conditional on an off-balance sheet treatment) that would have to be considered in any proposals to deal with retrospection, caused by the withdrawal of the TN. These are matters for the Treasury to discuss with relevant departments, in particular CLG, DfES and the Department of Health.

30. In its deliberations the working group concluded that it is for the Treasury to consider how they would approach retrospection, and the mechanisms that would be required to successfully complete the exercise. However, the working group recognises that there could be alternative routes to achieve retrospection, taking into consideration the factors of practicality and associated costs. Whether there would be a group change of accounting treatment or individual consideration of projects is for the Treasury to consider, and as a policy issue, is one of the areas that Treasury will need to communicate its views on to the FRAB.

Timing of the withdrawal of the TN

31. The working group discussed the issue of the timing of the withdrawal of the TN and considered three possible options, as follows:

- Option 1 - Withdraw the TN as soon as possible. In its discussions the working group concluded that if the Treasury decided to withdraw its TN, then the earliest likely time this would be possible from an accounting perspective would be for the financial year 2007-08. However, for this to be practical, any Treasury announcement of its intention to withdraw the

TN would need to be made quickly and be accompanied by the issuance of appropriate public sector guidance on retrospection, funding implications, the impact on current procurement etc. It is apparent that Treasury would need time to consider all the implications of withdrawing the TN and agreeing its policy before taking action.

- Option 2 – Withdraw the TN linked to the Comprehensive Spending Review (CSR). The working group in discussing this option, concluded that the withdrawal of the TN linked to the first year of the CSR, i.e. from financial year 2008-09, may permit the Treasury to better manage the change from a policy and budgeting perspective, by providing sufficient lead time to form its policy decisions, to signal advanced warning to the public sector, and to provide any guidance on the changes.
- Option 3 – Link the withdrawal of the TN to future changes in accounting for PFI in UK approved GAAP. The working group in discussing this option concluded that any future changes to UK GAAP in respect of accounting for PFI is likely to happen on a timescale that is too distant to address the present concerns over the inconsistency that exists in the public sector in accounting for PFI. The group concluded that this is not a viable option.

32. Whilst the working group considers that there are two viable options, the timing for the withdrawal of the TN would be ultimately dependent upon when the Treasury is able to confirm its future policy and put the appropriate procedures in place to provide the necessary guidance on any transition arrangements for accounting for PFI. The Treasury will need to communicate its views on this to the FRAB.

Summary

33. The working group identified differences between the approaches adopted in assessing the accounting treatment of PFI transactions within the public sector (i) under the AN as interpreted using the TN and (ii) under the AN as applied without reference to the TN. The working group identified that in some cases the differences were material to the overall conclusion on the balance sheet treatment of the PFI asset within the public sector, whereas there is less diversity of practice within the private sector where the AN alone is applied.

34. The working group in its initial work concluded that there were several possible options to increase consistency in accounting for PFI. The later work of the group focused on complete withdrawal of the TN, on the basis that this would increase consistency provided there was general agreement amongst the firms and audit agencies on how the AN should be interpreted in its application to the public sector in the absence of the TN.

35. The further work conducted by the working group in analysing representative PFI case studies suggests that the withdrawal of the TN, and the sole application of the AN in both the public and private sectors will increase consistency within the public sector and increase symmetry between the public and private sectors in accounting for PFI, with remaining differences anticipated to be within the scope of reasonable professional judgement.

36. In the event of the Treasury withdrawing the TN the working group considers it both unnecessary and undesirable to include any interpretative guidance in the FReM related to the AN.

37. The working group is of the view that for some bodies that have given precedence to the TN in accounting for PFI, the withdrawal of the TN and the subsequent sole application of the AN, will represent a change in accounting policy.

38. The working group concludes that it is for the Treasury to consider how they should approach retrospection, and the mechanisms that would be required to successfully complete the exercise, but recognises that there could be alternative routes to achieve it, taking into consideration the factors of practicality and associated costs. This is a policy issue for the Treasury to consider, and it will need to communicate its views on this to the FRAB.

39. The working group considered several options related to the timing of the withdrawal of the TN, however Option 1, withdrawing the TN from 2007-08, or Option 2, withdrawing the TN from 2008-09 linked to the CSR, represent the most viable options.

40. The working group concludes that any decision on the timing of the withdrawal of the TN, should the Treasury decide to do so, (and any related announcement) is ultimately dependent upon when the Treasury can put the appropriate procedures in place to provide the guidance on any transition arrangements for accounting for PFI, including the implications for funding (particularly where approved funding has in the past been conditional on an off-balance sheet treatment). The Treasury will need to communicate its views on this to the FRAB.

Recommendations

41. The PFI working group, in the interests of achieving greater consistency in accounting for PFI in the public sector, recommends that:

- The FRAB advises HM Treasury to withdraw its TN at the earliest time, but no later than 2008-09;
- The AN should be the sole source of guidance on accounting for PFI in the public sector, and that the FReM is amended to reflect this;
- The FReM does not contain any interpretative guidance related to the AN.

FRAB Secretariat
12 February 2007

Case Study One - Barchester Grouped Schools PFI

- 1 Midshire County Council is still seeking credits of £79.313m with uplift giving a total credit of £84.865m.

Background to the project

- 2 A major contributory factor was thought to be the educational structure of First, Middle and High Schools, which necessitates transitions for most children at the age of 8 and 12, in the middle of Key Stages. The new structure, now approved by the Schools Organisation Committee, will introduce a Primary and Secondary school system as in the rest of Midshire County Council and most of the country.
- 3 Midshire County Council ('The Council') will need to accommodate an additional 1100 pupils in the secondary phase. The OBC demonstrated that a 5 High School model worked best and gave details of the consideration of options.
- 4 The case presented in the FBC is to achieve:

School	OBC Option	FBC proposal	School size
Lower (Primary School)	New build - existing site	Unchanged	420
Priory	New build - existing site	Unchanged	950
St James'	New building - existing site	Unchanged	950
St Luke's	New build - new site	Unchanged	950
St Peter's	Extension and refurbishment - existing site	New build - existing site	1225
West Barchester	Extension and refurbishment - existing site	New building - existing site	1300

- 5 DfES Division for Voluntary Aided Schools has agreed to contribute toward the St Peter's New Build at £2m p.a. (to be part-indexed at RPI annually).

Developments since the OBC

- 6 The likely demand risk inherent in the project has been revised. It is anticipated that the provision of newly built schools will boost demand and in addition a number of developments in Barchester, will also increase the demand for education provision.

The Proposed PFI Project

- 7 The GHI Schools consortium has formed a Special Purpose Vehicle (SPV), Education Support Company (Barchester) Ltd to undertake this project. The SPV will employ GHI Plc subsidiaries to undertake the design and build of the schools as well as the delivery of long-term services.

Capital Structure

- 8 The borrowing entity for the project is Education Support Company (Barchester) Ltd, a Special Purpose Vehicle, and funding is provided on a limited recourse basis. The agreed capital structure of the SPV based on the most current financial model is as follows:

	£'000s	% total
Senior Debt	79,758	91.3%
Subordinated Debt	7,543	8.6%
Equity	10	0.1%
TOTAL	87,311	100%

- 9 The consortium has underwritten a level of third party income which on average is £60k pa (real), and is netted from the charge therefore reducing the payment made by the Council. Any income in excess of this figure is to be shared equally between the Council and the consortium
- 10 Contract debtor tax treatment is being utilised by the consortium. Consistent with HMT / OGC guidance, the SPV bears all the risk to general changes in tax policy, as well as the risk of the proposed tax treatment being disallowed in the future.

Unitary charge

- 11 There will be a single Unitary Charge for the Contract which is not made up of separate independent elements relating to availability or performance. Deductions for poor performance and unavailability will be made against each school's allocated Unitary Charge, with unavailability deductions capped at the total charge and performance deductions capped at a percentage of the total unitary charge.
- 12 The initial unitary charge payable by the Council will be approximately £11.451m, and remains approximately flat in nominal terms over the life of the project.

Capital Costs

School	OBC £ 000	FBC £ 000
St Luke's	15,244	17,182
St James'	15,543	14,317
St Peter's	7,639	15,545
West Barchester	11,893	13,582
Priory	12,929	13,531
Lower	4,740	5,295
Total	67,988	79,452

Application of FRS5

- 13 The contract payment follows the general form:
UP = UC - Availability penalties - performance penalties
- 14 The services to be benchmarked are listed below:
 - Management/Operations Systems
 - Security
 - Grounds Maintenance
 - Caretaking and Portering
 - Cleaning and Pest Control
 - Energy Management and Utilities
 - Catering

- Insurance.

- 15 After excluding the separable services above, the contract still includes non-separable lifecycle costs, building and preventative maintenance costs services. These cannot be benchmarked or subject to early termination without the whole of the contract being terminated.

Qualitative Indicators

- 16 The other qualitative indicators specified by the guidance as to be considered when forming a view on the accounting treatment are set out in the following table and explained in more detail below:

Indicator	Contract Position	Who bears the risk?	
		Council	Operator
Termination for Operator default	Compensation reflects PUK Guidance i.e. termination is based on market value of contract (where retendered) or calculated equivalent (where not retendered e.g. no liquid market) which may fall well below value of funding outstanding at time of termination.		X
Nature of Operator's funding	Senior Bank Debt 91% (maximum) Subordinated Debt and Equity 9% GHI Plc. is the design and build contractor, and will provide a parent company guarantee to the FM provider, WorkFM.		X
Who determines the nature of the property?	Standard use of Output Specification supplemented by negotiation at Preferred Bidder stage.		X

Analysis of demand

- 17 The payments between the Purchaser and the Operator do not reflect the usage of the property and, as long as availability and performance criteria are met, the Purchaser is required to pay the unitary charge regardless of the level of usage. This indicates that the Purchaser retains the majority of demand risk.

Education Provision across Barchester

- 18 TN1 states that where the Purchaser has the flexibility to manage demand across a portfolio of properties in a particular sector, it is necessary to evaluate the total exposure to demand risk across the portfolio of properties in that particular sector of the market. The total exposure should then be allocated across the properties providing the total expected supply. This presumes that the portfolio is wider than the facilities covered by the PFI scheme, which is correct in the case of Lower. However in the case of the five secondary schools within the project, they are the only LEA schools in Barchester. The LEA provides, in Barchester, 34 mainstream schools (12 First Schools, 8 Middle Schools, 9 Combined Schools and 5 High Schools). Demographics and birth rates have been used to generate expected demand in the entire primary and secondary portfolios and for Lower itself. This is explained further in the paragraphs below.
- 19 Information on the following factors are set out below
- the area within which demand is managed
 - historical information on usage levels against supply
 - geographical and demographic factors
 - the effects of government policy.

The area within which demand is managed

- 20 Barchester is a fairly self-contained city in terms of educational provision. The schools work close to the boundaries of the city with few pupils coming from outside. The other nearest secondary schools are mainly too far away to have a significant effect on educational take-up in Barchester with the exception of The Vale Community College, see below, and The Community College (CC) in Barchester West which is chosen by some parents who live to the north-west of the city. The numbers taken by CC are limited by the size of CC and the poor communication routes to approximately 15 pupils a year.

Historical information on usage levels against supply

- 21 At present each cohort is approximately 1,000 pupils in size, but there is turbulence around this number as children move in and out of the area every year. There is, however, a trend reflecting a lack of confidence in the current provision, on average there are 176 pupils fewer at 15 than when that cohort entered the school system at 5 years old. This situation is exacerbated by the number of changes built into the system which encourages the level of choice facing parents.
- 22 Whilst the national average of pupils moving into the independent sector is 8%, within Barchester 487 pupils attend neighbouring maintained schools with 333 of these attending The Vale Community College. These are pupils that might be attracted back into the Barchester LEA schools if there was sufficient confidence in such provision.
- 23 Compared with the number of births in 1989, 81% of children now attend a secondary school in Barchester. This low ratio is primarily due to a fundamental dissatisfaction with the current provision. Demand based upon the current take up of places is considered the worst case scenario for this project.
- 24 The PFI Scheme will provide 5,375 places, at 5 secondary schools, and 420 places at Lower Primary School. The pupil numbers for the early years of the project are known with some degree of certainty (based on birth rates and current pupil numbers at first and middle schools in the City), whilst numbers in later years are based on empirical data and local knowledge on factors such as:
 - Birth rates, and
 - Impact of any developments in Barchester and surroundings.

Geographical and demographic factors

- 25 There are significant developments around Barchester that might affect the potential school numbers; a new settlement is planned to the east of Barchester with 4,000 new houses. This would increase the number of local pupils able to attend the Vale Community College and thus reduce the number of children able to attend who live in Barchester. This would suggest, all other things being equal, that the numbers of pupils wishing to attend schools in Barchester would increase. Additionally several big companies are moving into Barchester. This trend is expected to continue. This suggests the upside risk may be great, however the risk inherent in this project is limited by the school capacities, and the Council also have some control over this risk as described below.

The effects of government policy

26 The PFI scheme was designed to meet various aspects of government policy. These include:

- Raising standards;
- Building schools for the future;
- Asset management planning;
- Transforming secondary education; 14 – 19 curriculum;
- Specialist schools;
- Networked learning communities;
- Developing early years education and childcare;
- Inclusion;
- Healthy Schools Initiative;
- Economic regeneration;
- Transport policy in reducing congestion;
- Extended schools.

27 Since the bid was made government policy has developed in these areas and the proposals made are in harmony with these developments.

Projected Demand in Barchester's Primary Portfolio

28 Lower Primary School has the capacity to provide 420 of the total of 8,140 primary places in the city. The likely level of demand across the entire portfolio has been forecast based upon the information provided above. As can be seen from the graph below excess capacity has been planned to allow for parental choice.

29 Demand at Lower Primary will be affected by competition with neighbouring schools, both LEA schools and independent schools.

Projected Demand in Barchester's Secondary Portfolio

30 All of the secondary schools within Barchester are included within the PFI project. The likely level of demand across this portfolio has been forecast based upon the assumptions given above. Demand is expected to increase and parental choice may be restricted. However, scope for expansion has been built into the PFI project to accommodate increased demand.

- 31 As the PFI scheme includes all of the LEA schools in Barchester, and demand within Barchester may only be materially affected by the Vale Community College outside of Barchester, demand will be affected by competition within the independent sector.

Demand risk within the PFI project

The degree of genuine uncertainty

- 32 The demand risk in respect of this project is complicated by the nature of the restructuring of education in Barchester that drives the PFI scheme. One example of this uncertainty is the need for the Council to provide an extra 1,100 secondary school places as a result of Year 7 pupils being taught in the secondary sector. This adds a degree of uncertainty to the overall project which compounds the school-by-school situation as described below. The Council's projections of expected numbers in each year group are robust, however, and are considered to be prudent.
- 33 Across Barchester 5,375 places were estimated as being required. The option appraisal considered the educational objective of having secondary schools which were approximately 1,000 pupils in size in order to maximise educational advantages. This was then applied to the situation across Barchester. Designated areas have been introduced from 2004 to help manage the changing patterns of attendance. The introduction of the co-ordinated scheme for admissions will also provide the Council with more control over which schools pupils attend.
- 34 As each school was assessed as an individual case, as well as part of the overall Barchester Reorganisation that requires such significantly increased secondary pupil numbers, the information below represents the justification used in arriving at the proposed pupil numbers:

Priory

- 35 Priory School in its present form is a 706 pupil school with current numbers on roll (NoR) of 507. Therefore at present there does not appear to be a sufficient demand for places at the existing school. This is largely down to the OFSTED inspection in 2000 when Priory was identified as having serious weaknesses. It was subsequently protected from the admission of additional pupils who might prejudice the educational provision. Although the 2002 inspection identified it as an effective and improving school with no serious weaknesses, its considerable potential is currently limited by a public perception of it remaining weak.
- 36 Therefore, whilst the restructuring of secondary education will necessitate Year 7 provision at Priory, the justification for a 950 place new build school is based largely on the reversal of the public perception of the school which will allow it to develop to the optimum size sought.

St James'

- 37 St James' currently has 624 pupils on roll. Its results are improving and this has been recognised by its recent Ofsted report. The introduction of designated areas has worked positively and there are pupils applying from the schools new areas. The size of 950 was selected in the context of ideal size and providing sufficient places across Barchester.

St Luke's

- 38 The site at St Luke's is inadequate to provide acceptable curricular provisions to the existing NoR of 691, despite having 'capacity' for 761. As a result of this, a new site has been identified and, therefore, a new school is to be built. It is felt, however, that the significant increases in housing developments in the east of the city (particularly the development of the A1000 corridor and the proposed relocation to the City of office of major companies) mean that pupil demand at St Luke's (and its neighbour the St Peter's VA School) is likely to increase significantly.
- 39 As a result of the analysis, a new 950 pupil secondary school has been identified as being required for St Luke's.

St Peter's

- 40 The geographical location of the St Peter's school means it is in a similar position to St Luke's as regards demographic changes in the short to medium term. Moreover, the current High School structure in Barchester, whereby provision begins at Year 8, means the school is not attractive to pupils from outside Barchester. The problem if the school moves to secondary status without a subsequent expansion would be that there would necessarily be a reduction in each year group in church school places. At present the school has a capacity of 1,075 and NoR of 992.
- 41 The proposal is for a new build 1,245 place secondary school on the existing site.

West Barchester Technology College

- 42 The site limits the expansion of the school and creates overcrowding for the current NoR of 1,269, particularly when considered alongside the capacity of 1,153. Although the present overcrowding is having a negative effect on pupil behaviour (as evidenced by one of the highest levels of permanent exclusions in The County), it is felt that this can be rectified by the new build of a 1,300 pupil facility on the existing site. The number per year group will be reduced to facilitate this and maintain the balance of pupil provision across Barchester.

Lower Combined

- 43 Lower currently functions as two separate schools, Lower First and Lower Middle, which, although located on the same site, boast their own Headteacher, staff and premises (with the exception of the dining block which is shared). The students are aged between 5 and 12 years, with early years provision on site provided in partnership with a voluntary pre-school group.
- 44 At present the schools are unable to deliver the levels of education required for new starters at its feeder school, Priory. This is down to a number of factors, including the presence of numerous temporary facilities due for replacement and the generally high maintenance needs facing the schools.
- 45 As birth rates in the surrounding area are falling, and the new school will only teach up to and including Year 6 pupils, the new school is to be a 420 place facility compared to the current 720 pupil combined capacity and the 513 NoR (including Year 7 pupils).

The length of contract

- 46 The operating period lasts for 28 years. This is therefore a relatively long contract covering several generations of pupils.

The strategy for managing demand risk

- 47 There exist a limited number of strategies open to the Council within the contract as a means of managing demand risk at the location, particularly should demand be less than expected. These are that the Council could:
- terminate the whole contract;
 - seek to issue an acceptable variation to the contract, meaning:
 - partial termination of the contract (i.e. a school); or
 - partial closure of a premises.
- 48 These strategies, in reality, may be impractical because they may not present the Council with significantly more savings than continuing with the contract at actual utilisation levels. Management of demand risk on a macro level would involve the LEA managing the admissions process over the whole area, which might be necessary, particularly in the initial period of the new secondary school system in Barchester.

- 49 Additionally in respect to secondary places the Council have built flexibility into the PFI project, by negotiating designs at St Luke's (scope for additional 400 places) and Lower (scope for additional 210 places) that have the capacity to expand and meet any additional demand. In respect of Lower the Council is protected against a decrease in demand as this would be managed by the amalgamation of infant and junior schools in the area. At their current size, with year groups of 90 or 120, one school of 630 or 840 would be created from two smaller schools with the consequent advantages for pupils generally recognised. This would also facilitate the further removal of poor quality or temporary accommodation.

Generation of scenarios for demand

- 50 Each year there may be an excess or shortfall from the expected level of demand. The demand in one year is assumed to vary randomly from the previous years according to a triangular distribution. This triangular distribution has worst case, most likely case and best case scenarios. For example, if in 2005 the demand was 2 places below the expected level of demand and the triangular distribution was (best case +5, most likely case 0, worst case -5), then the demand in 2006 could vary between a shortfall of 7 and an excess demand of 3.
- 51 The rationale for modelling the change in demand rather than the level of demand annually is to create a smoothed demand profile over time. This should, for example, prevent unlikely scenarios of there being excess demand in years 1 and 3, but a large shortfall in the intervening year.

Lower School

- 52 In the case of Lower demand is expected to exceed the prudent forecast numbers. A high demand scenario based upon forecast birth rates and increased take up of places produces a forecast where capacity is reached at the school within 5 years of opening and subsequently maintained (21 more pupils over 5 years, therefore 21 pupils / 5 years = 4 pupils per year). Demand being less than the prudent forecast of expected numbers is considered extremely unlikely.
- 53 The distribution below has been used to calculate estimates of total pupil numbers, which has been compared to the expected number of pupils on roll each year. The value of variation from expected numbers, in terms of unitary charge, has been calculated and discounted to arrive at an expected value for each scenario.
- 54 The triangular distribution used to approximate variations in demand, was as follows.

Worst case annual change in excess / (shortfall) from expected level of demand	-2 pupils
Most likely annual change in excess / (shortfall) from	no change

Worst case annual change in excess / (shortfall) from expected level of demand	-2 pupils
expected level of demand	
Best case annual change in excess / (shortfall) from expected level of demand	+4 pupils

Secondary Schools

55 Forecast expected numbers are based upon birth rates and an increased take up of places (90% take up) compared to the current take up (81% take up). A worst case scenario has been based upon birth rates and the current level of take up of places. This produces a forecast which levels off after 20 years at a forecast pupil number that is 9% lower than the expected level (484 pupils lower, therefore $484 \text{ pupils} / 20 \text{ years} = 24 \text{ pupils per year}$). A best case scenario has been produced with an increased take up (94% take up) of places compared to the expected case where take up is 4% greater than the expected level over a 20 year period (215 pupils greater, therefore $215 \text{ pupils} / 20 \text{ years} = 11 \text{ pupils per year}$). This rate was determined by the known national average of pupils moving into the independent sector.

56 The expected ranges were as follows.

Worst case annual change/shortfall from expected demand	-24 pupils
Most likely annual change/shortfall from expected demand	No change
Best case annual change/shortfall from expected demand	+11 pupils

Residual value risk

57 School buildings are specialised properties for which there is limited practical alternative use and residual value is therefore calculated on the basis of depreciated replacement cost. While school properties in general will still be required for their purpose at the end of the contract, this may not be the case for individual schools.

58 The contract requires that the properties be handed back to the Council in good condition. Clause 41 of the Project Agreement states:

"No later than the date 18 months prior to the Expiry Date, the Authority shall be entitled to carry out or procure the carrying out of a survey of the Sites to assess whether they have been and are being maintained by the Contractor in accordance with its obligations"

This describes the Final Survey which is designed to ensure the Council are not left with schools that have been left to deteriorate at the end of the contract term, thereby adversely affecting their residual value. This approach works as described in Clause 41.5:

"If the final survey shows that the Contractor has not complied with or is not complying with its obligations under clause 24.1, the Authority shall:

notify the Contractor of the rectification and/or maintenance work which is required to bring the condition of the Schools to the standard they would have been in if the Contractor had complied or was complying with its obligations under clause 24.1.(the "Required Standard"); and

recover the cost of the survey by means of a withdrawal from the Retention Fund Account or deduction from the next payment of the Unitary Charge."

- 59** A total cost for the six schools of £73.503m has been taken from the financial model for construction cost. The principal elements of the building structure, external envelope and external civil engineering elements have a minimum life expectancy of 60 years.
- 60** The future residual value of the property is random and assumed to fit the following parameters:

	Impact
Worst Case	-10%
Most Likely Case	0%
Best Case	+10%

Appendix 1 – Risk Register

Risk	Significance	Who bears the risk?		Comments
		Council	Operator	
Demand	High	X		Lower - Demand risk determined by competition with LEA and independent schools. Secondaries - Demand risk determined by competition with independent schools.
Third Party Revenue	Low	X	X	Underwritten level of income of £60K pa. Any income above this level is shared 50:50.
Availability	Medium		X	Non availability penalty up to 100% of the unitary charge.
Performance	Medium		X	Performance penalty up to a percentage of the Unitary Charge.
Design	Medium		X	Operator required to provide a design solution to meet the Council's output specification. Design failures may result in availability and performance penalties through Operator's responsibility for cost management.
Obsolescence & Technology	Low		X	Output specification to be met throughout

& Technology				contract, but simple buildings and no ICT inclusion.
Changes to relevant costs	Medium		X	As the schools are all new build, there is potential for misestimate of maintenance costs.
Residual Value	Low	X		Schools transfer back to Council at end of the contract for nil consideration.

Appendix 2 – Qualitative indicator summary

Qualitative Indicators

Indicator	Contract Position	Who bears the risk?	
		Council	Operator
Termination for Operator default	Compensation reflects PUK Guidance i.e. termination is based on market value of contract (where retendered) or calculated equivalent (where not retendered e.g. no liquid market) which may fall well below value of funding outstanding at time of termination.		X
Nature of Operator's funding	Senior Bank Debt 91% (maximum) Subordinated Debt and Equity 9% GHI Plc. is the design and build contractor, and will provide a parent company guarantee to the FM provider, WorksFM.		X
Who determines the nature of the property?	Standard use of Output Specification supplemented by negotiation at Preferred Bidder stage.		X

Case Study 2 - NHS - Case Study, Leafy Green NHS Trust

Background to the project

1. Leafy Green Healthcare Trust (the Trust) is contracting a PFI deal for a partial redevelopment of the Trust site and the provision of an on-site laundry, replacing current off site facilities. The project will allow the Trust to offer patients up-to-date facilities to replace old and unsuitable accommodation across the site and allow the Trust to redevelop surplus site areas.
2. The contract is expected to be for 30 years with Can-do Ltd, the Operator, which will form a Special Purpose Vehicle (company) to deliver the contracted services (serviced facilities). The facilities are expected to be delivered in December 2004 for the start of operational purposes. At the end of the contract period, the facilities will revert to the Trust for nil consideration. The contract is solely for maintained facilities and does not provide the Operator with opportunities for third party income.
3. The Operator's primary contract is to design, build, finance and operate the required facilities and to provide all hard facilities management services such as maintenance and lifecycle renewals. The Trust will be responsible for all clinical and soft services such as cleaning, heating and lighting, catering and portering. The Operator will however, have responsibility for energy efficiency.
4. The whole unitary charge will be uplifted by the annual rate of inflation per the Retail Prices Index (RPI).

Project details

5. The scheme encompasses the development of a new phase of the main acute hospital accommodation at the Leafy Green Hospital. The new project covers:
 - Trauma & Orthopaedic wards (56 beds);
 - Regional Burns Unit;
 - Elderly wards (60 beds);
 - Plastic Surgery & Maxillo-Facial OPD;
 - Clinical office accommodation.
6. The scheme is mainly a new build facility, but will include the transfer of the newly constructed MRI & endoscopy building. The Trust will be responsible for the redevelopment of the surplus accommodation/land which will become available as a result of the scheme.

7. The new build element of the scheme will involve the construction of a new four-storey extension to a 12 year old element of the main hospital ("phase 1"). This will require the Operator physically to join the new facility to the existing facilities.

Commercial details

8. The Operator will build, design, finance and operate the facilities and enter into a 30 year service agreement with the Trust. The concession period will commence from the date of availability of the facilities, which is currently assumed to be December 2004.
9. Upon expiry of the service agreement, ownership of the facilities shall revert to the Trust for nil consideration.
10. The land upon which the facilities will be built will remain in the legal ownership of the Trust for the duration of the concession, although the Operator will be granted a licence for the duration of the construction and operational phases of the concession period.
11. The facilities would be used by the Trust on an exclusive basis and it is anticipated that the Operator would not be able to benefit from any third party revenues.
12. The Operator will charge the Trust a single unitary payment for the provision of the facility. This charge is payable to the Operator on the basis that the facility is available and provided to an appropriate standard as measured by an output specification and performance monitoring system (PMS). The Trust is required to pay this charge irrespective of actual occupancy levels.
13. The Operator would exclusively provide all "hard" facilities management services to the Trust such as routine and lifecycle maintenance. These will be partly funded by a sinking fund, which will be integrated into the single unitary charge on a straight line basis.
14. The Trust will provide clinical services and "soft" facilities management services such as cleaning, heating & lighting, catering and portering. The Trust will also be directly responsible for business rates.
15. The responsibility for utilities costs (energy and water) will be shared between the Trust and the Operator in accordance with the provisions of the Standard Form of PFI Contract. The Trust will assume responsibility for any financial variances due to the movement in unit costs after financial close and the Operator will assume responsibility for any financial variances relating to energy volumes (i.e. efficiency).
16. The entire single unitary charge (i.e. 100%) will be uplifted by the prevailing annual rate of retail price inflation, which is assumed to be 2.5% per annum for the purpose of this report.

17. There is assumed to be no scope for the generation of additional third party income from the scheme.

Capital Structure

Sources and applications of funds

Source of Funds	(£ 000)	Application of Funds	(£ 000)
Construction Costs	22,255	Senior Debt	25,039
Equipment	0	Sub-Ordinated Debt	2,834
Project Fees & Overheads	2,771	Equity	1
Capitalised Interest	1,580	Trust Bullet Payment	0
Working Capital	1,268	Retentions	0
Total	27,874		27,874

Source: Operator financial bid info.

18. The Operator has obtained senior debt support from the Bank of Loans, with which they have an established relationship. A letter of support has been provided from their funder. The Operator proposes that the bank will provide a fairly standard 90% of the funding required as senior debt repaid over 27 years.
19. The Operator and their lead construction contractor are proposing to underwrite their sub-ordinated debt requirements directly. There is only a nominal pure equity investment of £1K injection by the Operator.

Operational Phase

20. The Trust is obligated to pay an annual unitary charge of £2,423,368 from the start of the concession (December 2004).
21. This figure excludes the cost of utilities, on the basis that this cost stream has some of the characteristics of a pass-through cost and is separable to the main payment for the availability of the facilities.
22. Figure A below provides an annualised approximation of the key cost elements incorporated into the Operator's tariff as at April 200X prices. This analysis will inform the quantitative risk analysis in the event that an FRS5 approach is undertaken by this assessment.

Figure A, Analysis of the Operator's Costs

Heading	(£ 000)
Hard FM	392
Lifecycle Costs	232
Insurance	84
SPV Management	66
Debt Service & Repayment, Taxation and Dividends	1,649
Annual Tariff	2,423

Application of FRS5

23. The contract payment follows the general form:

$$UP = UC - \text{Availability penalties} - \text{Performance penalties}$$

Qualitative indicators

Termination for Operator Default

24. In the event of Operator default, if the bank exercises its right under the Direct Financier Agreement and steps in, no compensation would be payable. If the bank does not exercise its step in rights, it would be entitled to compensation in accordance the Standard Form of PFI Contract.

25. Furthermore, as Operator default could reasonably be expected to be associated with some non-performance issues, and that contractual set-off rights allow for recovery of any outstanding deductions from any termination settlement, the Operator's lender is further exposed in the event of Operator default. It should also be noted that the agreed payment mechanism for this project only allows a limited period of sustained poor performance before the Trust is able to terminate the project agreement.

Nature of Operator's Financing

26. The Operator is understood to be planning on the basis of receiving senior debt bank loan financing equivalent to 90% of rolled up capital costs and the remainder by sub-ordinated debt and a fixed equity investment. .

Who Determines the Nature of the Property?

27. The Operator has designed the facilities and will construct the assets with materials of its own choice. The Trust has had limited input into the method of construction, although it does have the right to accept the services at the commencement date based on its own commissioning procedures. During the duration of the concession, the Operator has the opportunity to maintain and, if necessary, alter the property at its cost, as long as the Trust is able to continue to provide clinical services and provides its consent to the variation. However, the Trust does have some element of design risk if it changes its mind on the clinical outputs and/or there is a change in NHS legislation that requires a design change.

28. Although the Operator is unable to vary its design without the Trust's consent, the responsibility for making and funding any design changes remain entirely with the Operator.

Quantitative indicators

Analysis of demand risk

29. This risk is retained by the Trust as the unitary charge will not vary with the volume of usage. Assuming that all of the facility is defined as available, the Trust is committed to paying a fixed unitary charge irrespective of usage.

30. The main factors identified that will influence the assessment of demand risk include:

- The ongoing clinical need for facilities of these types. This is a mainly function of demography and current clinical practice;
- The proximity, appropriateness and availability of other existing healthcare facilities within the Trust's catchment area;
- The scope for competition from within or outside of the NHS.

31. Given that the facilities can be analysed between inpatient beds and general clinical facilities, including some administrative functions, it could be argued that the Trust is really exposed to differential demand risk. Assuming that the general clinical facilities have been sized appropriately and that there are no foreseeable changes in clinical practice which will make these facilities obsolete during the life of the concession, the main demand risk associated with this scheme relates to inpatient beds. This is based upon the assumption that the Trust will be able to utilise non-specialised space for other purposes or sub-let on a commercial basis.
32. There are a number of factors which would appear to indicate that the Trust's exposure to demand risk is relatively low. These include:
- Historically high occupancy levels for NHS facilities of this type;
 - A significant demographic increase in the number of elderly residents within the Trust's catchment area over the next two decades;
 - The support of local healthcare commissioners for the development of this facility (this was pre PBR);
 - The direction of Government policy in relation to the delivery of care on a more clinically appropriate and patient centre environment.
33. In accordance with the NBI recommendations, the Trust has sized its capacity requirements based upon an assumption of an 85% occupancy for inpatient beds. Therefore, this is assumed to be the most probable value for determining the risk of variation.
34. As some occupancy will be lost as a result of patient movements and the need to retain some clinical flexibility, it is considered unlikely that occupancy will exceed 87.5%. Although current average occupancy levels can exceed this level on occasions, it should be recognised that the Trust has specifically sized bed capacity to achieve decreased occupancy levels required by the NBI.
35. Equally, it is considered unlikely that average occupancy will fall below 85% in the first decade of the concession period. This is because there is a relative shortage of such facilities locally and a high and growing need for the services that it provides. Thereafter, it has been assumed that minimum occupancy will fall to 83% during the second decade and to 81% during the final decade of the concession. This reflects the relationship between uncertainty and time.
36. In order to determine the drivers of demand risk, it is necessary to analyse the unitary charge between inpatient beds and the remainder of the facilities. The Operator's accommodation schedule indicates that inpatient bed areas account for 5,786 square metres out of the total gross area for the scheme of 9,092 square metres. As a crude proxy, this suggests that 57% of the unitary charge, amounting to or £1,370,601 per annum, relates to the provision of inpatient beds, and is therefore effectively exposed to demand risk.

37. The key assumptions supporting the calculation of this risk are set out in Figure B below.

Figure B: Analysis of Demand Risk Assumptions

Description	Occupancy
Risk Bearing Party	Trust
Risk Driver (Value)	Unitary charge relating to inpatient beds (£1,371K)
Event Probability	100%
Years of Occurrence	1 - 30
Minimum Impact	Y1-10 85% Y11-20 83.5% Y21-30 81%
Most Probable Impact	85%
Maximum Impact	87.5%

Source: Trust estimations

Residual Value Risk

38. This risk is clearly retained by the Trust. Whilst the Operator's financial model assumes that the facilities would have a net book value of zero, it would be expected that; had the facilities been developed by the Trust, some residual value would actually remain after 30 years. This of course assumes that the Trust has an ongoing use for the facilities, which is considered a reasonable position.

39. Therefore, working on the basis that the facilities will have a weighted useful economic life of 40 years and that it will be maintained in good condition as result of performance specifications, it is therefore expected that the net book value of the facilities as at year 30 will exceed zero.

40. It could reasonably be argued that the potential maximum residual value, measured on a simple straight-line basis, is around 25%, being 10 years remaining of a 40 year weighted useful economic life. However, this assumption does not reflect the asset enhancing value of lifecycle replacement undertaken by the Operator. This is especially so in the case of engineering services, which typically experience a significant overhaul between years 20 and 25 of the concession. Therefore, a weighted average remaining value of 35% has been assumed, which is the same assumption used to generate the estimate of residual interests in the Full Business Case.
41. It is considered that the risk of the expected underlying residual value being exceeded is negligible as the operator has no incentive to "over maintain" the assets. Therefore, it is assumed that the maximum residual value will equate to the expected residual value (i.e. 35%).
42. Although planned maintenance and lifecycle expenditure will be closely monitored by the Trust, it is more likely that the underlying residual value will be slightly less than expected due to lower than expected upkeep of the facilities by the Operator. Therefore, it is assumed that the minimum residual value will be 5% less than the expected residual value (i.e. 30%).
43. Given that property values tend to appreciate over time, it is also necessary to consider the impact of higher or lower than expected changes in the real value of property relative to assumed inflation. As a working estimate, it has been assumed that the maximum value will increase by a further 10% over the life of the scheme and the minimum value has been set at a 5% decrease in real terms property prices. These estimates are judgemental and reflect the expectation that property inflation is more likely to exceed general inflation over the next 30 years.
44. The residual value calculation has been based upon the Operator's current construction costs excluding SPV-related and bid development costs, which amount to £22.3 million.
45. In calculating the net present value of the residual, no general construction inflation has been assumed.
46. The key assumptions supporting the calculation of this risk are set out in Figure C below.

Figure C: Analysis of Residual Value Risk Assumptions

Description	Occupancy
Risk Bearing Party	Trust
Risk Driver (Value)	Works Costs (£22,255K)
Event Probability	100%
Years of Occurrence	31
Minimum Residual Value	30%
Most Probable Residual Value	35%
Maximum Residual Value	35%
Maximum Real Property Inflation	(5%)
Expected Real Property Inflation	0%
Maximum Real Property Inflation	10%

Source: Trust

Other indicators

Relevant cost change

Figure D: Relevant Cost Risk Assumptions

Description	Occupancy
Risk Bearing Party	Operator
Risk Driver (Value)	Annualised operating costs (£774K)
Event Probability	100%
Years of Occurrence	1 - 30
Minimum Impact	Y1-10 0.25% Y11-20 0.50% Y21-30 0.75%
Most Probable Impact	0.00%
Maximum Impact	Y1-10 1.50% Y11-20 1.75%

Description	Occupancy
	Y21-30 2.00%

Source: Trust risk assessment

Penalties for Under Performance & Non-Availability Risk

47. Although both of these risks have been transferred to the Operator through the payment mechanism, it is not envisaged that a significant level of deductions (i.e. above 2.5%) will result through the sub-standard delivery of the facility and services given the relatively simple nature of the facilities.
48. The payment mechanism provides for penalty deductions for failure to meet a prescribed level of performance, which after allowing for a period of rectification, could result in service failure points being incurred depending upon the severity of the failure. Accruing service failure points leads to deductions from the unitary charge, and could provide the Trust with the right to invoke the termination clause.
49. Being highly utilised buildings, there is a risk of higher than usual wear and tear. More importantly, the payment mechanism ensures that if a limited number of key operational units are unavailable (e.g. inpatient beds), the Operator could quite quickly be exposed to a situation whereby it is penalised 100% of the unitary charge due in a given month.
50. Three potential scenarios have been assessed by the Trust in their risk workshop:
- The first scenario is based upon the assumption of continual low level poor performance every month throughout the concession period.
 - The second scenario is based upon good performance throughout the concession with isolated events of significant poor performance.
 - The third scenario assumes that actual performance will be excellent and that relatively few deductions will be incurred.

Scenario 1: Continual Low Level Poor Performance

51. It is possible that deductions could be relatively low due to the relatively low tolerances imposed by the payment mechanism. A range of performance scenarios against the agreed payment mechanism means that if deductions averaged more than 0.05% per month over a sustained period, the project company would ultimately default and the project agreement could be terminated.
52. It is assumed that the Operator would manage its performance so that it never exceeded 0.05% per month. Therefore, this level of deduction could be equated with the **expected level** of deduction for modelling purposes.

53. At a level of deductions of 0.05% every month, the annual deduction would be approximately would be £1,212 per annum.

Scenario 2: Isolated Events of Significant Poor Level Poor Performance

54. It is suggested that for second scenario it is perhaps more likely that actual deductions will be insignificant for considerable periods of time, interspersed with limited periods of significant poor performance.

55. In order to test the impact that such an event a scenario has been suggested whereby one of the two wards is deemed unavailable, but still used by the Trust, for a period of one week with no other area or quality related failures. This event could easily be triggered by causal factors such as a heating failure or longer than expected planned maintenance.

56. This event would lead to deductions of £61,097 in that month. Working on the relatively cautious assumption that such events would occur only once every two years, the annualised level of deduction that result under this scenario would be £30,048 or 1.24% per annum. Given the high level of service failure points that could result from this scenario, it is assumed that the Operator would work quickly to rectify the problem to avoid escalation procedures.

Scenario 3: Very Low Events of Poor Level Poor Performance

57. Evidence from other local schemes in operation suggests that the actual level of deductions on completed and operational PFI schemes of this nature can be very low once initial snagging faults arising during the first six months of operation have been rectified. Assuming that pre-planned maintenance schedules are adhered to, it is possible that the actual level of deductions could be negligible. Although it would probably wise not to assume a zero level of deductions, a working estimate of say 0.025% could be considered the **minimum level** of annual deductions expected.

58. At a level of deductions of 0.025% every month, the annual deduction would be approximately would be £606 per annum.

59. Taking the three scenarios together, this assessment will assume that annual deductions will vary between a **minimum** of 0.025% and a **maximum** of 1.24% per annum, with the **expected** level of deductions being 0.05% per annum.

60. The key assumptions supporting the calculation of this risk are set out in Figure E below.

Figure E: Analysis of Performance & Availability Risk Assumptions

Description	Occupancy
Risk Bearing Party	Operator
Risk Driver (Value)	Unitary charge (£2,423K)
Event Probability	100%
Years of Occurrence	1 - 30
Minimum Impact	0.025%
Most Probable Impact	0.050%
Maximum Impact	1.240%

Source: Trust

Design Risk

61. Because of the scheme being for acute accommodation which is designed to meet/join an existing facility, the risk of design failure is considered to be medium. The more probable cause of cost variation linked to design failure is persistent and incremental maintenance which require additional expenditure, but which fall short of the non-recurring capital expenditure associated with rectification works.
62. The cost driver for this variation is the Operator's revenue maintenance budget. It is assumed that there is a 10% probability of such an event occurring during each year of the concession and the cost consequences will vary between 5% and 20% with an expected variance of 10%.
63. Although the probability of the occurrence of latent defects is less probable, the consequences are considered to be more significant and would require capital expenditure. The cost driver for this variation is the Operator's works costs. It is assumed that there is a 5% probability of such an event occurring during years 11 to 30 of the concession and the cost consequences will vary between 1% and 5% with an expected variance of 2.5%.
64. The key assumptions supporting the calculation of this are set out in Figure F below.

Figure F: Analysis of Performance & Availability Risk Assumptions

Description	Maintenance	Latent Defects
Risk Bearing Party	Operator	Operator
Risk Driver (Value)	Maintenance budget (£2,423k)	Works cost (CAPEX) (£22,225k)
Event Probability	10%	5%
Years of Occurrence	1 - 30	11 - 30
Minimum Impact	5%	1%
Most Probable Impact	10%	2.5%
Maximum Impact	20%%	5%

Source: Trust

CASE STUDY 3 - PRISON

- Prison building, assumed useful economic life 60 years, DCMF contract. Planned size - 840 prisoners
- Financing – 9% equity, 91% bank. On contractors default, basically only bank debt + interest gets paid (less certain deductions)
- Contractor's accounting of capital cost under FRS 5 - as a finance debtor
- Contractor provides:
 - Security
 - Staffing
 - Maintenance and repair
 - Medical and health care assistance
 - Drug tests and treatment programme
 - Educational programme
- Contract length 25 years, after which prison reverts to public sector. Built on Prison Service land.
 - Capital spend £65m
 - Maintenance + lifecycle costs £500k per annum
 - Unitary payment £25m per annum
 - NPV unitary payments £245m
- Benchmarking – at Prison Service discretion, and only on a total contract basis
- Demand risk – unitary charge based on guaranteed minimum number of prisoners (800) but some extra payments made if numbers exceeded
- Performance risks – penalty clauses
(capped at 5% of unitary charge as long as availability continues)
- Operational cost risks – indexation is RPI based
- Design risk and obsolescence risk – considered to be shared
- Prison legislative changes – Prison service risk

(NAO observation – many of the risks are not property related)
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Unitary charge formula;

$$UP = F + I + I_2 + U$$

where

F = Fixed fee

I = Indexed fee

I_2 = Indexed Costs fee

U = Indexed utility fee

Above factors based on available places, subject to guaranteed minimum. All parts of the contract run for the same period.

Observations on demand risk

This is perhaps not as straightforward a contract as some other prisons as it includes some extra payments to cover marginal costs for prisoner numbers if they exceed a certain level. In considering demand risk, attention was drawn to the ever increasing prisoner numbers in England and the UK as a whole. However it was also noted that this increase in demand is not being experienced uniformly across the UK or England and will largely be influenced by policy decisions on custodial judgements that may change over a 25 – 30 year time span. Changes in technology (tagging etc) were also noted as a possible influence on future demand.

A further argument put forward as a limitation of demand risk was that decreases in demand could be catered for by transferring prisoners from non-PFI prisons to the PFI prison (and that in such a situation it was likely that older, non-PFI prisons would be closed before PFI ones).