



SCOTTISH
FUTURES
TRUST

Value for Money Assessment Guidance: Capital Programmes and Projects

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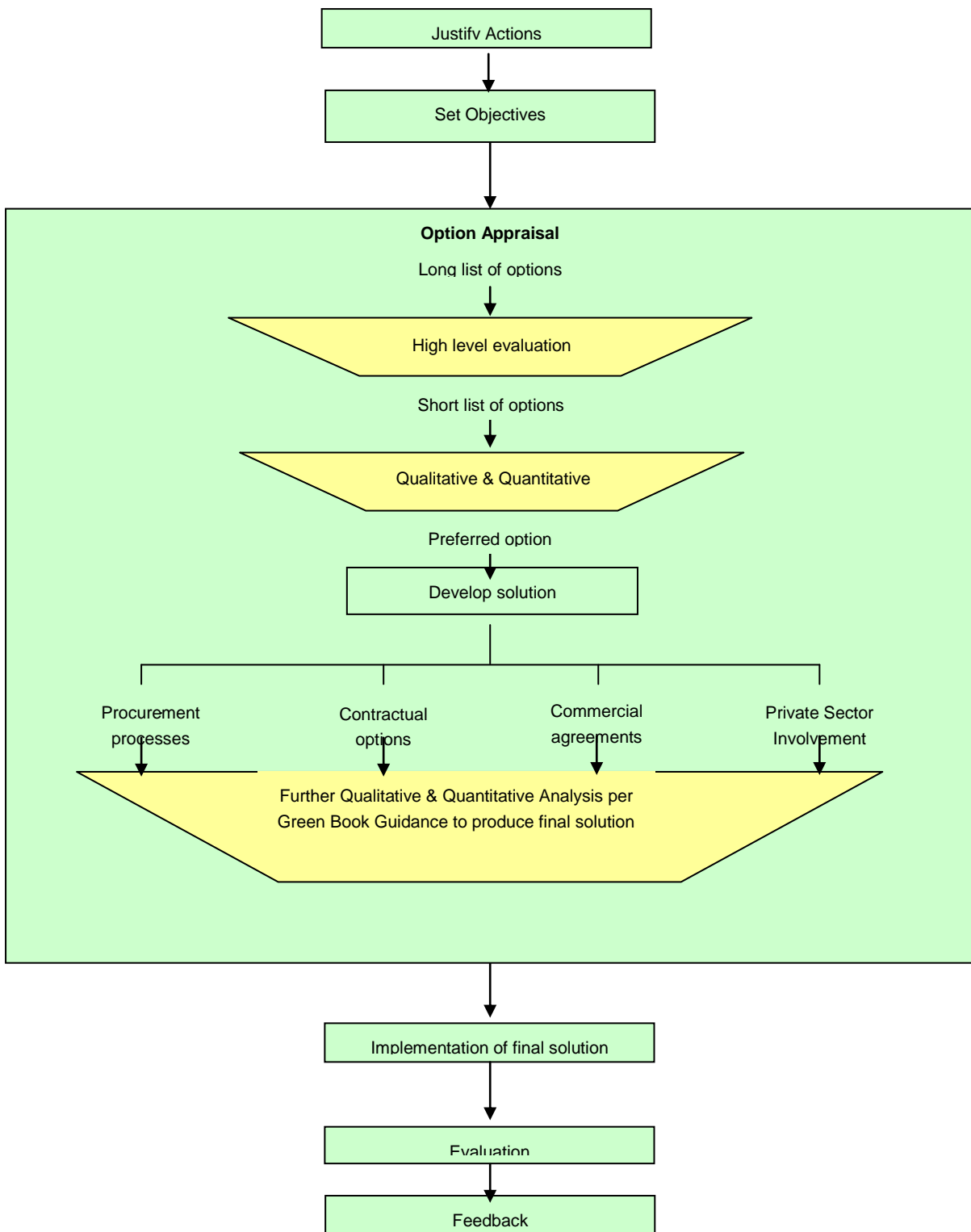
Foreword

This guidance has been prepared and issued by the Scottish Futures Trust (“SFT”) on behalf of the Scottish Government (“SG”). It describes the value for money process for capital programmes and projects and the requirements that Procuring Authorities need to consider before making relevant investment decisions. Note that the guidance note previously entitled “*Quantitative VfM Assessment - how to construct a Revenue Financed Base Case and Shadow Bid Model*” is now contained in Appendix J to this document.

This guidance is mandatory for all capital programmes and projects for the Scottish Government, its Associated Directorates, Executive Agencies, Non Departmental Public Bodies and for all public bodies in receipt of funding from the Scottish Government or its Agencies.

This guidance should be applied in conjunction with the HM Treasury Green Book. The flowchart below provides a high level illustration of the HM Treasury Green Book and how this guidance sits within that.

Interaction of HM Treasury Green Book Guidance and Value for Money Guidance



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1. Introduction – Aim, Application and Background to Guidance

Introduction

1.1 Within this section we summarise:

- the aims and objectives of this guidance
- what is meant by the term “Value for Money”
- when it should be applied
- the background to its development; and
- the key components of the value for money assessment process.

Aim and Objective of this Guidance

1.2 The aims and objectives of this guidance are:

1. To assist Procuring Authorities, Agencies and Directorates in **understanding the Value for Money assessment process** for infrastructure projects which encompass an element of design, build, finance and maintain (DBFM) arrangements, including the hub initiative and its application to various stages in the development of a project.
2. To **provide an approach** for determining whether the proposed procurement approach will deliver best Value for Money.
3. To ensure **consistency of approach** in assessing Value for Money of capital programmes and projects.

What is Value for Money?

1.3 Value for Money (“VfM”) at a project level is defined as **the optimum available combination of whole-life costs and quality (or fitness for purpose) of the good or service to meet the users’ requirements. VfM is not the choice of goods and services based on the lowest cost bid.**

1.4 By applying this guidance, Procuring Authorities, Agencies and Directorates will be able to make more informed investment decisions as to

- i. which procurement route offers best VfM for a specific programme or project;
- ii. the selected procurement route for a project continuing to offer VfM at all stages of the project development and procurement process.

1.5 At all stages, the emphasis of the guidance is on:

- **Evidence:** making a robust assessment based on detailed evidence and previous experience. Data should be collected on all projects and used to aid future assessments.
- **Early Assessment:** ensuring that project appraisals are started early, and are undertaken prior to engagement with the market. Late changes to a project's scope or timing, once procurement has commenced, are likely to cost more and therefore, erode VfM.
- **Sufficient Resourcing and Planning:** Ensuring that a procurement process is well planned, managed, executed and transparent in order to maximise VfM from the competitive process. Procuring Authorities must ensure they have sufficient capable resources to apply to the procurement regardless of which procurement route is selected.

Application of this Guidance

The Value for Money (VfM) Assessment Guidance is mandatory guidance for all capital programmes and projects for the Scottish Government, its Associated Directorates, Executive Agencies, Non Departmental Public Bodies and for all public bodies in receipt of funding from the Scottish Government or its Agencies.

The VfM principles of this guidance should also be adhered to in the event of any variations to contracts following the procurement phase.

1.6 At the programme level, this guidance will assist the Scottish Government or the relevant Directorate to establish the appropriate procurement route and strategy for future investment. At a project level, it informs Procuring Authorities of the nature of the VfM assessment process which should be followed.

1.7 This guidance is most relevant to those investments which are not funded conventionally (i.e. those that are privately financed such as NPD) but equally the

assessments required in the guidance could be useful to any programme or project involving the procurement of public services over the longer term. This guidance may also be applied to support robust evaluation and VfM justification of outsourcing decisions by public bodies.

- 1.8 Some of the core principles relating to achieving VfM in programmes and projects which include private finance, DBFM elements or are procured through NPDs may also be applicable to other forms of public sector procurement, in particular those programmes and projects that involve substantial capital expenditure. The application of this guidance note and its VfM principles to capital expenditure, infrastructure programmes and projects where a private finance solution is not used should be considered.
- 1.9 Private sector involvement in infrastructure delivery is characterised by a long-term commitment by the private sector to deliver and maintain public infrastructure and services and, given the complexity generally associated with its procurement, it will normally only be relevant for certain types of investment, therefore naturally limiting its use. Private funding and its associated rigour and due diligence can often be leveraged into public infrastructure transactions. When done so, the themes and assessment tests of this guidance should be applied.

Context

- 1.10 The Scottish Public Finance Manual sets out the general principles which apply to the public sector's acquisition of goods and services, including works, and sets out policy on procurement which is to achieve VfM having regard to propriety and regularity. Public sector bodies which are subject to the Scottish Public Finance Manual are also subject to the mandatory policy and procedures of the SG Construction Procurement Manual in relation to non-privately financed works projects.
- 1.11 The guidance should be applied in conjunction with the HM Treasury Green Book, which details the approach which should be adopted in relation to option appraisal, and the Quantitative VfM Assessment Guidance. It should also be applied in conjunction with sector specific guidance, such as the Scottish Government Health Directorate's Scottish Capital Investment Manual ("SCIM"), available online at: <http://www.pfcu.scot.nhs.uk/>

- 1.12 **It is important to note that VfM is a relative concept which requires comparison of the potential or actual outcomes of alternative options.** Where appropriate this is reflected in assessments based on a relative comparison between conventional procurement and privately financed options (in whole or part) or on different available private finance routes. This requires a high degree of estimation, especially where experience and/or data on similar projects procured under different procurement routes is limited.
- 1.13 Care should be taken to ensure that VfM assessments consider whether markets have changed or matured, and that the most appropriate way to procure a project, or the best terms which can be achieved, may change over time. Therefore, care must be taken when comparing and benchmarking current situations to historical information and data.

Background

1.14 The VfM Assessment Guidance application note should be applied by Procuring Authorities, Agencies and Directorates planning to undertake privately financed investments (in whole or part) in Scotland. The application of these principles should be made in conjunction with the economic assessment methodology outlined within HM Treasury Green Book. Application will be relative to the stage in the project lifecycle which the project is at but will be consistently applied in each case. The guidance reflects:

- best practice procedures applicable to Scottish investment programmes;
- the approvals process for capital projects in Scotland;
- Scottish governance requirements such as the SG / STUC Staffing Protocol;
- where a decision on the use of a revenue financed approach has not already been taken at SG level, the requirement to use a Conventionally Procured Assessment Model (“CPAM”) (see Quantitative VfM Assessment Guidance for further detail). This is a risk adjusted financial model which estimates the cost of the public sector procuring a project directly. It provides a quantitative VfM benchmark for the development of projects up to the point at which actual bids are received. This evaluation model will assist Procuring Authorities, Agencies and Directorates to help ensure that best value is achieved, and provide an audit trail of the VfM implications of a project throughout the procurement process.

Separate guidance is available in the Quantitative VfM Assessment guidance note.

- where a decision has already been taken at SG level that a project will only be offered revenue funding, the requirement to produce a revenue financed base case for the value for money assessment. Further guidance on this is in the Quantitative VfM Assessment guidance note
- in addition, qualitative VfM elements should be reviewed throughout the procurement process.

1.15 This note also refers to the application of Optimism Bias and risk analysis in VfM assessment. More detail on this aspect of the assessment is available in the Quantitative VfM Assessment guidance. A key concept is that better risk analysis (and in particular evidence-based analysis) should operate to reduce the level of Optimism Bias over time.

1.16 **The requirements of this guidance note are mandatory for public bodies in Scotland.** Where applicable, its requirements are included in relevant Key Stage Reviews (“KSR”) completed by Procuring Authorities, Agencies and Directorates. Undertaking the KSR (or similar external review) process in Scotland is mandatory for all privately financed projects. In addition, Gateway reviews are now mandatory for other publicly procured capital investments which exceed £5 million and which are assessed as being high risk and/or mission critical.

1.17 **The default assumption for privately financed projects is that these will be funded through NPD (Non Profit Distributing) arrangements,** however this guidance can be applied to all infrastructure projects including those procured under alternative structures such as hub and joint ventures. For sectors where it is viewed that NPD is not suitable, consultation with the Scottish Futures Trust is required in order to determine the appropriate private finance model to test.

1.18 The NPD model has been developed in the Scottish market as a means of capping the returns earned by investors on public sector procurement at a level aligned with the corresponding risk transfer. The structure has been successfully implemented in the schools sector and is also being introduced to the health and transport markets. The NPD model is discussed further in the NPD Explanatory Note available online at:

<http://www.scottishfuturestrust.org.uk/docs/439/Explanatory%20Note%20on%20the%20NPD%20Model.pdf>

1.19 Any clarifications in respect of this guidance should be referred centrally to the SFT. NHSScotland Bodies should refer to the SGHD Finance Unit / SGHD Property and Capital Planning Unit.

2. Summary of Guidance

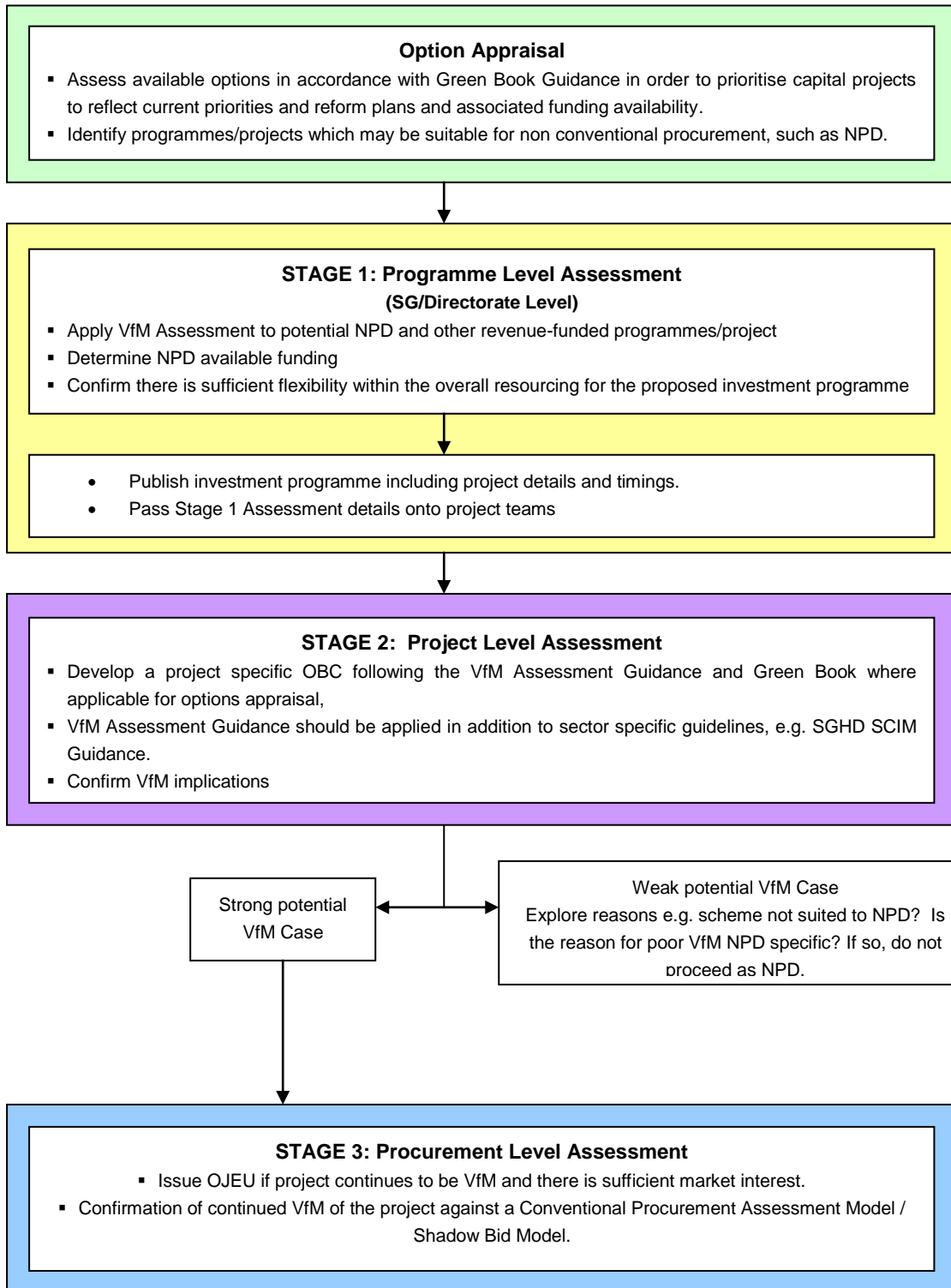
Introduction

2.1 The guidance is designed to be applied at the following stages of a project's development:

- **Project Level** – the guidance outlines the approach which should be adopted at a project level to reconfirm that the procurement approach will be suitable. When projects are being procured through a private finance approach, NPD will be the default delivery solution (albeit recognising that, for many smaller revenue financed schemes the use of the hub initiative may be the most appropriate procurement route). The project level assessment covers the period from business case development and approval to advertising the project.
- **Procurement Level** – the guidance outlines the steps a procuring authority must take to ensure that VfM is delivered throughout the procurement process.

Application of Guidance

2.2 The flowchart overleaf summarises the steps to be taken in considering VfM in the different stages of development of a capital project (steps 2 and 3 are covered by this guidance).



Option Appraisal

- 2.3 Initially the public sector (and as applicable Procuring Authorities, Agencies and Directorates) should identify investment options, appraising these options by applying the principles of the Green Book therefore enabling the prioritisation of capital projects.
- 2.4 Investment programmes and projects should then be assessed in terms of considering their most appropriate procurement route to deliver Scottish Government policy objectives. Where a conventional procurement route is considered this can be tested for VfM against the Assessment Criteria and Qualitative VfM tests laid out in the appendices to this guidance. Procuring Authorities, Agencies and Directorates should follow any sector / Directorate specific guidance as required. However the generic principles conveyed in this guidance, particularly around qualitative assessment will apply to all projects irrespective of procurement route. Procurement disciplines and risk transfer mechanisms which enhance the investment outcome should be factored into the assessments made procurements by project teams.
- 2.5 Guidance on the qualitative evaluation of options can be found in the Green Book and sector specific guidance for example, SGHD SCIM guidance. In particular consideration should be given to the availability of capital and the efficiency of funding arrangements.
- 2.6 guidance on the quantitative VfM assessment at the various stages is contained in Appendix J.
- 2.7 The following appraisal process, which will be undertaken at three stages, is applicable for those projects considered suitable for private finance / DBFM procurement approaches:

Stage 1: Programme Level Investment Review

- 2.8 This entails testing the VfM of procurement options when overall strategic investment decisions are being made. The key aims of Stage 1 are:

Aims of Stage 1: Programme Level Assessment

- to ensure that investment decisions in Scotland are appropriate for the relevant sector and that **investment programmes are viable, desirable and achievable**;
- to recognise that **a private finance (NPD) solution is only one of a number of options and should be used when appropriate and demonstrates potential for VfM**;
- to **ensure that investment decisions demonstrate VfM at a strategic level** and to consider that there is potential budget flexibility to accommodate any subsequent decision not to use, for example NPD to deliver investments (for example, utilising the Prudential Funding regime or public capital as an alternative to private funding and related procurement);
- to **ensure programme investments are affordable**.

2.9 This stage will be carried out as part of the overall planning of the investment programme. In most circumstances, this stage will be undertaken centrally by the Scottish Government. Where Procuring Authorities, Agencies and Directorates are in receipt of central funding, they are required to adhere to this guidance which will normally mean complying with Stage 2 onwards.

2.10 Stage 1 involves assessing the suitability of a programme (or a typical project within a programme) for privately financed procurement (typically NPD), using both qualitative and high level quantitative assessment techniques which produce programme level outputs which are robust and can underpin decision making.

2.11 Where the use of NPD already been determined to fulfil national policy objectives, the high level quantitative assessment of a typical project in a programme, this stage will require **a Project Bespoke Shadow Bid Affordability Model**. This forecasts the costs and therefore the affordability implications of undertaking the project as, for example,

an NPD. This will form the base case for the preferred options against which VfM can be assessed and will enable NPD / DBFM outputs to be driven from the affordability model.

2.12 SFT should be consulted in advance of such work being conducted to ensure that the methodology is robust and uses a standardised approach where appropriate.

2.13 The quantitative assessment at the investment programme stage will inevitably be conducted using only high-level estimates supported by appropriate evidence and should be used only as an indicator of whether there is potential to achieve VfM through the use of private finance. Other quantitative data that should be considered on a programme basis include:

- Economies of scale and efficiency gains across a programme;
- Programme set up and transaction costs of public and private sector participants relevant to financial / non financial benefits of the programme;
- Continuous improvement and related cost savings; and
- Transfer of risk through standardised contracts.

2.14 Separate evaluation of programme level affordability should be undertaken during the Stage 1 Assessment.

2.15 Note, the VfM of different procurement options is tested at this stage across the investment programme. Where an investment programme includes projects with significantly different characteristics, values or outcomes, then several examples may have to be analysed.

Stage 2 – Project Level Investment Review

2.16 Stage 2 covers the Project Level Assessment which includes the analysis of individual projects to ensure that they deliver VfM at a project level. In order to confirm this, programme level conclusions from Stage 1 should be re-tested in the context of the specific projects.

2.17 The key aims of Stage 2 are:

Aims of Stage 2: Project Level Assessment

- **review and confirm the VfM viability, desirability and achievability** of potential individual projects prior to making the decision to proceed with the procurement. This forms the basis of the qualitative analysis and assessment.
- **review and confirm the quantitative evaluation of VfM for the individual project.** VfM is typically tested by using a risk adjusted CPAM as an economic comparator against a shadow bid financial model (a proxy private finance structure).
- **assess and confirm** the affordability of the project (which a Shadow Bid Affordability model would inform). Projects must not proceed if affordability is not fully tested;
- **test the competitive interest for the project and the market capacity** to bid and deliver the project effectively and within the projected affordability envelope. Consideration should be given to:-
 - the likely project procurement processes and proposed timetable (for example to minimise transaction costs, promote market interest and minimise market failure in procurement etc)
 - Market capacity and optimal market launch timing should be reviewed with the relevant approving centre prior to project launch. In Scotland, Procuring Authorities, Agencies and Directorates will co-ordinate views on market capacity through the SFT. NHSScotland Bodies should refer in the first instance to the SGHD Capital and Facilities Division.

2.18 If the results of the Project Level Assessment indicate that improved VfM may be obtained by alternative procurement routes these alternative routes should be considered further by the Procuring teams.

Stage 3 – Procurement Level Investment Review

2.19 Stage 3 involves the procurement period from issue of OJEU through financial and commercial close to the operations of the project. During this period Procuring Authorities, Agencies and Directorates should continue to demonstrate that the private finance investment decision represents VfM and that the project is affordable.

2.20 Robust competition will be a key indicator of VfM throughout this stage.

2.21 The key aims of Stage 3 are documented in the table below:

Aims of Stage 3: Procurement Level Assessment

- to ensure **that the project is affordable, value for money and deliverable**;
- to reconfirm that the qualitative VfM areas of **viability, desirability and achievability still apply** (i.e. qualitative retesting);
- to **determine whether there is market failure or market abuse** and to protect against it;
- to **assess best value of private sector bids** by comparing them to previous and other current privately financed solutions, and where applicable against a conventional procurement option;
- to ensure that at all stages of the procurement process **a VfM audit trail is maintained** which supports the approvals process

2.22 Given that the potential suitability of the project for a privately financed procurement will already have been assessed in Stages 1 and 2, it is anticipated that in most circumstances this will produce a positive VfM outcome. If the project does not demonstrate a positive VfM outcome, the reason for this should be assessed and the

factors should be reviewed to assess if the project should proceed and if so on what basis.

2.23 The three VfM Assessment Stages are considered in more detail in the following chapters of this guidance and within the supporting pro-formas detailed in the appendices.

Other Considerations When Comparing NPD and Conventional Procurement

2.24 When assessing a projects suitability for private finance (typically via NPD), the following factors should be considered, at each stage, by Procuring Authorities, Agencies and Directorates:

1. **Affordability** – fundamental to any procurement decision will be a realistic affordability calculation, which refers to what is affordable across a programme or for individual projects based on spending allocations, budgets and future settlements. Programmes and projects will not be able to proceed or be presented to the market unless they are signed off as affordable at appropriate board and stakeholder level. This sign off will be reviewed as part of the KSR process.
 - The Scottish Government expects Procuring Authorities, Agencies and Directorates to undertake a thorough assessment of the likely project costs (inclusive of risk and Optimism Bias). This should be based upon the expected delivery specification, balance sheet treatment and take into account current/future market pricing and conditions.
 - It is recommended that on a project basis, a robust view of affordability is derived from a shadow bid affordability model.
 - The key affordability driver for Procuring Authorities, Agencies and Directorates will be the estimate and reliability of sources of funding available to meet conventional or privately financed procurement cost over the associated timescales.

- The affordability analysis **must include appropriate sensitivity testing** to take account of likely changes in key assumptions (for example, inflation and interest rates) should be assessed.

It is vital that in drawing up specifications Procuring Authorities are mindful of their affordability envelope, and the future resource implications. For long term investment decisions Procuring Authorities will need to demonstrate that the effects of long term inflation projections and potential future budget allocations have been considered.

2. **Design Quality** – Relevant Directorate guidance should be applied (e.g. SG Design Quality in Building Procurement section of Construction Procurement Manual, SG Architecture Policy Unit, Directorate Design Development Protocols, NHSScotland Design Quality Policy, CABE etc) as well as best practice in respect of sustainability
3. **Sustainability** – The Scottish Government is committed to promoting sustainability through procurement both directly and indirectly. Therefore all business cases for major infrastructure projects should include consideration of the use of sustainability measures in the project. This should include a statement of what will be sought through the specification (for example, low carbon footprint building, maximum energy use ceiling, etc). Procuring Authorities, Directorates and Agencies should also confirm that they are applying relevant Public Procurement Guidance and incorporating the requirement for the use of a minimum of 10% recycled materials in construction projects, where appropriate.
4. **Workers Terms and Conditions** – consideration of the benefits and disadvantages of transferring staff and the corresponding impact on risk allocation should be considered when assessing the appropriateness of revenue financed solutions. Note, the STUC Staffing Protocol must be addressed and applied at Stage 2 by Procuring Authorities, Agencies and Directorates.
5. **Scope of Services Provision** – the range of services being procured should be subject to achieving improved standards of service delivery. Due consideration of the impact of long term and short term service provision must be undertaken.

- As noted above, the SG/STUC Staffing Protocol must be applied by Directorates and Procuring Authorities
 - An assessment pro-forma has been developed by the Scottish Government and is included in Appendix F.
6. **Wider factors that impact upon the VfM of different procurement routes** – Procuring Authorities, Agencies and Directorates should take account of any differentials in the benefits or risks arising from alternative procurement options, for example in terms of the timing of or the quality of service delivered (see Quantitative VfM Assessment guidance Appendix C). Specialist assistance maybe required here. Where the relevant risks and benefits of different procurement strategies are noted, reference should be made to the Scottish Government Construction Procurement Manual that refers to alternative procurement options.
 7. **Uniqueness of Project** – in the case of “unique” or potential pathfinder projects, it is recommended that Procuring Authorities, Agencies and Directorates consult with the SFT (NHSScotland Bodies with the SGHD Capital and Facilities Division) to establish how the VfM assessment should be taken forward.
 8. **Market related factors** – circumstances may exist in a constrained bidder market for example, where there is a strong supply of projects where certain risk transfer scenarios (for example, refurbishment scope and related risk transfer position) may not encourage competitive bidding. This needs to be monitored and the implications for individual projects assessed. Specific VfM testing should be undertaken in circumstances when there is a single supplier – See Appendix G.
 9. **Disclosure of VfM information to the wider public** – it is expected that Project and Procurement level VfM information will remain confidential to public sector bodies (subject to FOI and Full Business Case disclosure). However, Evidence Bases detailing cost input information and containing details on risk assessments should be retained centrally for experience, understanding and information sharing in the public sector.
 10. **Balance sheet treatment** – as well as ensuring that projects are affordable, Procuring Authorities, Agencies and Directorates should also undertake a

realistic assessment of the likely balance sheet treatment. Recognising that private finance should only be pursued where it delivers VfM and not to secure any particular balance sheet treatment Procuring Authorities, Agencies and Directorates should discuss likely accounting issues with their external auditor during the procurement process and sponsoring Directorates as appropriate. The accounting treatment of a programme or project does not form part of the direct VfM assessment. Whether the investment is on or off-balance sheet is a decision taken by independent auditors and is not relevant to the VfM of the procurement route. To ensure integrated and informed decisions on application of private finance are made Procuring Authorities should consider the consequences of the privately financed transaction being treated as a capital asset for accounting purposes.

11. **Taxation** – where a choice of procurement routes lead to different outcomes in terms of tax receipts, these should be taken into account in the VfM assessment. Procuring Authorities, Directorates and Agencies should refer to the Revised Green Book and supporting documentation. Taxation Adjustments will also be required when using the Conventional Procurement Assessment Models.
12. **Best Value** – the duty of best value allows Local Authorities flexibility to judge the most appropriate approach to procurement, including NPD solutions. It encourages approaches to procurement that challenge the economy, efficiency and effectiveness in the provision of better and more responsive public services. VfM is central to Best Value but it should not be regarded purely in terms of balancing quality and cost. In considering the most viable, desirable and achievable method of procurement VfM must also take due regard to the other elements of Best Value, including sustainable development, equalities and the capacity for continuous improvement
13. **Externalities:** As set out in the Green Book, the assessment of externalities – negative or positive – is necessary in making an investment decision. For example, the undertaking of a procurement may have an impact on the supply side capacity of a particular part of the private sector. While this should be undertaken as part of the Green Book investment assessment, should different externalities exist for different procurement routes then these also must be taken into account in making the VfM assessment.

14. **Long-term certainty and flexibility:** Most privately financed projects are procured under long-term contracts. The process of procuring long-term infrastructure and services funded by private finance can often provide greater certainty of the whole-of-life costs and standards of service compared to conventional procurement. This certainty may reduce absolute flexibility but, provided the procuring authority carefully considers the scale and scope of the service needed over the long-term and structures the contract for a commensurate term, the long term contract may still generate a better VfM outcome. Upfront consideration at Programme Level of the long-term policy strategy should, therefore, also feed into the VfM assessment.

15. **State of project and programme readiness:** It is important that Procuring Authorities allocate sufficient resource to adequately prepare and develop the project before formal engagement with the market. Excessive bid costs and delays in the procurement process resulting from poorly developed projects often erode the VfM in procurement. This is prevented through strong project management and setting realistic timetables to ensure that projects are well developed before release to market.

2.25 **These factors must be considered at the Programme Level and Project Level Stages. They should also be reconsidered as appropriate in the Procurement Level Stage.** In particular in the procurement stage, other VfM assessment guidance will be applied to decision making, for example assessing the competitiveness of Private Sector funding. The following generic factors which drive VfM must also be considered:-

Factors Driving Value for Money

2.26 The Table below details some of the factors which will influence the VfM of a project:

Generic Factors driving Value for Money

- **The optimum allocation of risks between the various parties** ensuring that risks are allocated to the party, or parties, which are best placed to manage and minimise these risks over the relevant period;

- **A rigorously executed transfer of risks** to the parties which are

responsible for them, ensuring that the allocation of risks can be enforced and that the costs associated with these risk are actually borne by the parties in the manner originally allocated and agreed;

- **Focusing on the whole life costs** of the asset rather than only the upfront costs involved;
- **Integrated planning and design of the facilities-related services** through an early assessment of whether the possible integration of asset and non-asset services (e.g. soft services) should deliver VfM benefits;
- **The use of an outputs specification approach** to describe the Procuring Authority's requirements which, amongst other things, allows potential bidders to develop innovative approaches to satisfying the service needs of the procuring authorities;
- **Sufficient flexibility** to ensure that any changes to the original specification or requirements of the procuring authority and the effects of changing technology or delivery methods, can be accommodated during the life of the project at reasonable cost to ensure overall VfM;
- **Ensuring sufficient incentives within the procurement** structure and the project contracts to ensure that assets and services are developed and delivered in a timely, efficient and effective manner, including both rewards and deductions as may be appropriate;
- **The term of the contract** should be determined with reference to the period over which Procuring Authorities can reasonably predict the requirement of the services being procured. This will require careful considerations of factors including: potential changes in end-use requirements; policy changes; design life of the asset; the number of major asset upgrades or refurbishments during the period of the contract; potential changes in the way services could be delivered (e.g. technical advancements); and the arrangements for the asset at expiry of the contract;
- **Sufficient skills and expertise** in both the public and private sectors, and

these are utilised effectively during the procurement process and subsequent delivery of the project; and

- **Managing the scale and complexity** of the procurement to ensure that procurement costs are not disproportionate to the underlying project(s).

Conclusion

2.27 Previous studies have concluded that other forms of procurement could secure many of the benefits that private finance delivers and further that it could be inferred that decisions in favour of privately financed procurement may be driven by stereotypes of poorly performing alternatives rather than good evidence of demonstrable benefit. Having genuine choice in procurement route should foster intelligent decisions which are likely to be in the best long term interests of both public and private sectors. Therefore the benefits of maintaining a mixed economy of procurement options should be realisable. It should be noted that the opportunity to capture the benefit from private finance is not present to the same degree in every project and some benefits are more strongly associated with particular project phases.

2.28 One of the key aspects of the approach to assessing VfM is the need to ensure that the quantitative VfM analysis is not considered in isolation – qualitative assessment, wider VfM factors and evidence based examples are central to decision making. It will be necessary to take account of previous delivery and experience of privately financed projects when Procuring Authorities, Agencies and Directorates are promoting the future procurement of infrastructure assets. It is recommended that referral is made to available project databases and reports maintained or published by the Scottish Government, Infrastructure UK, Audit Scotland and HM Treasury. Going forward, Procuring Authorities, Agencies and Directorates must put in place mechanisms for collating, retaining and sharing information to build an evidence base of relevant privately financed projects information (e.g. input cost rates, percentage risk uplifts etc). A full and transparent audit trail at each stage must be maintained to facilitate and influence future investment decision making.

2.29 In respect of the **overall VfM judgement** the following should be noted:

- **Marginal results:** At either a Programme or individual Project level, where the difference in the assessments of the conventional option and the privately financed

option are marginal (small positive for or against) the outcome should not be interpreted as sufficient evidence for or against the use of revenue finance as a procurement route. In such cases more weight should be given to the qualitative rather than the quantitative assessment.

- **Uncertainty and sensitivity analysis:** Where there is a high level of uncertainty around inputs, or outputs are highly sensitive to the input variables, it is appropriate to place greater weight on the qualitative assessment or to invest more time and money in establishing higher confidence in the most critical assumptions. Procuring Authorities should in any event undertake appropriate sensitivity analysis.

In all cases, the overall assessment must note an appropriate and thorough explanation and justification of the leading factors in both the quantitative and qualitative analyses, plus wider VfM factors in coming to a decision, especially where the two assessments do not appear supportive of one another.

2.30 This guidance includes a framework for evaluating the appropriateness of revenue financed procurement (e.g. NPD) as a procurement route and subsequently providing Value for Money audit trail for privately financed investments. It must be applied to all privately financed procurements in Scotland. At each stage, appropriate sign off on Value for Money must be provided by the Scottish Government and the relevant procuring authority.

2.31 Studies and assessments have demonstrated that the level of competition in the market for a privately financed project impacts directly on VfM. Therefore strong competition is a fundamental requirement for project delivery in Scotland. This should be facilitated by adopting the appropriate scope and scale, level of risk transfer, timing of launch, promotion and marketing of programmes and projects.

2.32 Within the following sections of this guidance we review:

- The approach to be adopted in Stage 1 the Programme Level Assessment
- The approach to be adopted in Stage 2 The Project Level Assessment; and
- The approach to be adopted in Stage 3 the Procurement Level assessment.

The appendices provide additional detail on the pro-formas to be adopted when assessing VfM and the assessment of VfM in specific sectors such as transport.

3. Stage 1: Programme Level Investment Reviews

Introduction

- 3.1 Within this section of the guidance, we outline the approach which should be adopted at programme level to assess whether privately financed solutions such as NPD would be a suitable procurement option for policies involving significant capital investment. This section reviews the approach to the qualitative assessment, quantitative assessment, and finally how the combined results should be assessed.
- 3.2 This stage will be carried out as part of the overall investment programme planning. **In most circumstances, this stage will be undertaken centrally by the Scottish Government, normally as part of the Spending Review process.** A programme is defined as *“a portfolio of projects sharing a number of common characteristics, selected, commissioned, planned and managed in a co-ordinated way and which together achieve a defined set of business objectives”*.
- 3.3 The aim of this first stage is to confirm that there is an appropriate understanding of the procurement routes best suited for particular capital investments or investment programmes and that there is a close match between the requirements of each investment or programme and the capability, resource and market capacity to complete each investment or programme.

Stage 1 Programme Level Assessment outcomes:-

- provide an early assessment of whether alternatives to conventional procurement, including NPD, are likely to provide VfM for a programme of investment in public services
- help indicate which procurement route should be used within an overall programme (e.g. private finance / NPD in whole or part or not at all)
- assist budgeting between revenue and capital impacts
- ensure investment programmes are affordable

- give an understanding of how risks apply, or can be managed, in respect of different procurement routes
- increase transparency and improve deal flow
- ensure that necessary frameworks are in place (structure, skills, resource) to implement a programme

3.4 **The assessment at this stage may assume that there is already a prima facie case for selecting a privately financed / NPD procurement route**, for example in a sector which has a track record of delivering effective revenue financed projects above a certain capital value. Appendix A provides details of the features that make a project suitable for a privately financed solution. A checklist review of these areas must be completed.

3.5 Depending upon the sector and how investment decisions are made a Programme Level Assessment may not be required. Alternatively, a series of individual Project Level Assessments may be more applicable. If this is the case, the requirements and disciplines required at the Programme Level Investment Review stage should be encompassed and rolled into the Project Level Investment Review stage. **It is expected that “unique” or pathfinder projects within a Programme will be tested individually.**

Requirements at Stage 1:

3.6 At a Programme Level, the VfM assessment should include both a qualitative assessment and a quantitative assessment. This will most usefully be undertaken in advance of Spending Reviews, in order to help inform budget allocation decisions.

3.7 Generally this stage will be completed by the Scottish Government as part of its role in planning for, and assessing, infrastructure investment and appropriate delivery routes. This will entail investment programmes and projects being assessed in terms of considering the most appropriate procurement route to deliver Scottish Government policy objectives. For those identified as potentially suitable for private finance and therefore a move away from conventional procurement, this application note applies. For other procurement routes, applicable guidance from the SG Construction

Procurement Manual should be applied. The SG Construction Procurement Manual details various procurement routes that could be considered, including NPD and DBFM. An overview of the characteristics which could make a project suitable for private finance is provided at Appendix A of this guidance.

Stage 1: The Qualitative Assessment

3.8 The Qualitative Assessment considers the **Viability, Desirability and Achievability** of NPD compared with traditional procurement. It is likely that this assessment is best undertaken in a workshop environment involving stakeholders and, where necessary, advisors.

3.9 The underlying considerations regarding viability are:

Viability

Objectives and Outputs

- Can service requirements be stated in clear objective output based terms?
- Can the effectiveness of service delivery be measured and monitored?

Operational Flexibility

- Can operational flexibility be maintained over the lifetime of the contract?
- What is the appropriate contract length for projects in the programme?

Equity and Accountability

- Are there public equity reasons for providing the service directly?
- Are there accountability reasons for providing the service directly?

Regulation and Legislation

- Are there any regulatory reasons for providing the service directly?
- Are there any legal reasons for providing the service directly?

3.10 The above considerations focus on whether:

- there are issues that require that the services be provided by the public sector directly; and,
- the service be captured in an output specification and contract based approach.

3.11 When assessing viability, the public sector must ensure that that the appropriate Accountable Officer is satisfied that operable contracts, with built in flexibility, can be constructed and that any strategic and regulatory issues that impact on the public sector can be overcome.

Desirability – is the Procurement Route Desirable?

3.12 The underlying considerations relating to desirability are:

Desirability

Risk Management

- Does the project involve the purchase of a capital asset?
- Are the risks of cost and time overruns likely to be significant?
- Are there significant operational cost risks?

Innovation

- Is there likely to be scope for innovation in service delivery?

Service Provision

- What is the role of soft services i.e. facilities management?
- Are there good strategic reasons to retain soft services in house?
- Is soft service transfer essential for achieving improved service delivery?

Incentivisation

- Is incentivisation likely to result in enhanced service delivery?

Lifecycle Costs and Residual Value

- Is it possible to integrate asset design, construction and operation?
- Is it possible to achieve significant whole life cost savings?

3.13 The following risks should be considered on a Programme / Project Level basis:

Risks

- I. **Design:** can the service provider be made responsible for ensuring the design is fit for purpose and for all resources required for design and development activity?

2. **Financing:** can the service provider be made responsible for establishing and maintaining the funding for service provision throughout the contract life?
3. **Implementation:** can the service provider be made responsible for all aspects of implementation, transition and certification?
4. **Operation:** can the service provider be made responsible for delivery of a high quality service at required levels of availability and continuity?
5. **Usage:** can the service provider be made responsible for costs associated with variations in demand?
6. **Regulatory change:** can the service provider be made responsible for the consequences of changes in non-discriminatory legislation, such as national minimum wage?
7. **Obsolescence:** can the service provider be made responsible for ensuring that the technology underpinning service delivery - and the service delivery mechanism itself - remains consistent with contemporary market standards?
8. **Service provider lock-in:** can the service provider be made responsible for ensuring that the service is provided in such a way as not to constrain the Authority's ability to continue to meet its requirements cost-effectively in due course via an alternative supplier/solution?
9. **Residual value/disposal:** can the service provider be made responsible for the residual value of the assets at the conclusion of the service contract?

3.14 In assessing the above considerations, the relevant benefits of different procurement routes should be assessed (for example, by reviewing optimal risk transfer; the impact of signing a long term service contract; the scope for innovation; the appropriateness of internal / external FM provision; the relationship between design, whole life costing and operation).

Achievability – Is the Procurement Route Achievable?

3.15 The table below documents the key underlying considerations relating to achievability:

Achievability

Market appetite

- Is there sufficient appetite in the market to take the project forward under a revenue financed structure that is without equity and with capped returns on finance?

Transaction costs and client capability

- Is there sufficient client side capability to manage the procurement?
- Can appropriately skilled procurement teams be assembled?
- Is there a sufficient budget to fund the procurement process?

Competition

- Is there evidence that the private sector can deliver the required outputs?
- Is there likely to be sufficient market appetite for the project?

Meaningful use for surpluses

- Has a meaningful use been identified for any project cash surpluses over a programme to ensure that they can be distributed for the benefit of the public sector or wider community?

3.16 In assessing the above, consideration should be given to the likely level of market interest. Market appetite is likely to differ depending on the nature and risk profile of projects in a programme and therefore market testing should be carried out to gauge interest. Procuring bodies should also consider whether the public sector has the management expertise to manage a programme and individual procurements and how costly they will be to procure (transaction costs of public and private sector participants).

3.17 When assessing achievability the public sector must ensure that the appropriate Accountable Officer is satisfied that the procurement programme is achievable, that there is sufficient client side capability to deliver the project and that projects will be attractive to the market.

3.18 Scotland has a track record of delivering revenue financed Programmes that meet these requirements. Programmes should be developed building upon previous experience and standardised methodologies and procurement practices.

Stage 1: The Quantitative Assessment

3.19 When undertaking the Programme Level Assessment, a representative project (or projects) should be selected for the purposes of high level quantitative modelling so supportable conclusions across the whole programme can be drawn. If an investment programme encompasses elements with significantly differing characteristics, then examples from each different class of project will need to be considered.

3.20 For the quantitative VfM assessment appropriate technical support and databases which estimate applicable capital, lifecycle and revenue costs of a capital investment or capital investment programme should be utilised. In addition benefits, risks (including Optimism Bias) and relevant transaction costs should be assessed. When combined these considerations amount to the “**Conventional Procurement Assessment Model**” (CPAM). On an individual project where the procurement route has not already been determined at a Programme Level, the CPAM will be compared against the NPD financed option derived from a Shadow Bid Model.

3.21 Further detail on the quantitative assessment and the application of Optimism Bias and Risk is contained in Appendix J.

3.22 The following high level qualitative indicators should be assessed at the programme level:

- Economies of scale and efficiency gains across a programme;
- Programme set up costs and transaction costs of public and private sector participants relevant to financial / non financial benefits of the programme;
- Continuous improvement and related cost savings; and
- Transfer of risk through standardised contracts.

Results of the Qualitative and Quantitative Assessments

3.23 At the completion of Stage 1, the results of the Qualitative and Quantitative Assessments will need to be combined to identify the preferred option. This should

provide justification for the preferred procurement route, on an individual project or programme basis, and recognise any limitations of the component parts of the assessment.

3.24 It should be noted that the Quantitative Assessment must be viewed in light of the results of the Qualitative Assessment. Care must be taken in evaluating the relative weighting of the qualitative and quantitative assessments. Where possible, reference should be made to previous experience and evidence bases.

3.25 Procuring Authorities, Agencies and Directorates can then assess the VfM implications further at the project level investment (OBC) stage.

3.26 Appendix B details the reporting requirements for this stage of the assessment.

3.27 The following section reviews the application of the VfM guidance at a project level from the development of the Outline Business Cases through to OBC project approval prior to commencing procurement through the OJEU.

4. Stage 2 – Project Level VfM Assessment

Introduction

4.1 This section of the guidance reviews the approach which should be adopted to assessing VfM at a project level covering the development of the Outline Business Case, confirmation of the final project scope and procurement route to OJEU. It is applicable to projects where the Stage 1 assessment has indicated that a NPD procurement route is likely to be VfM.

Approach

4.2 Following the Programme Level assessment, the Stage 2 assessment aims to confirm that the procurement route identified is the most appropriate procurement route for an individual project. **Typically this stage is linked to the OBC process.**

4.3 The Project Level assessment seeks to verify that the assumptions, upon which the Stage 1 decision was based, remain supportable in the market conditions which prevail prior to advertising the project. The OBC itself should confirm both the preferred option (e.g. location, scope, affordability) and the preferred / selected procurement route. This should be endorsed by the relevant stakeholders through an appropriate governance process.

4.4 The Stage 2 Project Level review further expands upon the qualitative and quantitative assessment undertaken at Stage 1, and where applicable, facilitates the review and refinement of the initial Programme Level VfM for an individual project.

4.5 It enables Procuring Authorities, Agencies and Directorates to consider and, if applicable, switch to conventional procurement if that would provide improved VfM and a better fit with the funding options compared to the initial conclusions from the Stage 1 Programme Level Assessment. In reverting to conventional procurement, Procuring Authorities, Agencies and Directorate would apply relevant guidance within the Scottish Procurement Manual.

4.6 This stage will give Procuring Authorities, Agencies and Directorates **a better understanding of capability and capacity** to take the project forward and deliver the following outcomes:-

Stage 2: Project level assessment outcomes:-

- verify the decision to use the procurement route identified at the Programme Level, or if not identified at the time select the appropriate procurement route to progress to market. If applicable, indicate to Procuring Authorities, Agencies and Directorates that better VfM may be achieved through an alternative procurement route
- ensure that the procurement only proceeds if it is affordable. It will provide improved cost estimates AND improve the evidence base in respect of cost information
- where applicable test whether a revenue financed solution is marketable and attractive to bidders (market interest)
- consider and verify expected risk sharing / allocation arrangements;
- enable, if applicable, project re-scoping
- help ensure an efficient bid process will be put in place
- ensure the procurement team is adequately resourced and project governance is appropriate.
- ensure that an appropriate and meaningful use has been identified for the distribution of surpluses.

4.7 It should be noted that any differences in the conclusions at the Stage 2 Project Level Assessment compared to the Stage 1 Programme Level Assessment must be fully explained and documented by the project owners and sponsors.

- 4.8 Within this stage, unless already determined at a Programme Level, a quantitative VfM assessment using the Conventional Procurement Assessment Model (CPAM) and a Shadow Bid Affordability model should be undertaken. Before this work is undertaken advice should be sought from either SFT or the relevant Finance Business Partner (or equivalent).
- 4.9 If required, the CPAM developed for the procurement stage will reflect the same project timings, the specification and project risk allocation that bidders are pricing. It will be a key element of the audit trail of the project. The Shadow Bid Affordability Model will include risk pricing through Optimism Bias uplift and a bespoke project risk uplift as appropriate.

Requirements which Authorities must undertake:

- 4.10 At Stage 2, Procuring Authorities, Agencies and Directorates who have undertaken Programme Level Investment reviews must refine the Stage 1 Qualitative Assessment and Quantitative Assessment to reflect the specific project in question. This update is undertaken during the Outline Business Case stage.
- 4.11 The Stage 2 assessment elements should be reflected in the Outline Business Case submitted to the relevant approval body.
- 4.12 Requirements noted in this guidance at the Stage 2 Project Level will be assessed in the KSR process (or equivalent).

Stage 2: The Qualitative Assessment

- 4.13 In relation to the decision to proceed with NPD, Procuring Authorities, Agencies and Directorates should reconfirm the:

- **Viability**
- **Desirability**
- **Achievability**

of the investment decision (refer to the requirements at Stage 1 and the detailed proforma at Appendix C). These were explained in detail in Section 3 - please refer to this part of the guidance.

4.14 Procuring Authorities, Agencies and Directorates will also need to assess at this stage whether there is any cause to believe that there could be market failure (lack of bidder competition), market abuse (inappropriate bidder behaviour and pricing at the preferred bidder phase) or that the project risk allocation will be undeliverable.

4.15 Appropriately structured market soundings should be undertaken. This process should cover:-

Market sounding considerations

- being aware of the range and number of projects vying for market interest; (locally and nationally, within and across sectors);
- being aware of any actual or emerging market capacity constraints within their sector or related sectors through dialogue with other directorates where necessary;
- assessing formally the level of market interest in particular projects in the context of both the individual project scope and circumstances and competing demand from other projects likely to approach the market at around the same time;
- considering the case for managing the release of projects to the market particularly within sectors, thereby creating a transparent pipeline of projects and avoiding clusters of projects reaching market at the same time;
- seeking to actively promote a dynamic market by, for example, ensuring that barriers to entry remain low (but subject to appropriate pre qualification tests); and
- considering the development and promotion of a long-term competitive marketplace across a market significant programme or new business area and avoiding creating market dominance.

4.16 If it is determined prior to advertising the project that the benefits assumed for revenue financed procurement cannot be delivered by the market (for example due to market capacity) or the project is not considered affordable, then the investment route and project scope, timing and delivery should be reassessed

and revised accordingly. If it is possible to achieve the benefits by delaying the launch of the project (for example if several similar projects have recently gone to the market), this should be considered by the Procuring Authority in conjunction with the SFT or SGHD PFCU.

4.17 To address this at Stage 2 Project Level Assessment, Procuring Authorities, Agencies and Directorates supported by their professional advisers, should develop a market consultation strategy and should undertake relevant market soundings and promotion with bidders, including consulting and information sharing with the SFT and other Directorates as appropriate (i.e. SGHD Capital and Facilities for NHSScotland Bodies).

Stage 2: Quantitative Assessment

4.18 At Stage 2, the quantitative evaluation should be updated so the following variables reflect the specific project and cost environment as follows:

- capital costs
- lifecycle cost
- revenue costs
- risks and Optimism Bias
- benefits appraisal (where this is likely to differ between options)
- transaction costs

4.19 This should be completed in accordance with the Green Book. It should be collated and reviewed by the Procuring Authority, Agency or Directorate. The variables should be verified by appropriate technical support.

4.20 Detailed quantitative VfM guidance is contained in Appendix J.

Affordability

4.21 To demonstrate affordability at this stage, it is necessary to develop a Shadow Bid Affordability Model, (typically developed by external advisers).

4.22 Note, at this stage, Procuring Authorities, Agencies and Directorates must have a high degree of confidence in respect of the affordability and balance sheet status of the project. Any impact of balance sheet status on central funding and support should be referred to individual Directorates.

STUC Staffing Protocol

- 4.23 It is mandatory to apply the STUC Staffing Protocol on all privately procured projects. In terms of the opportunity for in-house teams to deliver soft FM services within a private finance context, the Quantitative Assessment at OBC stage is not an appropriate benchmark for an in-house bid. These must be tested during the procurement process. In addition the potential savings from in-house FM provision should not be applied to the CPAM to form a differentiator for conventional and non-conventionally procured investment.
- 4.24 Where an in house bid is being assessed, this should be done in a market testing exercise and the public sector bid must be comparable to and based on the same assumptions as the private sector bid (e.g. in terms of risk allocation and service specification).

Results of the Qualitative and Quantitative Assessments

- 4.25 The quantitative assessments, sensitivity testing and the qualitative analysis will confirm the preferred project scope and procurement route. Procuring Authorities, Agencies and Directorates will need to determine the weighting to be applied to these aspects of the VfM assessment. The quantitative VfM factor is likely to differ by sector.
- 4.26 The Qualitative Assessment should inform the confidence placed on the Quantitative Assessment.
- 4.27 Procuring Authorities, Agencies and Directorates must calculate and confirm their own affordability envelope and compare this with the results of the quantitative analysis. If a project is deemed unaffordable, it should not be pursued.
- 4.28 If privately financed or NPD procurement does not represent VfM, the reasons why the project is not VfM should be reviewed as well as the appropriate procurement route. This may involve re-examination of the project, its scope and allocation of risk. Assessors should consider the following:-
- identify why and whether the issue is specific to the proposed procurement route or to procurement of the project in general;

- consider the case for a delay to the start of the procurement, if this can address the concern;
- reconsider the criteria to be set out in the OJEU Notice and determine whether there is another way to deliver the business requirement; and
- reconsider the procurement route and the possibility of switching to other forms of procurement.

4.29 When considering the VfM assessment, Procuring Authorities, Agencies and Directorates must accord proper weight to the respective parts of VfM analysis - qualitative and quantitative. Provided that the indicative VfM is positive and is based on a balance of combined qualitative and quantitative VfM elements, the project can proceed: there is no necessity to prove quantitative VfM above a particular percentage. Audit Scotland supports this approach. Judgement of the weighting between the qualitative and quantitative elements is a key consideration as is reference to previous evidence bases in assessing qualitative and quantitative assessments.

4.30 Where there is an affordability constraint, the combination of proposals should be selected that optimises the value of the benefits.

4.31 **In Scotland no project in receipt of central government funding should proceed to market (the Procurement Level Stage) prior to receiving OBC approval from the relevant Directorate.** In the case of NHSScotland Bodies, following OBC approval by the Capital Investment Group, a Pre-OJEU KSR is required. This should be discussed with the SGHD Capital and Facilities Division. An OJEU should only be placed following approval from the relevant Directorate. For all NPD Projects, the Director of the SFT and relevant Directorate should be informed of the launch details.

4.32 The table and reporting requirements at Appendix C must be completed.

4.33 Within the following section of the guidance, we outline how the VfM assessment must be approached during the procurement phases of a project.

5. Stage 3 – Procurement Level VfM Assessment

Introduction

5.1 Within this section of the guidance, we review the approach to the VfM assessment during Stage 3 from the final approval of the Outline Business Case and OJEU issue through to financial close / contract award. The requirements at this stage are based on the assumption that a revenue financed solution is being undertaken to deliver the project. **Key to delivering VfM at this stage is a robust bid competition in procurement.**

5.2 Before proceeding to OJEU, Procuring Authorities, Agencies and Directorates in Scotland must complete the following checklist:

Pre OJEU checklist:

- i. confirm their affordability envelope;
- ii. establish what affordability and cost information will be shared with bidders;
- iii. confirm ongoing VfM of the project;
- iv. assess and confirm that their specifications align with their affordability envelope;
- v. confirm that standardised legal agreements and approach will be applied in procurement;
- vi. confirm with the SFT and other relevant Directorates and Agencies the procurement timetable and forecast OJEU and ITPD issue dates;
- vii. consider the timing of a funding competition;
- viii. have an internal risk management register and plan in place; and decide on the scope of soft FM services to be procured, or decide to test during procurement in accordance with SG / STUC protocol.

5.3 In Scotland within procurement (post OBC) it is a requirement that Procuring Authorities, Agencies and Directorates demonstrate the VfM of NPD on both a **qualitative and quantitative**. They should therefore:

- continue to confirm that the project in procurement is Viable, Desirable and Achievable (reaffirming previous workshop outputs as applicable);
- utilise a Shadow Bid Model as an initial VfM comparison against actual bids (to ensure the bids reflect defined project scope, current market conditions and structures etc); and
- where applicable utilise market information and research databases of other NPD outturns to compare and assist with VfM calculations and benchmarks.

The need for VfM tests beyond receipt of bids

- i. to provide Procuring Authorities, Agencies and Directorates with:-
 - a. additional comfort and sign-off regarding investment decisions
 - b. adherence with best value principles
 - c. additional audit trail supporting investment decisions
- ii. it addresses the fact that NPD procurements on average last a minimum of 2 years from OJEU and in some circumstances may only reach contractual and financial close 2 – 3 years post OBC submission (Project Level Stage), hence VfM reasons to progress the deal should also be reconfirmed (but always considered in the qualitative context)
- iii. it needs to be recognised that the quantitative assessment at the Procurement Stage is only one of a number of VfM elements reviewed (e.g. there is a review of competition, the benefits of the investment, etc) and although there will also be sensitivity testing of the quantitative outcome, it is not to be viewed in isolation.

5.4 After taking account of supporting qualitative factors, should this assessment against a shadow bid affordability model suggest that the bids do not offer VfM, then the NPD procurement process should be halted and further analysis undertaken. The Procuring

Authority should assess the underlying reasons for the shift in VfM and should consider alternative options which address these issues, such as re-scoping the project and putting it to the market at a later date, or if capital budget becomes available, reconsideration of conventional procurement. The Procuring Authority and its advisers should consider the financial and wider implications of the alternative options put forward at this stage. The full consequences of re-scoping the project or changing procurement route should be considered, taking into account factors such as:

- impact on timetable;
- impact of delay on cost;
- sunk costs already invested;
- the ability to maintain market confidence; and
- availability of alternative sources of finance.

Procuring Authorities, Agencies and Directorates must consult with the SFT, SGHD Capital and Facilities Division as appropriate when making these decisions.

5.5 Throughout Stage 3, Procuring Authorities, Agencies and Directorates must monitor their projects to:

- **identify and be aware of any or potential market failure** (lack of competition and lack of bidders). If at any stage the procurement team identifies market failure (e.g. absence of competition), they should consider the implications for the project. Market failure or lack of competition occurs where there is only a single bidder for a project or perhaps where there are two or more bidders but only one is considered to be credible. The concern is that in the absence of competitive tension the bidder may not be appropriately incentivised to offer its best price, terms and conditions to the public sector. In this case market abuse might arise (see below). However, procurement should not automatically be stopped as a result of market failure and the Procuring Authority should undertake a thorough review of the market failure circumstances affecting the particular project in reaching their view on the way forward. If it is not possible to take appropriate additional action that satisfy the Accounting Officer then the procurement should be halted. In considering whether the procurement should continue, the reason for the market failure should be examined closely. The team should establish whether the failure of competition is due to systemic

problems in the market, in which case the failure should equally affect alternative procurement routes. It is recommended that internal / external auditors have due sighting of the procurement process. Also see Appendix G.

- **ensure a robust competition is maintained** in procurement. A competitive procurement is one of the ways in which the public sector aims to achieve VfM in its procurement activities. Procuring Authorities should be confident that the procurement will receive an adequate competitive response and that competition can be maintained throughout the resulting procurement process. The Procuring Authority should regularly review the quality and extent of competition throughout the procurement phase until the selection of preferred bidder. A robust competition requires a number of well-qualified bidders who have expressed strong interest in bidding for the project.
- **ensure minimisation of transaction costs** to both the public and private sectors. It is key in achieving VfM for an NPD transaction that a realistic competition is maintained, but this is only likely to be the case if the public sector keeps tight control of transaction costs and completes a realistic assessment of what will be necessary to ensure a competitive market for their project that minimises these costs for both public and private sector.
- **identify market abuse** (inappropriate pricing and bidding, typically at the preferred bidder stage when competitive pressure may be reduced). Market abuse can be defined as a situation where the bid offered is out of the market, that is to say above the market price for similar projects, or where the risk profile has been substantially eroded relative to other similar recent NPD projects at this price. It is also important for the Procuring Authority to understand how bid submissions relate and reconcile to the detailed costings carried out by the Project Team's own technical advisers. It is important to understand the driver of cost creep to ensure that it is not a means by which the bidder can replace or recover the equity returns foregone in the NPD model.
- **ensure risk allocation is still deliverable** and risk sharing is appropriate. All NPD projects should be based on standardised contract approach. The overall aim of this approach is to establish the use of SoPC4 (or equivalent) and sector specific contracts in order to frame a risk profile for the NPD procurement which provides proper incentives for the private sector to perform efficiently. VfM judgements should be made on the basis that the risk allocation is given in this context.

- **regularly assess that bidders are financially robust with capacity to deliver** and invest (for example through regularly checking financial PQQ tests in accord with financial PQQ methodology).
- **monitor cost stability.** If cost estimates at OBC differ significantly from the price at Full Business Case (FBC) or financial close, questions should be asked as to whether there are legitimate external reasons which could not be foreseen and, if not, why this escalation was not captured by the Optimism Bias estimates. The level of cost variation may be subject to directorate review / directorate limits.
- **financial flexibility and financial structures.** It is important that the assessment of the impact that the use of different financial structures will have on the flexibility of the project to accommodate changes to the project requirements is considered.
- **assess alternatives,** for example assess VfM delivered by any variant bids received or changes to scoping and risk transfer implemented during a competitive dialogue process.
- **feed back appropriate information** (e.g., risk uplift quanta, cost per square metre of accommodation and services etc) and market intelligence to the SFT and relevant Directorates and Agencies.

5.6 These **requirements** have previously been met by Procuring Authorities, Agencies and Directorates in Scotland by applying relevant standardised guidance to the appropriate stage of the NPD procurement process model and through the consultation and direction provided by their appointed advisers. Further guidance on the CPAM is available in the Quantitative VfM Assessment guidance note. The KSR process will also address these areas.

5.7 In **procurement**, market sounding, market promotion and market launch of projects should be done on a “cross directorate basis” particularly at the initial stages of procurements.

5.8 Note, **in Scotland, it is not considered appropriate to conduct an NPD competition with fewer than two robust bidders.** Any circumstances where this is not the case must be immediately referred to the SFT / SGHD Capital and Facilities or relevant Agency or Directorate. If competition drops to one bidder after the receipt of bids, the procurement will be reviewed (separately from Gateway / KSR review if

necessary) in order to allow for SFT / SGHD Capital and Facilities/ Scottish Procurement and Commercial Directorate assessment of the situation, the available options (including halting the procurement) and Value for Money implications.

- 5.9 **Once a preferred bidder has been selected (and subject to Competitive Dialogue requirements) it is essential that the Procuring Authority ensures that VfM is maintained in the absence of competitive tension.** The impact on changes in costs and risk profile and the corresponding impact on VfM must be carefully controlled. A protocol to deal with these changes must be agreed as part of the preferred bidder appointment process. When reporting these changes or movements from guidance / SoPC 4 for approval (for example in the FBC or to the SFT / SGHD Capital and Facilities) during procurement **(throughout Stage 3)** the following areas must be covered by Procuring Authorities in a VfM report:

Stage 3 VfM Report:

- exact position in the original bid phase (including how element was to be priced)
- treatment proposed now
- Unitary payment and NPV implications of treatment (pre and post where applicable)
- differences in non financial impacts / benefits of the two approaches including assessment of qualitative factors under each treatment (Desirability / Viability / Achievability)
- detailed contractual drafting of the proposal (or written summary of how this will be treated if drafting is not available)
- summary of contractual impact (in particular around compensation on termination scenarios, longstop dates and relief & compensation events)
- clarity on how proposals comply with guidance / SoPC 4 (and where not so, quantified impact of full compliance)

- non financial impact / qualitative aspects
- impact on wider VfM factors (for example impact on balance sheet treatment / risk transfer)
- confirmation that no procurement or competition issues exist from treatment (for example scope change post PB)

This VFM report should be signed off by the Senior Responsible Officer

The Stage 3 Procurement Level assessment reporting requirements are detailed in the table at Appendix D.

Appendix A – When should non Conventional Procurement be considered for Projects and Programmes

A.1 Non conventional procurement (e.g. private finance / NPD) should be considered when the nature of the projects or the programme includes the following characteristics:

- a major capital investment programme, requiring effective management of risks associated with construction and delivery;
- the private sector has the expertise to deliver and there is good reason to think it will offer value for money;
- there is significant constraint upon capital budget availability at either Government or Directorate level;
- proven track record in delivery
- the structure of the service is appropriate, allowing the public sector to define its needs as service outputs;
- the nature of the assets and services identified as part of the projects are capable of being costed on a whole-of-life, long term basis;
- the value of the projects / programme is sufficiently large to ensure that procurement costs are not disproportionate;
- the technology and other aspects of the sector are stable, and not susceptible to fast paced change;
- planning horizons are long term, with assets intended to be used over long periods into the future; and
- there are robust incentives on the private sector to perform.

A.2 In such circumstances, there is a prima facie case for considering privately financed (NPD / non conventional) procurement. The public sector bodies (and where applicable Procuring Authorities, Agencies and Directorates) are required to confirm that these areas have been reviewed prior to undertaking the Stage 1 Programme Level Assessment.

A.3 For projects of a capital value less than £20m, the appropriateness of procuring these on an NPD basis should be discussed directly with the SFT (SGHD Capital and Facilities for NHSScotland Bodies) or the relevant centre prior to commencing the VfM assessment stages. For smaller projects it may be more appropriate to use other procurement routes for revenue financed schemes, such as hub.

The following pro-forma should be completed and submitted with the relevant Stage 1 or Stage 2 assessment:-

NPD Consideration Checklist	Response
1. Are there major capital investments requiring management of delivery and construction?	
2. Is there evidence that the private sector can deliver the projects / programme and that it is likely to be VfM?	
3. Are the services capable of being defined in Service Outputs?	
4. Is whole life costing possible?	
5. Confirm that procurement costs are not disproportionate to total costs of set up and operation?	
6. Is there a technology stable market?	
7. Confirm that planning for asset use over long term has been conducted.	
8. Confirm that appropriate incentivisation for the private sector to perform has been considered.	
9. Confirm that there is appetite within the market to take the programme / projects forward on a private finance basis which includes capped returns / zero equity.	

A.4 The following table should be completed as part of self assessment prior to undertaking detailed VfM assessment. It will be submitted at the Stage 2 OBC assessment as applicable:

Project Element	Design	Construction (including transitional activities such as decant)	Maintenance including life cycle maintenance	Operation of facilities (e.g. cleaning, reception, catering)
Detail NPD Benefit and enhancement to non NPD:				
Quality of service				
Project management				
Risk management				
Improved relationships promoting synergy, quality and added value				
Strong financial control and management				
Innovation				
Effective exploitation of opportunities				

Note that health projects should also consider SCIM Appendix 2a in determining the suitability of an NPD model for the project in question. SCIM guidance is available online at: <http://www.pfcu.scot.nhs.uk/>

Appendix B – Checklist and Pro-forma of Required Actions Stage 1

Programme Level Assessment

This should be undertaken at feasibility stage of the programme's development. The objective is to assess programme level VfM and whether a privately financed procurement route is likely to provide VfM and whether NPD options should be considered for the programme. If Procuring Authorities are commencing VfM assessment at Stage 2, the information below should be reported.

Stage 1 – Investment Programme Level Assessment (Section 4 of Guidance)		
Requirement	Details Assessed	Action Undertaken / Comments / Action Required
1. Confirm that the case for privately financed procurement on a programme basis has been tested	<p>1. Confirmation that elements detailed in Appendix A have been reviewed & the pro-forma completed.</p> <p>2. Confirm that the typical capital value of individual projects will be of sufficient size for NPD or other forms of private finance / investment</p>	
2. Undertake Qualitative Assessment of private finance / NPD versus traditional procurement on a Programme basis	<p>1. Viability of programme (complete table below)</p> <p>2. Desirability of programme (complete table below)</p> <p>3. Achievability of programme (complete table below)</p> <p>4. Consider wider VfM factors and Generic VfM factors relevant to the Programme.</p> <p>If there is a mixed economy of procurement methods (i.e. additional to NPD / private finance), 1 to 4 above should be adjusted to cover all procurement types.</p> <p>A separate workshop output report should be provided to support the completed pro-forma tables on viability, desirability and achievability and summarise the wider VfM factors of the programme.</p>	
3. Quantitative Assessment – review costs of establishing	<p>To test a typical project in the programme:</p> <p>1. Relevant costs assessed (capital, lifecycle, revenue). Supporting assumptions to be</p>	

Stage 1 – Investment Programme Level Assessment (Section 4 of Guidance)		
Requirement	Details Assessed	Action Undertaken / Comments / Action Required
<p>and operating the programme relative to efficiencies and economies derived and financial / non financial benefits</p> <p>Also if applicable test a typical project in the programme for quantitative VfM</p>	<p>provided.</p> <p>2. Risks, Optimism Bias and transaction costs assessed. Supporting assumptions provided.</p> <p>3. Past projects used as historical evidence of pricing of relevant costs and risks.</p> <p>Deliverables:</p> <ul style="list-style-type: none"> • Report compiled by the public sector with input from advisers as appropriate. • Where applicable CPAM and shadow bid models available for review. All input assumptions verified. • Review of economies of scale, efficiencies and transaction costs of the programme vs benefits (financial and non financial) 	
4. Combined Overall Evaluation	<ol style="list-style-type: none"> 1. Quantitative and Qualitative programme outputs are considered together 2. Implication / Suitability of being able to switch procurement routes and impact on programme funding to be considered 3. Evidence of VfM of previous private finance / NPD projects considered in selecting a core procurement route for the programme 4. Are suitably resourced and structured delivery teams (including budgets) in place (local and central if applicable) or can be put in place. 5. Overall programme timescales considered (including different delivery dates relative to each procurement method) 6. Detail any gaps in programme information and outputs and assess their significance and provide plan to address 7. Conclusion on suitability of programme for private finance / NPD procurement <p>The final report should cover the above points with supporting evidence.</p>	
5. Review of Affordability	Affordability implications assessed through:	

**Stage 1 – Investment Programme Level Assessment
(Section 4 of Guidance)**

Requirement	Details Assessed	Action Undertaken / Comments / Action Required
	<p>1. PayBack Period analysis</p> <p>2. Programme set up costs and operational costs relevant to budgets. Internal affordability forecasts and budgets should be assessed</p> <p>For a typical project:</p> <p>3. the shadow bid model/CPAM with sensitivity analysis.</p> <p>4. Consideration of budget/funding sources and grant funding (eg. Prudential funding etc) and revenue vs. capital spend implications</p> <p>5. Consider whether investment plans are in accord with Spending Reviews / Infrastructure Plan</p> <p>6. Consideration of ability to switch some projects from private finance / NPD to traditional procurement and the affordability implications of this.</p> <p>The final report should cover the above points with supporting evidence.</p>	
6. Review of Balance Sheets Status	Indicate the likely Accounting Treatment implications of projects procured in the Programme and detail in final report.	

QUALITATIVE VFM ASSESSMENT TABLES

NOTE – the following Viability, Desirability and Achievability Pro-forma should be used at the Programme Level for Qualitative Assessment.

It should be tailored accordingly to reflect the characteristics of the Programme Level Assessment and the procurement type. Therefore questions and references should be edited accordingly.

For example it is recommended to assess both procurement route choices under the headings below and then score and assess each.

Programme Level VfM Assessments Tables:

VIABILITY		
Investment objectives and outcomes need to be translatable into outputs which can be contracted for, measured and agreed.		
Issue	Questions	Response
Programme level objectives and outputs	Is the Procuring Authority satisfied that long term and operable contracts could be constructed for the projects to be included within the Programme? <i>(describe the types of contracts envisaged)</i>	
	Could the contracts describe service requirements in clear, objective, output-based terms over a long term period?	
	Could the contracts support assessments of whether the service has been delivered to an agreed standard?	
	Is the fit between needs and outcomes on a programme basis sufficient to proceed?	
	Will there be significant levels of investment in the new capital assets and related services?	

VIABILITY

Investment objectives and outcomes need to be translatable into outputs which can be contracted for, measured and agreed.

Issue	Questions	Response
	<p>Is service certification across projects likely to be straightforward in terms of agreeing measurable criteria and satisfying the interests of stakeholders?</p> <p>Does the Programme have clear boundaries (especially with respect to areas of procuring authority control)? If there are interfaces with other programmes are they clear and manageable?</p> <p>Can the services in the programme be provided without the essential involvement of Authority personnel? To what extent does any involvement negate the risk transfer that is needed for VfM?</p> <p>Will the private sector likely have control/ownership of the intellectual property rights associated with the performance/design/development of the assets for the new service?</p>	
Operational flexibility	Is the Procuring Authority, Agency or Directorate satisfied that operational flexibility is likely to be maintained over the lifetime of the contracts put in place at an acceptable cost?	
	Is there a practical balance between the degree of operational flexibility that is desired and long term contracting based on up-front capital investment in projects?	
	What is the likelihood of large contract variations being required during the life of a typical contract?	
Equity, efficiency and accountability	Are there public equity, efficiency or accountability reasons for providing the programme services directly rather than through private finance / NPD contracts?	
	Does the scope of the programme services lend itself to providing the contractor with “end-to-end” control of the relevant functional processes? Do the services have clear boundaries?	
	Are there regulatory or legal restrictions that require programme services (or those services envisaged to be included in projects) to be provided directly?	

VIABILITY

Investment objectives and outcomes need to be translatable into outputs which can be contracted for, measured and agreed.

Issue	Questions	Response
	<p>Will the private sector be able to exploit economies of scale through the provision, operation or maintenance of other similar services to other customers (not necessarily utilising the same programme assets)?</p> <p>Does the private sector have greater experience/expertise than the procuring authority in delivery of programmes and associated services? Are the services in the programme non-core to the procuring authority?</p> <p>Is a privately financed / NPD procurement basis for projects likely to deliver improved value for money to the directorate as a whole?</p>	
OVERALL VIABILITY	Is the relevant Accountable Officer satisfied that operable contracts with built in flexibility can be constructed across the programme, and that strategic and regulatory issues can be overcome?	

DESIRABILITY

By integrating the life-cycle and operation costs with design and construction, DBFM procurement models can provide better risk management and incentives to develop innovative approaches to output delivery. Consistent high quality services can be achieved through performance and payment mechanisms. However, risk transfer is priced into the contract. The purpose of this section is to consider whether the benefits of the contract structure are likely to outweigh this additional cost.

Issues	Question	Response
Risk management	Does the Programme involve the purchase of significant capital assets, where the risks of cost and time over-runs are likely to be significant?	
	<p>Is the private sector likely to be able to manage the generic risks associated with the programme more effectively than the procuring authority?</p> <p>Bearing in mind the relevant risks that need to be managed for the programme, what is the ability of the private sector to price and manage these risks?</p> <p>Can envisaged standardised payment mechanisms and contract terms incentivise good risk management across the programme?</p>	
Innovation	<p>Does a preliminary assessment indicate that there is likely to be scope for innovation on a programme basis?</p> <p>Does some degree of flexibility remain in the nature of the technical solutions/services and/or the scope of the projects?</p> <p>Can solutions be adequately free from the constraints imposed by the procuring authority, legal requirements and/or technical standards?</p> <p>To what extent will individual project's scope, specification and operation be pre-set or open to negotiation with the private sector?</p> <p>Could the private sector improve the level of utilisation of the assets underpinning the programme and projects within it (e.g. through selling, licensing, commercially developing for third party usage etc)?</p>	

DESIRABILITY

By integrating the life-cycle and operation costs with design and construction, DBFM procurement models can provide better risk management and incentives to develop innovative approaches to output delivery. Consistent high quality services can be achieved through performance and payment mechanisms. However, risk transfer is priced into the contract. The purpose of this section is to consider whether the benefits of the contract structure are likely to outweigh this additional cost.

Issues	Question	Response
Service provision	<p>Across the programme, are there good strategic reasons to retain soft service provision in-house - what are the relative advantages and disadvantages?</p> <p>Is optimal risk allocation achieved by transfer or not and is soft service transfer essential for achieving the overall benefits of improved standards of service delivery?</p> <p>(Refer to the STUC Staffing Protocol)</p>	
Incentive and monitoring	Can the outcomes or outputs of the investment programme be described in contractual terms which would be unambiguous and measurable?	
	Can the programme services be assessed against an agreed standard?	
	Would incentives on service levels be enhanced through standard contracts and payment mechanisms?	
Lifecycle costs / residual value?	Is it possible to integrate the design, build and operation of projects?	
	<p>Are lengthy contracts envisaged?</p> <p>Will long-term contractual relationships be suitable (or advantageous) for the service?</p> <p>Are there constraints on the status of the assets at contract end?</p>	
	<p>Are there significant ongoing operating costs and maintenance requirements across the programme and projects?</p> <p>Are these likely to be sensitive to the type of construction?</p>	
OVERALL DESIRABILITY	Overall, is the relevant Accountable Officer satisfied that the programme and its procurement approach would bring sufficient benefits that would outweigh the expected higher cost of capital?	

ACHIEVABILITY

Significant transaction costs are involved in an investment programme. In particular, the procurement process can be complex and significant resources, including senior management time, may be required for programme and individual project development and ongoing monitoring. Client capability will have direct consequences for procurement time. Perceptions of this capability will also affect the level and quality of market interest. NPD and other contract-based approaches should maximise the benefits of a competitive process – but the structure of proposals and the choice of procurement route should be informed by an assessment of the likely market appetite.

Issue	Question	Response
Transaction costs and client capacity	<p>Is there sufficient central support to the roll out and monitoring of the programme?</p> <p>Is there sufficient client-side capability to manage the procurement process on projects and appraise the ongoing performance against agreed outputs?</p>	
	<p>Can appropriately skilled procurement teams be assembled in good time?</p>	
	<p>Will the programme and projects be feasible within the required timescale?</p> <p>Is there sufficient time for resolution of key procuring authority issues?</p> <p>Does the size of the Programme and typical projects justify transaction costs?</p>	
Competition / Market Interest	<p>Is there evidence that the private sector is capable of delivering the required outcomes, including across all geographic areas covered by the programme?</p>	
	<p>Is there likely to be sufficient market appetite for the projects in the programme?</p> <p>Has this been tested robustly? Is there any evidence of market failure for similar Programmes / Projects?</p>	

ACHIEVABILITY

Significant transaction costs are involved in an investment programme. In particular, the procurement process can be complex and significant resources, including senior management time, may be required for programme and individual project development and ongoing monitoring. Client capability will have direct consequences for procurement time. Perceptions of this capability will also affect the level and quality of market interest. NPD and other contract-based approaches should maximise the benefits of a competitive process – but the structure of proposals and the choice of procurement route should be informed by an assessment of the likely market appetite.

	Have any similar programmes been tendered to market? Has the procuring authority's commitment to a NPD solution for projects of the type covered in this programme been demonstrated?	
	Do the nature of the investment and/or the strategic importance of the work and/or the prospect for further business suggest that it will be seen by the market as a potentially profitable programme?	
OVERALL ACHIEVABILITY	Overall is the relevant Accountable Officer satisfied that the procurement programme is achievable, given client side capability and the attractiveness of the proposals to the market?	

Appendix C – Checklist and Pro-forma of Required Actions Stage 2

Project Level Assessment

The following checklists should be completed at the OBC stage of Project development and be submitted with the OBC for approval. The checklists replicate the analysis undertaken at the Programme Level to confirm either the continued desirability of NPD or whether alternative procurement routes could deliver improved VfM. Where the continued case for NPD remains, the requirement for a replication of the quantitative assessment of NPD versus the CPAM model is not required.

Stage 2 – Project Level Assessment – Refer to Section 5 of Guidance		
Requirement	Details Assessed	Undertaken / Comments / Action Required
1. Confirm that the case for NPD/alternative procurement routes has been tested	<p>If this has not been confirmed at Programme Level:</p> <ol style="list-style-type: none"> 1. Review the project characteristics against the criteria included within Appendix A to determine whether the project is suitable for privately financed / NPD procurement and complete/update the relevant pro forma. 2. Confirm the capital value is of sufficient size for NPD / alternative forms of procurement funded by private investment. 	
2. Qualitative Assessment of NPD / alternative procurement routes verses conventional procurement – project level	<ol style="list-style-type: none"> 1. Review, confirm and complete applicable pro-forma below relating to: <ul style="list-style-type: none"> • Viability of project • Desirability of project • Achievability of project (in particular market capacity and likely bid competition / market interest to be reviewed) 2. Consider wider VfM factors and generic VfM factors 3. Review proposed Project Timetable 4. Confirm proposed risk allocation 5. Confirm benefit assessment and deliverability 6. Support evaluation and decision with evidence from previous projects. <p>Report findings should include the results of the assessment of the viability, desirability and achievability of NPD procurement. (This should include the pro-forma checklists and the results of</p>	

Stage 2 – Project Level Assessment – Refer to Section 5 of Guidance		
Requirement	Details Assessed	Undertaken / Comments / Action Required
	the workshops which assessed these.)	
3. Quantitative Assessment - application to a specific project	<p>1. All relevant costs assessed in accordance with the CPAM guidance note. Supporting assumptions should be detailed.</p> <p>2. Consideration of whether alternative procurement routes may lead to a different level of benefits compared to traditional procurement.</p> <p>3. Risks, Optimism Bias, Tax Differential and transaction costs assessed. Supporting assumptions should be detailed.</p> <p>4. Use past projects as historical evidence of pricing. Risk / Optimism Bias should be updated as appropriate.</p> <p>5. Implications in relation to STUC Staffing protocol considered</p> <p>6. Where required, a CPAM and shadow bid model should be developed to inform the assessment of the affordability and VfM implications of the project. Detailed sensitivity testing and scenario analysis should be undertaken. Note that the CPAM model should only be maintained to the point of bid receipt. Any significant changes from Stage 1 assessment should be noted and commented upon. The Report should identify if costs have increased by greater than 25% from Stage 1 and explain why.</p> <p>The Report should be compiled by Procuring Authorities / Agencies / Directorate with input from advisers as appropriate. All input assumptions should be reviewed and verified and sensitivities run.</p>	
4. Combined Overall Evaluation	<p>1. Quantitative and Qualitative evaluation outputs are considered in conjunction.</p> <p>2. Overall project timescales are confirmed.</p> <p>3. Confirm that standardised documentation will be adopted, and a full explanation of any deviations to the standard provided.</p> <p>4. Conclude on the suitability of the project for privately financed / NPD procurement.</p> <p>The above features should be recorded within the Report.</p>	
5. Review of	1. Affordability should be assessed using a	

Stage 2 – Project Level Assessment – Refer to Section 5 of Guidance

Requirement	Details Assessed	Undertaken / Comments / Action Required
Affordability – to determine if the project can continue	shadow bid model. 2. Consideration of alternative funding sources should be undertaken (e.g. Prudential funding, bank funding, bond funding etc) and the revenue vs. capital spend implications assessed. 3. Confirm project is affordable / supportable based upon forecast scope and delivery timescales. The affordability implications (including the affordability envelope under a range of sensitivities) should be signed off required. The affordability assumptions and implications should be detailed within the report.	
6. Review of Balance Sheets Status	The accounting implications of the project should be assessed and recorded within the Report.	

Depending upon the sector in question, this will be assessed as part of the Pre-OJEU KSR process and OBC sign off.

Project Level VfM Assessments Tables:

VIABILITY Investment objectives and outcomes need to be translatable into outputs which can be contracted for, measured and agreed.		
Issue	Questions	Response
Project level objectives and outputs	Is the Procuring Authority satisfied that a long term, operable contract could be constructed for the project as envisaged within the Programme Level Assessment?	
	Confirm that the proposed contract describes / will describe service requirements in clear, objective, output-based terms over a long term period?	
	Confirm that the contract will support assessments of whether the service has been delivered to an agreed standard?	
	Confirm that the proposed project outcomes will meet the project objectives and address the need.	
	Will there be significant levels of investment in the new capital assets and related services?	
	Confirm that any interfaces with other projects or programmes are clear and manageable? Confirm that the services to be provided as part of the project do not require the essential involvement of Procuring Authority personnel? To what extent does any involvement negate the risk transfer that is needed for VfM? Will the private sector have control / ownership of the intellectual property rights associated with the performance / design / development of the assets for the new service?	
Operational flexibility	Is the Procuring Authority satisfied that operational flexibility is likely to be maintained over the lifetime of the contract at an acceptable cost?	
	Is there a practical balance between the degree of operational flexibility that is desired and long term contracting based on up-front capital investment in projects?	
	What is the likelihood of large contract variations being required during the life of a typical contract?	
Equity, efficiency and accountability	Are there public equity, efficiency or accountability reasons for providing the project directly rather than through private finance / NPD contracts?	

VIABILITY

Investment objectives and outcomes need to be translatable into outputs which can be contracted for, measured and agreed.

Issue	Questions	Response
	Does the scope of the project services allow the contractor to have control of all the relevant functional processes? Do the services have clear boundaries?	
	Are there regulatory or legal restrictions that require project services to be provided directly?	
	Will the private sector be able to exploit economies of scale through the provision, operation or maintenance of other similar services to other customers? Does the private sector have greater experience / expertise than the Procuring Authority in delivery of the project services? Are the services in the project non-core to the Procuring Authority? Is a privately financed / NPD procurement basis for projects likely to deliver improved value for money to the Procuring Authority as a whole?	
OVERALL VIABILITY	Is the relevant Accountable Officer satisfied that operable contracts with built in flexibility can be constructed across the project, and that strategic and regulatory issues can be overcome?	

DESIRABILITY

By integrating the life-cycle and operation costs with design and construction, privately financed / NPD procurement models can provide better risk management and incentives to develop innovative approaches to output delivery. Consistent high quality services can be achieved through performance and payment mechanisms. However, risk transfer is priced into the contract. The purpose of this section is to consider whether the benefits of the contract structure are likely to outweigh this additional cost.

Issues	Question	Response
Risk management	Does the project involve the purchase of significant capital assets, where the risks of cost and time over-runs are likely to be significant?	
	<p>Is the private sector likely to be able to manage the generic risks associated with the project more effectively than the Procuring Authority?</p> <p>Bearing in mind the relevant risks that need to be managed for the project, what is the ability of the private sector to price and manage these risks?</p> <p>Can envisaged standardised payment mechanisms and contract terms incentivise good risk management within the project?</p>	
Innovation	<p>Does a preliminary assessment indicate that there is likely to be scope for innovation on a project basis?</p> <p>Does some degree of flexibility remain in the nature of the technical solutions / services and / or the scope of the project?</p> <p>Can solutions be adequately free from the constraints imposed by the Procuring Authority, legal requirements and / or technical standards?</p> <p>To what extent will the individual project's scope, specification and operation be pre-set or open to negotiation with the private sector?</p> <p>Could the private sector improve the level of utilisation of the assets underpinning the project (e.g. through selling, licensing, commercially developing for third party usage etc)?</p>	

DESIRABILITY

By integrating the life-cycle and operation costs with design and construction, privately financed / NPD procurement models can provide better risk management and incentives to develop innovative approaches to output delivery. Consistent high quality services can be achieved through performance and payment mechanisms. However, risk transfer is priced into the contract. The purpose of this section is to consider whether the benefits of the contract structure are likely to outweigh this additional cost.

Issues	Question	Response
Service provision	<p>In relation to the project, are there good strategic reasons to retain soft service provision in-house - what are the relative advantages and disadvantages?</p> <p>Is optimal risk allocation achieved by transfer or not and is soft service transfer essential for achieving the overall benefits of improved standards of service delivery?</p> <p>(Refer to the STUC Staffing Protocol)</p>	
Incentive and monitoring	<p>Can the outcomes or outputs of the project be described in contractual terms which would be unambiguous and measurable?</p>	
	<p>Can the project services be assessed against an agreed standard?</p>	
	<p>Would incentives on service levels be enhanced through the standard contract and payment mechanism?</p>	
Lifecycle costs / residual value?	<p>Is it possible to integrate the design, build and operation of the project?</p>	
	<p>Is a lengthy contract envisaged?</p> <p>Will long-term contractual relationships be suitable (or advantageous) for the service?</p> <p>Are there constraints on the status of the assets at contract end?</p>	
	<p>Are there significant ongoing operating costs and maintenance requirements across the project?</p> <p>Are these likely to be sensitive to the type of construction?</p>	
OVERALL DESIRABILITY	<p>Overall, is the relevant Accountable Officer satisfied that the project and its procurement approach would bring sufficient benefits that would outweigh the expected higher cost of capital?</p>	

ACHIEVABILITY

Significant transaction costs are involved in a privately financed / NPD Project. In particular, the procurement process can be complex and significant resources, including senior management time, may be required for programme and individual project development and ongoing monitoring. Client capability will have direct consequences for procurement time. Perceptions of this capability will also affect the level and quality of market interest. NPD and other contract-based approaches should maximise the benefits of a competitive process – but the structure of proposals and the choice of procurement route should be informed by an assessment of the likely market appetite.

Issue	Question	Response
Transaction costs and client capacity	Is there sufficient Procuring Authority capability to manage the procurement process and appraise the ongoing performance against agreed outputs?	
	Can an appropriately skilled procurement team be assembled in good time?	
	Will the project be feasible within the required timescale? Is there sufficient time for resolution of key Procuring Authority issues? Does the size of the project justify the transaction costs?	
Competition / Market Interest	Is there evidence that the private sector is capable of delivering the required outcomes?	
	Is there likely to be sufficient market appetite for the project? Has this been tested robustly? Is there any evidence of market failure for similar projects?	
	Have any similar projects been tendered to market? Has the Procuring Authority's commitment to a privately financed / NPD solution for this type of project been demonstrated?	
	Does the nature of the investment and / or the strategic importance of the work and / or the prospect for further business suggest that it will be seen by the market as a potentially profitable project?	

ACHIEVABILITY

Significant transaction costs are involved in a privately financed / NPD Project. In particular, the procurement process can be complex and significant resources, including senior management time, may be required for programme and individual project development and ongoing monitoring. Client capability will have direct consequences for procurement time. Perceptions of this capability will also affect the level and quality of market interest. NPD and other contract-based approaches should maximise the benefits of a competitive process – but the structure of proposals and the choice of procurement route should be informed by an assessment of the likely market appetite.

OVERALL ACHIEVABILITY

Overall is the relevant Accountable Officer satisfied that the project is achievable, that the project team is sufficiently resourced and the project is attractive to the market?

Appendix D – Checklist and Pro-forma of Required Actions Stage 3

Procurement Level Assessment

This analysis should be undertaken in the procurement stage of Project development when the VfM argument for proceeding with the privately financed / NPD project is subject to final confirmation.

Stage 3 – Procurement Level Assessment – Refer Section 6 of Guidance		
Requirement	Details Assessed	Undertaken / Comments / Action Required
1. The following key parameters should be confirmed:	<p>1. the affordability envelope for the project</p> <p>2. the extent of affordability & costing information that will be shared with bidders</p> <p>3. project specifications (which can be delivered within the affordability envelope)</p> <p>4. SoPC / SSSC / SGHD PA and other relevant standardised documents applied</p> <p>5. NPD or alternative procurement timetable and forecast OJEU date approved by SFT / SGHD PFCU / relevant Centre</p> <p>6. Appropriateness of funding competition / approach to ensuring funding best value reviewed</p> <p>A separate report should be prepared on the above and the following pro-forma checklist completed.</p>	
2. Qualitative Assessment	<p>Review, confirm and complete the pro forma below relating to the:</p> <ul style="list-style-type: none"> • Viability of the procurement • Desirability of the procurement • Achievability of the procurement <p>Review and confirm the impact of wider VfM factors and generic VfM factors</p> <p>Report findings should include the results of the viability, desirability and achievability assessment. (This should include the pro forma checklists and the results of the workshops which assessed these.)</p>	
3. Quantitative Assessment - Bid comparator will be	<p>1. Consideration and application of STUC Staffing protocol and associated technical guidance undertaken.</p>	

Stage 3 – Procurement Level Assessment – Refer Section 6 of Guidance		
Requirement	Details Assessed	Undertaken / Comments / Action Required
developed.	<p>2. Compare private finance / NPD bids with shadow bid model / CPAM and undertake sensitivity analysis. Note that the CPAM model should only be maintained to the point of bid receipt.</p> <p>Report compiled by Procuring Authorities, Agency, Directorate with input from advisers as appropriate.</p>	
4. Other Commercial Areas	<p>1. Confirm that Risk allocation is still best practice / best value, VfM and is deliverable.</p> <p>2. Confirm that a robust bidding and evaluation process has been in place during procurement.</p> <p>Detail in report</p>	
5. Develop strategy to deal with ongoing project issues and elements	<p>1. Process in place to regularly review bidders financial capacity (standard PQQ financial tests at key project stages)</p> <p>2. Protect project against Market Failure through undertaking regular market soundings / reviews and actively marketing the project (is there sound competition?)</p> <p>3. Protect against Market Abuse and undertake regular reviews for this (is there evidence of market abuse)</p> <p>4. Confirm process to review, control and confirm ongoing affordability of the project</p> <p>5. Review & confirm Balance Sheet status of the Project</p> <p>6. Develop and agree bid evaluation framework</p> <p>7. Internal Risk Management Register and related Internal Risk Management plan to be developed and agreed</p> <p>8. Process to collate and share relevant information with other Procuring Authorities, Directorates and Agencies</p> <p>9. Confirm financial standing of the preferred bidder</p> <p>A detailed report should be attached to the proforma</p>	

Depending upon the sector in question, this should be assessed at the Pre Invitation to Submit Final Tender stage (if applicable) and at FBC.

Procurement Level VfM Assessments Tables:

VIABILITY		
Investment objectives and outcomes need to be translatable into outputs which can be contracted for, measured and agreed.		
Issue	Questions	Response
Procurement level objectives and outputs	Is the Procuring Authority satisfied that a long term, operable contract will be constructed for the project as envisaged within the Programme Level Assessment?	
	Confirm that the draft contract describes service requirements in clear, objective, output-based terms over a long term period?	
	Confirm that the contract supports assessments of whether the service has been delivered to an agreed standard?	
	Confirm that the proposed project outcomes meet the project objectives and address the need.	
	Are significant levels of investment in the new capital assets and related services required?	
	<p>Confirm that any interfaces with other projects or programmes are clear, manageable and the various responsibilities have been captured within the relevant contracts?</p> <p>Confirm that the services to be provided as part of the project do not require the essential involvement of Procuring Authority personnel? To what extent does any involvement negate the risk transfer that is needed for VfM?</p> <p>Will the private sector have control / ownership of the intellectual property rights associated with the performance / design / development of the assets for the new service?</p>	
Operational flexibility	Is the Procuring Authority satisfied that the proposed contract offers sufficient operational flexibility which can be maintained over the lifetime of the contract at an acceptable cost?	
	Is there a practical balance between the degree of operational flexibility offered in the contract and long term contracting based on up-front capital investment in projects?	
	What is the likelihood of large contract variations being required during the life of the contract?	

VIABILITY

Investment objectives and outcomes need to be translatable into outputs which can be contracted for, measured and agreed.

Issue	Questions	Response
Equity, efficiency and accountability	Are there public equity, efficiency or accountability reasons for providing the project directly rather than through private finance / NPD contracts?	
	Does the scope of the project services allow the contractor to have control of all the relevant functional processes? Do the services have clear boundaries?	
	Are there regulatory or legal restrictions that require project services to be provided directly?	
	Will the private sector be able to exploit economies of scale through the provision, operation or maintenance of other similar services to other customers? Does the private sector have greater experience / expertise than the Procuring Authority in delivery of the project services? Are the services in the project non-core to the Procuring Authority? Is a privately financed / NPD procurement basis for projects likely to deliver improved value for money to the Procuring Authority as a whole?	
OVERALL VIABILITY	Is the relevant Accountable Officer satisfied that operable contracts with built in flexibility have been constructed across the project, and that strategic and regulatory issues have been overcome?	

DESIRABILITY

By integrating the life-cycle and operation costs with design and construction, DBFM procurement models can provide better risk management and incentives to develop innovative approaches to output delivery. Consistent high quality services can be achieved through performance and payment mechanisms. However, risk transfer is priced into the contract. The purpose of this section is to consider whether the benefits of the contract structure are likely to outweigh this additional cost.

Issues	Question	Response
Risk management	<p>Does the project involve the purchase of significant capital assets, where the risks of cost and time over-runs are likely to be significant?</p>	
	<p>Is the private sector likely to be able to manage the generic risks associated with the project more effectively than the Procuring Authority?</p> <p>Bearing in mind the relevant risks that need to be managed for the project, has the private sector demonstrated its ability to price and manage these risks?</p> <p>Do the proposed payment mechanisms and contract terms incentivise good risk management within the project?</p>	
Innovation	<p>Have bidder submissions displayed innovative ideas for the procurement?</p> <p>Does some degree of flexibility remain in the nature of the technical solutions / services and / or the scope of the project?</p> <p>Are solutions adequately free from constraints imposed by the Procuring Authority, legal requirements and / or technical standards?</p> <p>To what extent has the individual project's scope, specification and operation been pre-set or open to negotiation with the private sector?</p> <p>Has the private sector suggested improvements to the level of utilisation of the assets underpinning the project (e.g. through selling, licensing, commercially developing for third party usage etc)?</p>	
Service provision	<p>In relation to the project, has soft service provision been retained in-house - what are the relative advantages and disadvantages?</p> <p>Is optimal risk allocation achieved by transfer or not and is soft service transfer essential for achieving the overall benefits of improved standards of service delivery?</p> <p>(Refer to the STUC Staffing Protocol)</p>	

DESIRABILITY

By integrating the life-cycle and operation costs with design and construction, DBFM procurement models can provide better risk management and incentives to develop innovative approaches to output delivery. Consistent high quality services can be achieved through performance and payment mechanisms. However, risk transfer is priced into the contract. The purpose of this section is to consider whether the benefits of the contract structure are likely to outweigh this additional cost.

Issues	Question	Response
Incentive and monitoring	Have the outcomes or outputs of the project been described in contractual terms which are unambiguous and measurable?	
	Have standards been agreed against which the project services will be assessed?	
	Are incentives on service levels enhanced through the standard contract and payment mechanism?	
Lifecycle costs / residual value?	Has the design, build and operation of the project been integrated?	
	Is a lengthy contract envisaged? Will long-term contractual relationships be suitable (or advantageous) for the service? Are there constraints on the status of the assets at contract end?	
	Are there significant ongoing operating costs and maintenance requirements across the project? Are these sensitive to the type of construction?	
OVERALL DESIRABILITY	Overall, is the relevant Accountable Officer satisfied that the project and the bids received would bring sufficient benefits that would outweigh the expected higher cost of capital?	

ACHIEVABILITY

Significant transaction costs are involved in a privately financed / NPD Project. In particular, the procurement process can be complex and significant resources, including senior management time, may be required for project development and ongoing monitoring. Client capability will have direct consequences for procurement time. Perceptions of this capability will also affect the level and quality of market interest. NPD and other contract-based approaches should maximise the benefits of a competitive process – but the structure of proposals and the choice of procurement route should be informed by an assessment of the likely market appetite.

Issue	Question	Response
Transaction costs and client capacity	Is there sufficient Procuring Authority capability to manage the preferred bidder process and appraise the ongoing performance against agreed outputs?	
	Has an appropriately skilled procurement team been assembled and made available to the project throughout the procurement?	
	Does the project remain feasible within the required timescale? Is there sufficient time for resolution of key Procuring Authority issues? Does the size of the project continue to justify the transaction costs?	
Competition / Market Interest	Is there evidence that the private sector is capable of delivering the required outcomes?	
	Has sufficient market appetite been demonstrated for the project?	
	Have any similar projects been tendered to market? Has the Procuring Authority's commitment to a privately financed / NPD solution for this type of project been demonstrated?	
	Has the nature of the investment and / or the strategic importance of the work and / or the prospect for further business resulted encourages market appetite in the project?	

ACHIEVABILITY

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OVERALL ACHIEVABILITY

Overall is the relevant Accountable Officer satisfied that the project is still achievable, that the project team will continue to be sufficiently resourced and the project has received sufficient market interest?

Appendix E: Example of Non Standard NPD Infrastructure Projects – applying SG VfM Guidance

Rail Infrastructure Projects - Procurement Route assessment / VfM Reviews

Background

E.1 SFT NPD VfM guidance assesses VfM factors associated with an NPD procurement route. A number of the assessment categories (particularly qualitative factors) focus on key elements that should be addressed in whatever eventual procurement route is chosen. That is, regardless of the procurement route developed, the level of detailed review undertaken should be as robust as that required for a full NPD project.

E.2 In addition, public sector procurement guidance (The SG Procurement Policy Manual) states *“PPP procurement should be considered when the evidence of the benefits that PPP can deliver gives a strong case for considering PPP for a Project or Programme. These characteristics include:-*

- *A major capital investment programme, requiring effective management of risks associated with construction and delivery;*
- *The private sector has the expertise to deliver and there is good reason to think it will offer value for money;*
- *The structure of the service is appropriate, allowing the public sector to define its needs as service outputs;*
- *The nature of the assets and services identified as part of the PPP scheme are capable of being costed on a whole-of-life, long term basis;*
- *The value of the project is sufficiently large to ensure that procurement costs are not disproportionate;*
- *The technology and other aspects of the sector are stable, and not susceptible to fast paced change;*
- *Planning horizons are long term, with assets intended to be used over long periods into the future; and*
- *There are robust incentives on the private sector to perform.*

In such circumstances, there is a prima facie case for considering PPP procurement. The public sector bodies (and where applicable Procuring Authorities, Agencies and Directorates) are required to confirm that these areas have been reviewed.”

- E.4 Based upon the characteristics above and, following best practice guidance, it is appropriate to develop an assessment of a Rail Infrastructure project under an NPD delivery vehicle for comparison to the alternative procurement routes likely to be used in practice. It is recognised that although a full NPD solution is potentially not sustainable for rail infrastructure projects, the preferred procurement route should demonstrate, as far as practical, compliance with the above characteristics and further review against key VfM areas outlined in Scottish Government NPD VfM Assessment Guidance.
- E.5 In summary, therefore, NPD delivery can be used as a comparator to benchmark the chosen delivery route against. The objective is to ensure that the chosen procurement route addresses qualitative aspects achieved under a NPD and addresses wider VfM factors in an appropriate and best value way. Finally different quantitative outcomes and affordability elements will also be assessed for the preferred option against a NPD benchmark where this is practical.
- E.6 Note: it is recognised that the quantitative benchmarks of the chosen procurement route may in some cases be made against the conventional procurement option (CPAM).

Process

- E.7 Prior to the evaluation of the procurement route and detailed VfM assessment, an option appraisal using Green Book principles will have been undertaken on the long-listed options.
- E.8 Authorities would then apply agreed criteria to rank options (e.g. benefits / flexibility etc) and create a shortlist of preferred options. It would be expected that the options identified, given the sector, cover large infrastructure procurements.
- E.9 Then undertake a high level NPD consideration:-
- This will be at the project level (typically rail projects will be considered complex and therefore there should potential scope to explore use of NPD in whole or in part).
 - On the assumption that the high level NPD assessment as detailed in Appendix A of the SFT VfM guidance indicates that NPD should be explored, then undertake more detailed VfM assessment, utilising SFT NPD VfM guidance as an appropriate comparator as described in the background above.
 - Compare the preferred procurement route with a NPD option.

- Attempt to demonstrate, where possible, that the preferred procurement route provides similar or preferential benefits to those achieved through a NPD project e.g.
 - Detailed risk transfer including the effective management of risks associated with construction and delivery;
 - The private sector has the expertise to deliver and there is good reason to think it will offer value for money;
 - That the project allows outputs to be set by the public sector;
 - That the nature of the contract allows greater price certainty;
 - That the value of the project is sufficiently large to ensure that procurement costs are not disproportionate;
 - That the technology and other aspects of the sector are stable, and not susceptible to fast paced change;
 - That planning horizons are long term, with assets intended to be used over long periods into the future; and
 - There are robust incentives on the private sector to perform.

E.10.1 Provide an introduction and overview of the scope of the overall project, however funded e.g. it requires design, construction, operation, maintenance, revenues etc

E.10.2 Undertake a detailed review of the costs and revenues as part of the development of the business case and cost benefit ratio. The development of a business case and cost benefit ratio will demonstrate the project option represents VfM. This element requires full consideration of:-

- input costs (construction, lifecycle, maintenance, operation) – as well as phasing of these
 - revenues
 - bespoke risk / Optimism Bias / contingency elements
 - price base and outturn delivery dates as well as economic and financial assumptions
 - indication of potential sensitivities in respect of the above (particularly in respect of indexation)
- The next stage will be to select a procurement route that represents Best VfM.

E.10.3 Develop a detailed procurement strategy and VfM assessment of the preferred option(s)

- This assessment will compare the differing risk and cost impacts of each of the shortlisted procurement options in order to develop a robust audit trail to justify the selection of the preferred procurement option.
- This may include an assessment of the whole project or some of its component parts (for example, unlikely to include revenue risk transfer)
- Compare procurement route / methodology against SFT NPD VfM guidance assessment areas (Qualitative / Quantitative / Wider Factors), thereby using VfM guidance to justify indicative procurement route
- Factors to consider:
 - Detailed Qualitative Assessment
 - Viability – these considerations focus on whether there are issues that require that the infrastructure and services within the project to be provided by the public sector directly as opposed to private sector involvement, and, can the project requirements be captured in an output specification and /or contract based approach. Thus the procuring body must sure that an operable contract with built in flexibility can be constructed, and that any strategic and regulatory issues that impact on the public sector can be overcome
 - Desirability – these considerations focus on the relevant benefits of private sector delivery against cost / risk transfer. Thus the procuring body must be satisfied that private sector involvement brings sufficient benefits that would outweigh the expected higher cost of capital and potential higher cost of services associated with remunerating the private sector for taking a certain level of defined / undefined risk
 - Achievability – these considerations focus on the likely level of market interest to invest and does the public sector have the management expertise to manage the procurement and how costly will it be to procure (e.g. transaction costs of public and private sectors). Thus the procuring body must ensure that there is sufficient client side capability to deliver the project and that projects will be attractive to the market

Tailor the SFT NPD VfM Assessment guidance pro-formas for specific assessment of NPD vs the selected procurement route and rank outcome

- Other wider option specific VfM factors to consider:
 - Risk identification / pricing / management (including interfaces between public and private, different contracts)
 - Costs
 - Economies of scale
 - Funding availability
 - Covenant / counter party issues
 - Affordability / phasing
 - Market issues (e.g. impact on competition, sole supplier)
 - Accounting treatment (of government / procuring bodies (if different))
 - Timetable impacts of different procurement routes
 - Long term certainty vs flexibility
 - Externalities
- Quantitative Assessment should also be undertaken. Note, this may be “high level” indicative quantitative elements
 - Inputs costs applied as described in 2 above
 - Use bespoke NPD models in comparison to financial model / cashflows of actual selected procurement route, or selected procurement route could be compared to conventional procurement (CPAM)
 - Different risk quantifications for different procurement routes would be expected (including differences in retained risks between options)
 - Potential not to undertake quantitative VfM testing if qualitative outputs of tested route are very persuasive
 - Outturn costs must be used

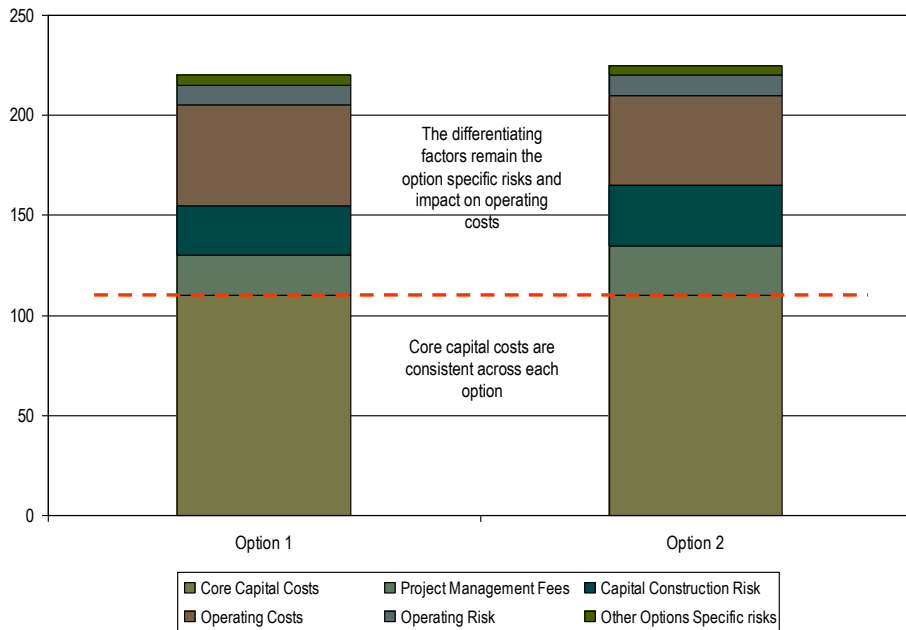
The affordability implications of differing procurement routes are fundamental to decision making. Therefore appropriate affordability analysis must be demonstrated. Similarly, balance sheet issues must be reviewed.

- A review of the high level risk allocation matrix (and written summary) of alternative procurement options should be undertaken (for example chosen procurement route vs NPD).

- show how time / cost / delivery risk is treated and exposure to which parties under contractual structure
- how will performance / availability be measured
- also demonstrate contractual structure and how contract operation would work in practice
- demonstrate how interface risks will be managed
- There should be general consideration of the impact of any future increased size of project on the assessments undertaken and the procurement route selected.
- Weighting and scoring of elements between qualitative and quantitative elements and wider VfM factors are to be determined by the client
- Further analysis of how private finance can be levered into the procurement route strategy, through for example:-
 - construction financing
 - turn key payments
 - portion of availability payments
 - combination of above
 - partnering (contracting) / risk sharing approaches

should be undertaken, as well as any subsequent impact on affordability and balance sheet outcomes.

The diagram below highlights that the emphasis when comparing the detailed procurement options must be based upon the differentiating factors, i.e option specific risks and price impacts.



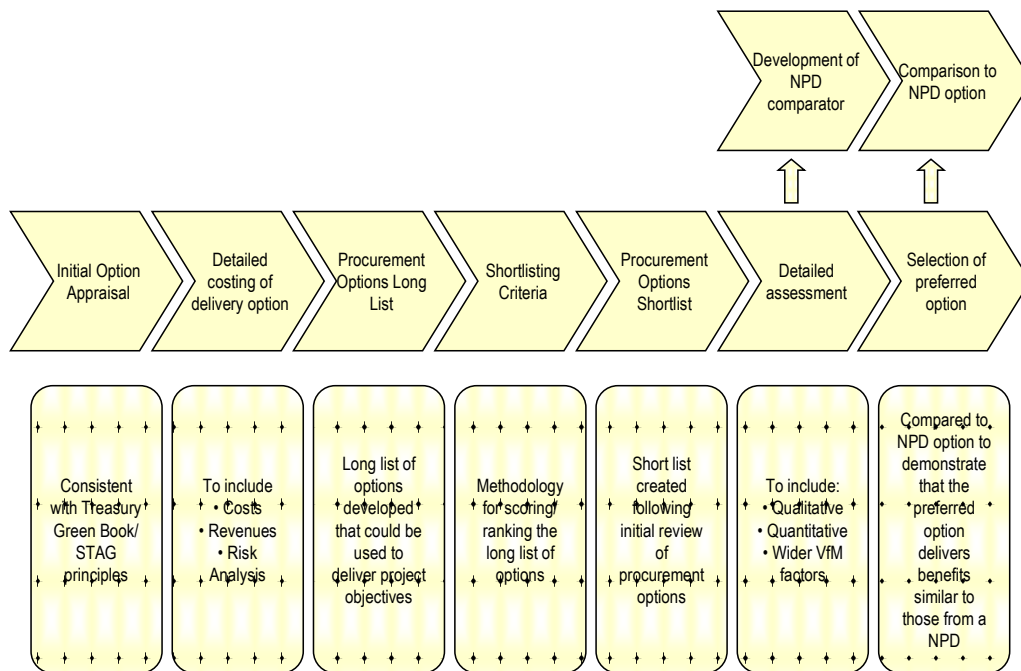
E.10.4 Apply any other Directorate guidance requirements, for example:

- Economic appraisal
- STAG
- Business case requirements

E.10.5 Procurement management and best practice should be considered in the assessment of procurement routes, for example:

- future VfM reviews (reapplying the processes detailed in this guidance at key procurement stages)
- Gateway Assessments
- ongoing internal risk management and ownership
- single point contract co-ordinating all delivery elements
- project management in private sector and public sector delivery
- robust tendering processes and private sector competition
- governance arrangements

The diagram below provides a summary of the process to be followed.



Example

E.11 It is likely that a rail procurement could be undertaken on the following basis (under an NPD structure):-

- i. Design and Build
- ii. Design, Build and Maintain
- iii. Design, Build, Finance and Maintain

E.13 Under all scenarios private and public finance could be used wholly or in combination. There will also be different levels of handover that can be contracted for, for example post the D&B, the contractor could

- handover the infrastructure (tested against the specification)
- handover the infrastructure fully tested prior to commercial services
- handover the infrastructure fully tested post a period of initial services, dealing with interface issues (i.e. beyond “snagging”) of say vehicles for a defined period (e.g. 12 months), and being responsible for maintenance over this period

- E.14 For i., ii. and iii. it will be important to assess these options for VfM against qualitative VfM and wider VfM factors in accord with the guidance above.
- E.15 It will also be important to assess the options, against a situation where an organisation like Network Rail (for example where Network Rail can transact directly with Scottish Government to deliver some or all of the above options) where it could deliver the defined option.
- E.16 Further, consideration of an organisation like Network Rail as a subcontractor to private sector bidders in options i., ii. and iii. must also be considered.
- E.17 In all circumstances regulatory, statutory and vires issues must be considered of the promoter and the Scottish Government and fully evaluated as part of option appraisal (qualitative and quantitative).

Appendix F - Scottish Government - Soft FM Inclusion / Exclusion VfM Testing

This pro-forma will assist Procuring Authorities to address STUC Staffing Protocol requirements regarding testing inclusion / exclusion of Soft FM provision from a NPD project (either pre OJEU or in procurement).

This pro-forma does not specifically cover the processes required to be in place to undertake soft FM inclusion / exclusion testing in procurement. Separate guidance should be sought. In completing the relevant pro-forma, Procuring Authorities may require to seek appropriate advisory input (technical, legal and financial).

Note, in certain sectors because of regulatory and accountability reasons, certain soft FM services should not be contemplated for transfer. If Procuring Authorities think that this is the case, they should discuss directly with the Directorate.

Pro-forma 1 – Exclusion Checklist Pre Procurement

Ref	Review Element	Procuring Authority Response (supporting information, calculations and spreadsheets to be provided)
1	<p>How was soft FM dealt with and what assumptions were applied at the option appraisal stage of the project (e.g. at OBC / prior to selection of the preferred option)</p> <p>Has external assistance been sought in relation to the soft FM inclusion / exclusion assessment (quantitative and risk issues)</p> <p>Please confirm that the ultimate decision to include / exclude soft FM services has been made by the Procuring Authority and that the Procuring Authority is accountable for any subsequent VFM and market attractiveness impact on the project.</p>	
2	<p>Detail the scope of soft FM services being considered – include a basic list</p> <p>Explain any soft FM service not considered for inclusion and detail why.</p> <p>Give details – including expiry date – of any current soft FM service contracts (e.g. outsourced contracts).</p>	

3	<p>1. Within the quantitative analysis undertaken, confirm the basis of pricing of the:-</p> <ul style="list-style-type: none"> i. projected in house soft FM costs (e.g. Procuring Authority estimates / DLO etc) ii. projected NPD soft FM costs (e.g. are they based on NPD market benchmarks provided by technical advisers) <p>In both cases state whether these are inclusive of risk</p> <ul style="list-style-type: none"> iii. allocation of overhead for in house pricing (insurance, head office, finance etc) <p>2. Further to the above, are the in house soft FM costs and the NPD soft FM costs priced to deliver the exact same level of service (i.e. based on an NPD output specification and a proactive response and rectification criteria with a strict monitoring and deduction regime contractually enforced by a payment mechanism)</p> <p>3. Has the full cost (i.e. direct cost and any related overhead) of in house management of soft FM delivery been costed and included in the assessment? Please provide details of the overhead allocation methodology.</p> <p>4. How is the fact that in an NPD soft FM services can be benchmarked being treated in the financial assessment of:</p> <ul style="list-style-type: none"> i. the NPD which includes soft FM ii. the in house bid <p>5. What implications were addressed in respect of the duration of the NPD (inclusive of Soft FM) being circa 30 years in duration vs a Service Level Agreement for in house provision which will be typically for a shorter period (i.e. detail Best Value review logistics etc).</p> <p>Note pricing implications of benchmarking and varying agreement periods should be included in the quantitative information below.</p> <p>6. Please provide details of any anticipated difference in other NPD costs (outside Soft FM) arising from different Soft FM provision options.</p> <p>7. How will / how have different pension arrangements and regimes been assessed</p>	
4	<p>Please provide the following financial details of base costs (including in house soft FM delivery and management):-</p>	

	<p>i. per annum cost of individual soft FM services costs (exclusive of risk) for in house provision and cost per square metre / unit etc of individual services</p> <p>ii. whole life cost of soft FM services costs (exclusive of risk) for in house provision</p> <p>iii. per annum cost of individual soft FM services costs (exclusive of risk) for NPD and cost per square metre of individual services</p> <p>iv. whole life cost of soft FM services costs (exclusive of risk) for NPD</p>	
5	<p>Please provide the following financial details of risk costs directly attributable to soft FM:-</p> <p>i. per annum risk cost of individual soft FM services costs for in house provision</p> <p>ii. whole life risk cost of soft FM services costs for in house provision</p> <p>iii. per annum risk cost of individual soft FM services costs for NPD</p> <p>iv. whole life risk cost of soft FM services for NPD</p>	
6	<p>What is the total cost of all transferred risk to the NPD operator:</p> <p>i. when soft FM is included in the NPD</p> <p>ii. when soft FM is not included in the NPD</p> <p>Both to be presented in NPV terms</p>	
7	<p>What is the total cost of Procuring Authority retained soft FM risk under</p> <p>i. the in house provision of soft FM services</p> <p>ii. the inclusion of soft FM services in the NPD</p> <p>Both to be presented in NPV terms</p>	
8	<p>What is the total cost of transferred risk to the NPD operator and what is the value of retained risk by the Procuring Authority under</p> <p>i. in-house provision of soft FM services</p> <p>ii. NPD provision of soft FM services</p> <p>Both to be presented in NPV terms</p> <p>Note – in relation to reference questions 4, 5 and 6, it is expected that the different cost bases between in house and NPD soft FM provision will drive different risk values (for example the NPD base cost will reflect that a stringent payment mechanism is in place).</p>	
9	<p>Detail the extent of consideration of risk pricing issues related to soft FM inclusion / exclusion:</p>	

	<ul style="list-style-type: none"> - what issues were raised and what value is attached to interface risk (e.g. design and operational issues) of the NPD bid with soft FM included - what issues were raised and what value is attached to the interface risk (e.g. design and construction being distinct from operation) of the NPD bid when soft FM is excluded (therefore public sector operation of services in NPD operators facilities over the life of the contract) - did the external advisers to the project risk adjust in house bid prices 	
10	<p>What is the overall impact on VFM. Please detail:</p> <ul style="list-style-type: none"> i. NPD NPV (inclusive of risk) – soft FM inclusion ii. CPAM NPV (inclusive of risk) – soft FM inclusion iii. NPD NPV (inclusive of risk) – in house soft FM provision iv. CPAM NPV (inclusive of risk) – assuming in house soft FM provision v. NPD NPV (inclusive of risk) – in house soft FM provision plus retained cost of soft FM and related retained risk (separately detailed) vi. CPAM NPV (inclusive of risk) – assuming in house soft FM provision plus retained cost of soft FM and related retained risk (separately detailed) 	
11	<p>Review of qualitative factors</p> <p>How will exclusion of soft FM impact:</p> <ul style="list-style-type: none"> • Viability • Desirability • Achievability • Wider Vfm factors <ul style="list-style-type: none"> - consideration of differential impact on programme from inclusion / exclusion - consideration of differential impact of single point accountability from inclusion / exclusion 	
12	<p>What is the view of the market?</p> <p>Provide evidence of the canvassing of bidders – specifically, views should be sought from active NPD consortia in the sector as to the attractiveness of the project (not withstanding any market capacity issues) with soft FM included or excluded and provided by the in house team</p>	

Appendix G - Single Supplier – VfM arrangements

- G.1 Where the required service and/or asset is of a particularly specialist nature there may only be one supplier in the market who is able to fulfil a procuring authority's requirements. These circumstances are likely to arise only rarely. Where this is the case and the authority is able to demonstrate this to the satisfaction of its own accounting officer and the Directorate / SFT, the Procuring Authority may wish to pursue a single source procurement.
- G.2 If there is only one supplier this does not automatically mean that NPD is not an appropriate procurement route as the absence of competition may apply equally whatever the procurement route. As such the procuring authority should apply this guidance in the usual way to ascertain if NPD is likely to be VfM.
- G.3 If the assessment suggests that NPD is VfM then the procuring authority should consider what other protections can be put in place to ensure VfM is achieved in a single bidder environment. These might include:
- Requiring the bidder to undertake transparent market testing of those parts of the supply chain where competition can be generated;
 - Where market-testing is not possible, gathering data on comparable procurements so the prices, terms and conditions can be compared and benchmarked. Understanding the extent of the adherence to SoPC terms;
 - Ensuring that specialist technical advice relevant to the particular service is available either in-house or through appointing external advisors; and
 - Examining the case for increasing flexibility in the contract term by limiting the initial term of the contract and/or incorporating break points in the contract such that the Procuring Authority can retender the contract should new suppliers enter the market.
- G.4 Although the decision as to whether to proceed or not rests with the Directorate Accounting Officer, there is a requirement to inform SFT where a project is proceeding as a single source NPD procurement.
- G.5 The Procuring Authority should also refer to guidance published by Office of Government Commerce on dealing with single supplier procurements

Appendix H - References, Links & Guidance

The following should be referred to

1. HMT VFM Assessment Guidance – accessed at www.hm-treasury.gov.uk
2. HMT VFM Spreadsheet Model and Quantitative Assessment User Guide
3. HMT Green Book -accessed at: <http://greenbook.treasury.gov.uk/>
4. NPD Explanatory Note available at :
<http://www.scottishfuturetrust.org.uk/docs/439/Explanatory%20Note%20on%20the%20NPD%20Model.pdf>
5. SG Construction Procurement Manual
6. SG Vfm Refinancing Guidance
7. SG Funding Competition Guidance Note

Specific NHS Scotland/ Health Guidance

9. SGHD Scottish Capital Investment Manual available at:
<http://www.pfcu.scot.nhs.uk/>
10. HDL (2002)87
11. DH Supplementary Guidance on Optimism Bias

Appendix I – Glossary

Competitive Dialogue	Competitive Dialogue is a process which enables the Procuring Authority to conduct discussions with bidders with the aim of identifying and defining the means best suited to meet the Procuring Authority's needs. The dialogue involves several stages during which the number of solutions discussed as well as the number of bidders is refined and reduced.
Conventional Procurement Assessment Model or CPAM	A Conventional Procurement Assessment Model is a risk adjusted financial model which estimates the cost of the public sector procuring a project directly.
DBFM	Design, Build Finance and Maintain
FBC	The Final Business Case explains how the preferred option would be implemented and how it can be best delivered.
FM	Facilities Management services – can be hard services relating to the maintenance of the maintaining the fabric of the actual building or soft services such as cleaning and catering.
Gateway Review	Mandatory reviews for publicly procured capital investments which exceed £5m and which are assessed as being high risk and / or mission critical.
Green Book	HM Treasury Green Book provides guidance on the techniques and issues that should be considered when assessing new policies, programmes and projects, whether revenue, capital or regulatory.
GEM	The Department of Health Generic Economic Model aims to assist the business case process of selecting the option that provides best value for money to the public sector for capital investment.
ITPD	The Invitation to Participate in Dialogue is a key milestone of the Competitive Dialogue process where pre qualified bidders are invited to take part in the dialogue stage.
JV	Joint Venture
KSR	Key Stage Review programme is a mandatory external review process for all privately financed procurements in Scotland.
NPD	The Non Profit Distributing model is a structure which has been developed in the Scottish market as a means of capping the returns earned by investors on public sector procurement at a level aligned with the corresponding risk transfer.
NPV	The Net Present Value represents a net cost figure for a

	project, i.e. all of the costs of the project to the client less the receipts associated with the project. The resulting cash flows are discounted at the appropriate cost of capital to an agreed base date.
OBC	An Outline Business Case prepared by the Procuring Authority to establish the need for the project, including an output specification.
OJEU	Official Journal of the European Union in which projects are advertised.
Optimism Bias / OB	Optimism Bias is the demonstrated systematic tendency for people to be over-optimistic about the outcome of planned actions. This includes over-estimating the benefits and under-estimating costs and delays.
PQQ	A Pre Qualification Questionnaire is designed to assess the competence of potential bidders from the expressions of interest submitted in response to the OJEU notice, with the aim of producing a list of potential bidders who qualify for the next stage in the procurement process.
SCIM	Scottish Capital Investment Manual
SFT	Scottish Futures Trust
Shadow Bid Model	A shadow bid model provides an indicative unitary charge which will be used as a proxy for the expected annual cost of a privately financed procurement
SG	Scottish Government
SGHD	Scottish Government Health Directorate
SGHD PFCU	Scottish Government Health Directorate Private Finance and Capital Unit
SoPC4	HM Treasury's Standardisation of PFI Contracts version 4 provides standard wording and guidance to be used by public sector bodies when drafting PFI contracts. This guidance is also applicable to NPD contracts.
SPFM	Scottish Public Finance Manual
STUC Staffing Protocol	Scotland's Trade Union Centre Protocol covers employment issues in Public Private Partnerships in protecting staff and eliminating the two-tier workforce.
Unitary Charge	The expected cost of a privately financed project, usually expressed in annual terms.
VfM	VfM is the optimum combination of whole-life costs and quality (or fitness for purpose) of the good or service to meet the users requirements. VfM is not the choice of goods and services based on the lowest cost bid.

Appendix J – Quantitative VfM Assessment

Quantitative VfM Assessment - how to construct a Conventional Procurement Assessment Model (“CPAM”) and apply its use in Quantitative VfM Assessment vs Shadow Bid Model

1. Introduction and Scope

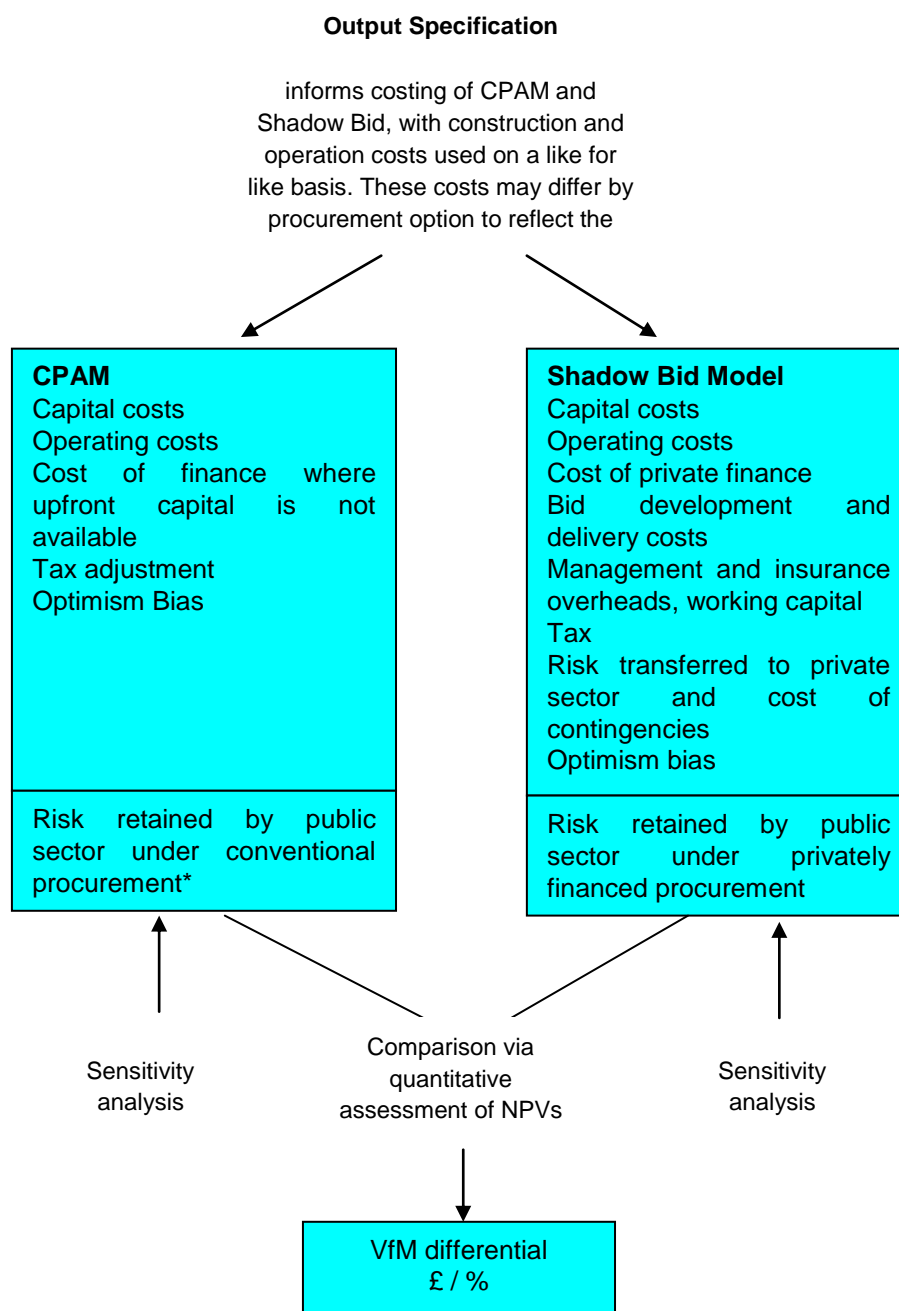
The Value for Money (“VfM”) guidance requires the use of quantitative appraisal throughout the VfM assessment stages (the Programme Level, Project Level and Procurement Level). The quantitative assessment should compare the financial cost of the chosen procurement route with a suitable comparator. This requirement should apply regardless of the procurement route chosen as a comparative analysis will almost always be possible.

VfM guidance requires quantitative assessment, using a risk adjusted Conventional Procurement Assessment Model (“CPAM”) as an economic comparator against a shadow bid financial model (a proxy private finance structure). The shadow bid model will typically be developed by Procuring Authorities in conjunction with their appointed financial advisers to facilitate both the VfM and affordability assessments. The shadow bid model will produce an indicative Unitary Charge. This Unitary Charge will be used as a proxy of the expected annual cost of a privately financed / NPD project. The discounted unitary charge over the life of the project will be compared to the discounted cost of the CPAM to provide an indication of the quantitative VfM assessment of the project.

At the Project and Procurement Levels, the purpose of the CPAM is to provide a benchmark against which to form a judgement on the likely quantitative Value for Money position of a privately financed / NPD procurement route which is a distinct task, separate from affordability analysis. There is no reason to presume that a good Value for Money project will be affordable or that an affordable project will represent good Value for Money. The issue of Affordability is not covered by this note.

The evaluation model will assist Procuring Authorities (Local Authorities, NHS Scotland Organisations, Scottish Government Agencies and Directorates) to help ensure that best value is achieved, and provide an audit trail of the VfM implications of a project throughout the procurement process. This exercise is intended to supplement the qualitative VfM elements and should be reviewed throughout the procurement process at the same stages.

Figure 1: Summary of Value for Money Quantitative Assessment



* Where the Authority proceeds with a conventional procurement, under which the programme / project risk is to be retained by the public sector, the Authority should refer to the Construction Advice and Policy Division's (CPAD's) Construction Procurement Manual:

<http://www.scotland.gov.uk/Publications/2005/11/28100404/04045>

Where the difference in the assessments of the conventional option and the privately financed option are marginal (small positive for or against) the outcome should not be interpreted as sufficient evidence for or against the use of private finance as a procurement route. In such cases more weight should be given to the qualitative rather than the quantitative assessment.

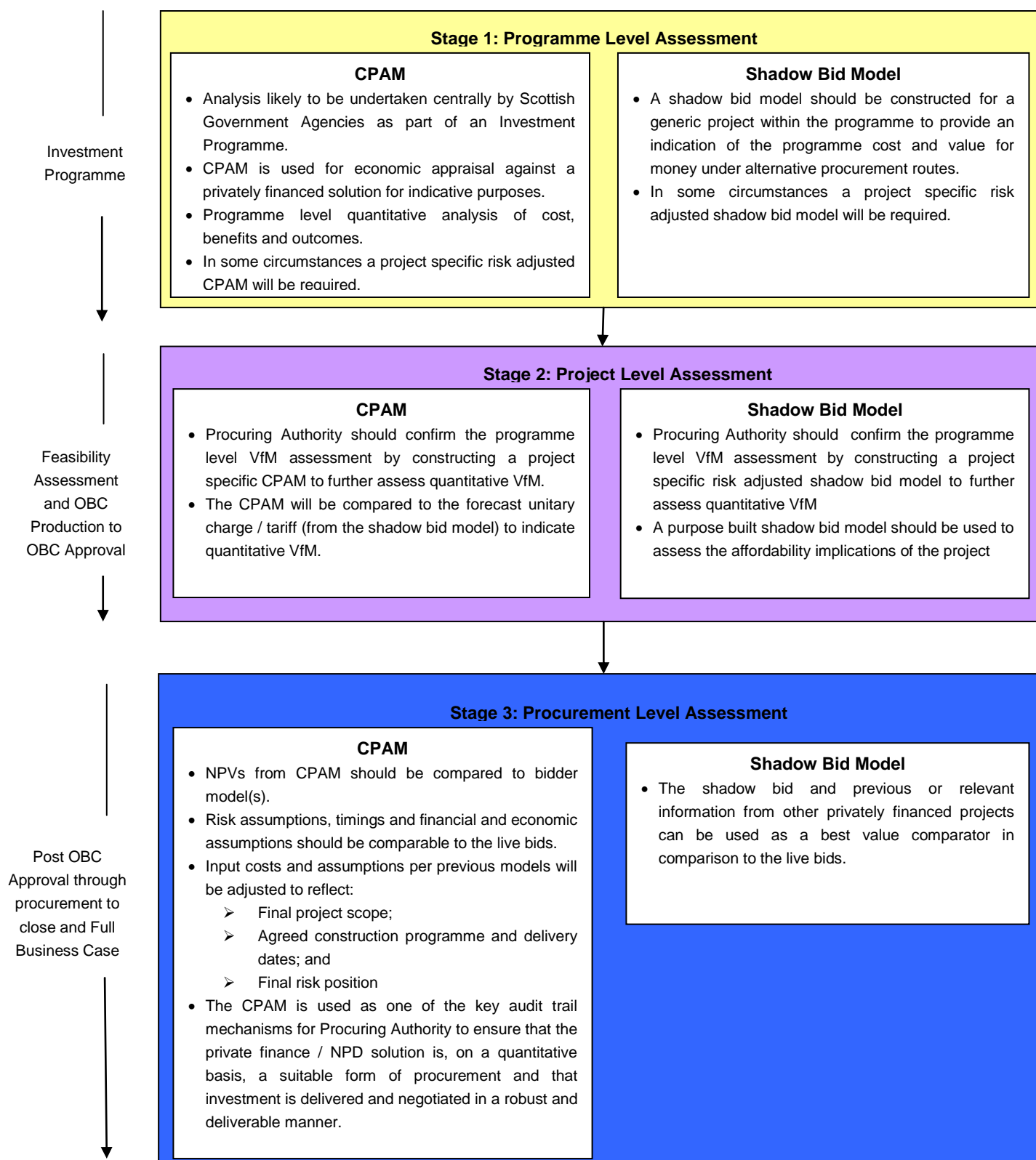
This note provides guidance on the quantitative VfM assessment and provides detail on the models which facilitate quantitative comparison for VfM purposes.

This note also discusses the inclusion of risk and Optimism Bias in the quantitative assessment, looking at how these areas are expected to be developed and valued.

Development of the Quantitative Analysis

The following flow chart provides details of the development of the CPAM and shadow bid model at each stage of the VfM assessment.

Figure 2: Development of the CPAM and Shadow Bid Model



Who should apply this guidance?

This guidance is intended for Procuring Authorities who are following the Value for Money Assessment Guidance for Capital Programmes and Projects. Advisers to the Procuring Authority as well as private sector Contractors are also recommended to read this. It is recommended that Authorities refer to this guidance throughout the procurement period.

Scope of the Guidance

This guidance is intended to be generic in nature and to cover the general principles that should be followed by Procuring Authorities when performing quantitative Value for Money analysis and constructing the CPAM and shadow bid model. For health projects, procuring bodies should refer to the SCIM business case guide at:

<http://www.pfcu.scot.nhs.uk/>

2. Summary

The purpose of this guidance is to assist the Procuring Authority in carrying out quantitative analysis to determine whether the preferred procurement route will deliver best VfM.

The evaluation model will assist Procuring Authorities to ensure that best value is achieved, and provide an audit trail of the VfM implications of a project throughout the procurement process.

This guidance sets out the quantitative models used in the VfM assessment and provides advice on the contents of the CPAM and the shadow bid models.

CPAM

It is important that the CPAM reflects the full resource cost of the project in order to provide a deliverable benchmark against which to assess the preferred procurement route. The CPAM must be able to fully deliver to the intended output specification and must be based on realistic assumptions around the availability of capital funding.

The capital and operational costs used in the CPAM should reflect the full resource cost of the project under conventional procurement and must be capable of delivering the intended output specification.

In addition to these basic capital and operational costs, where upfront capital is not available the cost of public sector finance should also be included in the CPAM, most likely in the form of PWLB finance costs.

These costs should be included where they reflect the ultimate cash flow consequence for the Procuring Authority, even if these are not of a cash nature. Including these costs in the analysis facilitates a like-for-like comparison between private finance and the true cost of public sector procurement.

Shadow Bid Model

The shadow bid model will provide an indicative unitary charge which will be used as a proxy for the expected annual cost of a privately financed procurement. In addition to capital, lifecycle and FM costs, the shadow bid model should also reflect the market cost of finance, bid development and delivery costs, management and insurance overheads and market returns.

Any surpluses arising under an NPD option should be risk adjusted to reflect their likelihood of occurring and taken into account in the VfM assessment.

Both the CPAM and the shadow bid models should be updated and compared throughout the procurement process. The cash flows from these models are discounted to allow comparison on a NPV basis. The comparison of these results will allow the Procuring Authority to ensure that the preferred procurement route continues to offer Value for Money.

Risk & Optimism Bias

An element of risk and optimism bias should be included in both the CPAM and the shadow bid model in the VfM assessment.

By maintaining a risk matrix the Procuring Authority can identify and quantify the risks to which the procurement is exposed. These risks can then be allocated to the party best placed to manage them, whether that be the private sector, public sector, or shared by both. The risk premium charged for transferring risks should also be included in the cost of risk to the public sector.

An Optimism Bias adjustment to cover all the risks that cannot be quantified should also be applied to both the CPAM and the shadow bid model. Such an adjustment compensates for

the overstatement of benefits and understatement of costs typically found in the procurement of large projects.

At the outset of a procurement it is expected that Optimism Bias will account for most of the risk attributed to the project. As the procurement progresses, detailed risk analysis is performed and the level of confidence in the capital / time assessments increases, thereby allowing some risks to transfer from the unquantified Optimism Bias category to quantified risk.

The quantified risk retained by the public sector will invariably differ across procurement options. The Procuring Authority is likely to retain more risk under a conventional procurement than under a privately financed option such as an NPD. Under an NPD solution significant risk will be passed to the private sector and therefore the cost of mitigation and the risk premium will be incorporated into the shadow bid model costs.

Sensitivity Analysis

Sensitivity analysis should be performed to determine the effect on Value for Money if the assumptions made are incorrect. It should be used to determine the tolerance of the preferred procurement option to cost shocks and increases in risk before the Value for Money differential is eroded.

Interpretation of Results

One of the key aspects of the approach to assessing VfM is the need to ensure that the quantitative VfM analysis is not considered in isolation – qualitative assessment, wider VfM factors and evidence based examples are central to decision making. It will be necessary to take account of previous delivery and experience of privately financed projects when Procuring Authorities are promoting the future procurement of infrastructure assets.

In respect of the **overall VfM judgement** the following should be noted

- **Marginal Results:** Where the difference in the assessments of the conventional option and the privately financed option are marginal (small positive for or against) the outcome should not be interpreted as sufficient evidence for or against the use of private finance as a procurement route. In such cases more weight should be given to the qualitative rather than the quantitative assessment.
- **Uncertainty and sensitivity analysis:** Where there is a high level of uncertainty around inputs, or outputs are highly sensitive to the input variables, it is appropriate

to place greater weight on the qualitative assessment or to invest more time and money in establishing higher confidence in the most critical assumptions. Procuring Authorities should in any event undertake appropriate sensitivity analysis.

3. The Quantitative VfM Process

This guidance requires that VfM is quantitatively assessed by comparing a risk adjusted CPAM against a shadow bid financial model. This section describes the quantitative work streams throughout the various stages of the VfM process.

Stage 1: Programme Level Investment Quantitative Review

When undertaking the Programme Level Assessment, **a representative project (or projects) should be selected for the purposes of high level quantitative modeling** so supportable conclusions across the whole programme can be drawn. If an investment programme encompasses elements with significantly differing characteristics, then examples from each different class of project will need to be considered. This assessment is normally undertaken at SG or directorate level before the development of the business case.

For the quantitative VfM assessment appropriate technical support and advice should be sought to estimate applicable capital, lifecycle and revenue costs of a capital investment or capital investment programme. In addition benefits, risks (including Optimism Bias) and relevant transaction costs should be assessed. These inputs are factored into the CPAM and shadow bid models and the results of these models are compared either on an individual project or a programme basis.

For this assessment, all input assumptions should be based upon evidence from past experience and projections. Where there is limited evidence or in the case of Pathfinder Projects, public sector bodies should consult with the Scottish Futures Trust (NHS Scotland Bodies should consult with the Private Finance and Capital Unit) directly.

The quantitative assessment at the investment programme stage will inevitably be conducted using only high-level estimates supported by appropriate evidence and should be used only as an indicator of whether there is potential to achieve VfM through the use of private finance. Other quantitative data that should be considered on a programme basis include:

- Economies of scale and efficiency gains across a programme;
- Programme set up and transaction costs of public and private sector participants relevant to financial / non financial benefits of the programme;
- Continuous improvement and related cost savings; and
- Transfer of risk through standardised contracts.

All quantitative assessment should be undertaken at a consistent evaluation point which will be the forecast projected “financial close” date. This will be more applicable for Stage 2 and Stage 3. The Procuring Authority should note that innovation is difficult to model at the investment programme stage – until the market has proposed innovative solutions, their costs and benefits are unknown. However, this is not designed to prevent Authorities from procuring large and / or unique projects. The ideal at Stage 1 is to uncover the scope and potential value of innovation.

At this initial stage a shadow bid affordability model would produce outputs which should be used to assess the VfM between an indicative private finance / NPD option and conventional procurement (either applying the models individually to a Project or as part of a Programme).

The following section discusses the contents of the quantitative models while further details on the application of Optimism Bias and Risk in respect of the quantitative assessment are detailed at Section 6 and Annex B.

Results of the Stage 1 Quantitative Analysis

At the completion of Stage 1, the results of the qualitative and quantitative assessments will need to be combined to identify which procurement approach may be suitable to deliver a programme of capital investment. This should provide justification for the preferred procurement route, on an individual project or programme basis, and recognise any limitations of the component parts of the assessment.

It should be noted that the quantitative assessment must be viewed in light of the results of the qualitative assessment. Care must be taken in evaluating the relative weighting of the qualitative and quantitative assessments. Where possible, reference should be made to previous experience and evidence bases.

Guidance on the qualitative VfM requirements is contained in the remainder of this document.

Stage 2: Project Level Quantitative Assessment

At Stage 2, the quantitative evaluation should be updated to reflect the specific project and cost environment. The project level assessment covers the period from business case development and approval to advertising the project.

This should be completed in accordance with the Green Book (and SCIM guidance for health projects). It should be collated and reviewed by the Procuring Authority. The variables should be verified by appropriate technical support.

It is desirable that the quantitative VfM assessment of different procurement options is undertaken at a consistent evaluation point, for example typically the forecast projected “contract award” date as the base date. This base date evaluation can continue to be a reference point at Stage 2 and Stage 3 even when the actual contract award date is moved. In assessing VfM at different procurement stages and at different base dates, there is no requirement to undertake and report reconciliations of movements in VfM. Rather, VfM will be assessed between procurement options at a consistent point in time and over an equivalent appraisal period.

As with the Stage 1 discussed above, the quantitative assessment relies upon a sound evidence base, wherever possible built up from past procurement experience in relation to both conventional procurement (e.g. Design & Build contracts, traditional Management Contracts etc) and non conventional (e.g. NPD, JVs).

Where applicable (for projects assessed at the Programme Level), the shadow bid model inputs from Stage 1 will be refined to reflect any project specific changes from the previous review at the Programme Level Stage. Given the high level nature of the Stage 1 assessment, complete new quantitative information may be required for bespoke project appraisal and any assumptions carried forward should be tested. The Procuring Authority should try to understand the drivers behind any significant change in cost estimates between stages 1 and 2.

Sensitivity Analysis

A range of sensitivities should be tested in respect of different input and economic assumptions to assess their impact on VfM. These should identify the key variables which will impact upon VfM and the pivotal points where changes in assumptions alter the overall

VfM outcome. In circumstances where conventional funding (e.g. via prudential regime) are part of a potential privately financed solution, the quantitative assessment models used should adopt the same assumptions.

Risk Analysis

Procuring Authorities will need to develop and implement thorough project-specific risk management and risk analysis procedures. In examining projects Audit Scotland and other auditors may wish to examine project appraisals. They might reasonably criticise public bodies that have placed undue reliance on subjective or poorly researched assessments of Optimism Bias and risk as the basis for selecting private finance as the procurement route, or accepting an NPD contract as offering VfM. Authorities will need to ensure that there is effective risk analysis with good evidence to support any adjustments to costings within the VfM assessments.

Conclusions drawn from the quantitative VfM analysis must be based upon detailed sensitivity analysis as point estimates of conventional procurement and non conventional procurement (CPAM / NPD) costs should not be considered in isolation. Likewise, there may be some limitations in some of the qualitative / quantitative assessments that need to be recognised (for example at this Stage, only limited account can be taken of innovation).

Therefore at Stage 2, adjustment to risk quantification and Optimism Bias figures should only reflect evidence based on past experience. **In Scotland it is recommended that a bespoke risk workshop is held at this stage to facilitate the pricing of Risk and Optimism Bias.** Refer to Section 5 and Annex B. Health projects should also refer to SCIM guidance at: <http://www.pfcu.scot.nhs.uk/>

Results of the Stage 2 Quantitative Analysis

The quantitative assessments, sensitivity testing and the qualitative analysis will confirm the deliverability of the preferred project scope and procurement route. The quantitative VfM factor is likely to differ by sector.

The qualitative assessment should help the Authority to gauge the level of confidence that can be placed on the quantitative assessment, for example if the qualitative assessment identifies gaps in programme information the Authority may wish to place less reliance on the results of quantitative analysis until this has been addressed.

Procuring Authorities must calculate and confirm their own affordability envelope and compare this with the results of the quantitative analysis. If a project is deemed unaffordable, it should not be pursued.

If Stage 2 analysis shows that privately financed or NPD procurement route no longer represents VfM, the reasons should be reviewed as well as the appropriateness of the procurement route. This may involve re-examination of the project, its scope and allocation of risk. Assessors should consider the following:-

- identify why and whether the issue is specific to the proposed procurement route or to procurement of the project in general;
- consider the case for a delay to the start of the procurement, if this can address the concern;
- review the scope of the project and determine whether there is a better way to deliver the business requirement (e.g. rebuild versus refurbish); and
- reconsider the procurement route and the possibility of switching to other forms of procurement.

When considering the VfM assessment, **Procuring Authorities must accord proper weight to the respective parts of VfM analysis - qualitative and quantitative.** Providing that the indicative VfM is positive and is based on a balance of combined qualitative and quantitative VfM elements, the project can proceed - there is no necessity to prove quantitative VfM above a particular percentage. The weighting between the qualitative and quantitative elements is a key consideration and should refer to previous evidence bases and qualitative and quantitative assessments.

Stage 3: Procurement Level Quantitative Assessment

In Scotland within procurement (post OBC) it is a requirement that Procuring Authorities demonstrate and review the VfM of privately financed / NPD bids against public sector procurement on both a **qualitative and quantitative basis**. They should therefore:

- continue to confirm that the Project in procurement is Viable, Desirable and Achievable as required by the qualitative guidance;
- Update the CPAM, forecasting relevant input costs, and assessing the timing, specification and risk allocation as priced by the bidder but assuming delivery by conventional means;

- the shadow bid model should also be updated as a VfM comparison against actual bids (to ensure the bids reflect current market conditions and structures etc); and
- where applicable market information regarding other private finance / NPD outturns should be used to compare and assist with VfM calculations and benchmarks.

At Stage 3, the CPAM will be inclusive of Risk, Tax Adjustment and Optimism Bias. During procurement (for example Preferred Bidder selection), the NPV of the CPAM can be compared to the NPV of the shadow bid unitary payment profile over an equivalent appraisal period to provide a procurement VfM test. It is expected that the outcome of this test is positive VfM. The shadow bid model will be used to facilitate bid evaluation and to enable suitable audit trail and investment approval sign off at Preferred Bidder selection, FBC and Financial Close stages. Note, like all quantitative assessment, this should not be viewed in isolation. **After taking account of supporting qualitative factors, should this assessment suggest that the bids do not offer VfM, then the NPD procurement process should be halted and further analysis undertaken.** The Procuring Authority should assess the underlying reasons for the shift in VfM and should consider alternative options which address these issues, such as rescoping the project and putting it to the market at a later date, or procuring conventionally (in this circumstance if conventional procurement offered better VfM than the NPD). The Procuring Authority and its advisers should consider the financial and wider implications of the alternative options put forward at this stage. It is important that the assessment be as realistic as possible and not simply a theoretical exercise. The full consequences of rescoping the project or changing procurement route should be considered, taking into account factors such as:

- Impact on timetable;
- Impact of delay on cost;
- Sunk costs already invested;
- The ability to maintain market confidence; and
- Availability of alternative sources of finance

Procuring Authorities, Agencies and Directorates must consult with the SFT, SGHD Private Finance and Capital Unit as appropriate when making these decisions.

4. Quantitative Models

This section describes the contents of the CPAM and the shadow bid model and discusses some of the wider VfM issues to be considered in making a comparison.

Contents of the CPAM

When compiling the CPAM all cost estimates should reflect the full resource costs of the project under conventional procurement and must be able to fully deliver to the intended output specification. The CPAM should reflect the same specification and timing which as the shadow bid model, while it is possible that cost bases may differ under different procurement options, the output delivered by the options should be the same. The CPAM should be updated during procurement for changes in timetable and specification to ensure that the comparison remains valid.

The key priority is that the analysis should be comparable, and as such should account for the opportunity cost or any assets already owned as well as any residual value accruing to the public sector under the option.

All costs and assumptions must be explicitly signed off by the procuring authority and should reflect empirical evidence and current market conditions.

Basic Capital Costs

Capital Cost Inputs in the CPAM will include:

- Basic cost of capital assets, such as buildings, required for the project, including any fit-out costs required to convert an existing property to the required use. Enabling, works and decanting costs may be included to the extent that the private sector partner will be required to undertake these
- Full lifecycle costs of maintaining the assets in the condition required to deliver the output specification over the agreed concession period, including the costs of meeting hand back requirements
- Specific RPI / indexation on the above
- Specific risk uplifts and Optimism Bias (see section 5)
- Any capital receipts or capital contributions if included directly in a project will offset these amounts. In these circumstances, refer to separate guidance at:

<http://www.scotland.gov.uk/Topics/Government/Finance/18232/capinject>

Other Costs

- Professional and Adviser fees, including internal design development costs and other such costs which would normally be capitalised
- Procurement administration costs
- Training and commissioning costs
- Centrally purchased supplies
- Opportunity costs (see below)

Cost estimates should reflect the full resource costs of the project. In particular, they should include the opportunity cost of any assets already owned by the client and which are to be used in the project. If the asset could be sold or used for another purpose, then the use of that asset in the project has an opportunity cost.

All assumptions and sources of information should be listed, in particular in relation to the costing and timing of expenditure. If there is any doubt regarding the availability of public capital, in addition to considering other public sector sources of capital, sensitivity analysis should be undertaken to quantify the effect of delayed construction work or more likely, a longer construction programme due to lack of capital availability.

Assumptions about the start, completion and if applicable, the phasing of construction works should reflect what could be realistic to expect in the public sector and will not necessarily correspond to the bidders' proposals.

Assumptions around capital cost inflation should be explicitly stated. It is usual that construction costs will fluctuate and, where they are inflationary, they have in the past sometimes risen faster than official government measures such as PRI and CPI. Advice should be sought from technical advisers to ascertain the real rate of growth in these costs. Also assumptions regarding the capital cost base dates should be made clear and the costs involved in the analysis should be adjusted as necessary to ensure they are comparable on a like for like basis.

Basic Operating Costs

This section should include estimates of the costs of the public sector providing the services specified in the procurement, over the concession period to the specification being tendered. The exact nature of the costs will vary according to the service element; hence a universal checklist would be impractical. Items which must be covered here include:

- Full staff costs, including accruing pension liabilities and any expected redundancy costs
- Raw materials and consumables
- Repairs and maintenance (where these items have not been capitalised)
- Administration and management overheads associated with managing the project and operating the asset over the lifetime of the project.
- Insurance premiums or equivalent
- Specific risk uplifts and Optimism Bias (see section 5)

As a private finance / NPD procurement normally involves a long term contract, the effect of inflation on operating costs during the contract may be significant. The costs included in the CPAM should be expressed in a way that is readily comparable with the shadow bid model, therefore costs should be expressed in a consistent manner (i.e. adjusted for inflation) and the base dates for the NPV calculation should be the same. Whilst often the prescribed long term inflation rate will be applied, allowance should be made for expected changes in relative or real prices of certain cost inputs, i.e. where the price of particular input is expected to rise faster than the average price level.

Where applicable, the cost bases will reflect third party income and related costs if these would be applicable to Conventional Procurement.

Cost of Finance

The CPAM should reflect a deliverable public sector procurement route and as such should be based on realistic assumptions around capital funding availability. **Where public funds are available within existing budgets to allow the construction of the project, no additional finance costs need be included. However where this is not the case, the cost of sourcing alternative capital, e.g. through PWLB borrowing, should be taken into account.**

Financing costs in the CPAM will include, as applicable:

- Public Works Loan Board finance costs incurred directly related to a project where applicable, (which can be factored in via the discount rate);
- Any other finance costs associated with sources of capital available to the Procuring Authority.

The inclusion of these costs is appropriate when they reflect the ultimate cash flow consequences of the Procuring Authority, even if some costs are non cash in nature. By including these costs, a more like for like comparison is achieved and the true cost of public sector procurement is identified.

Tax Adjustment

Where the difference in tax treatment between options are material, they must be stripped out to ensure a like-for-like comparison of resource costs.

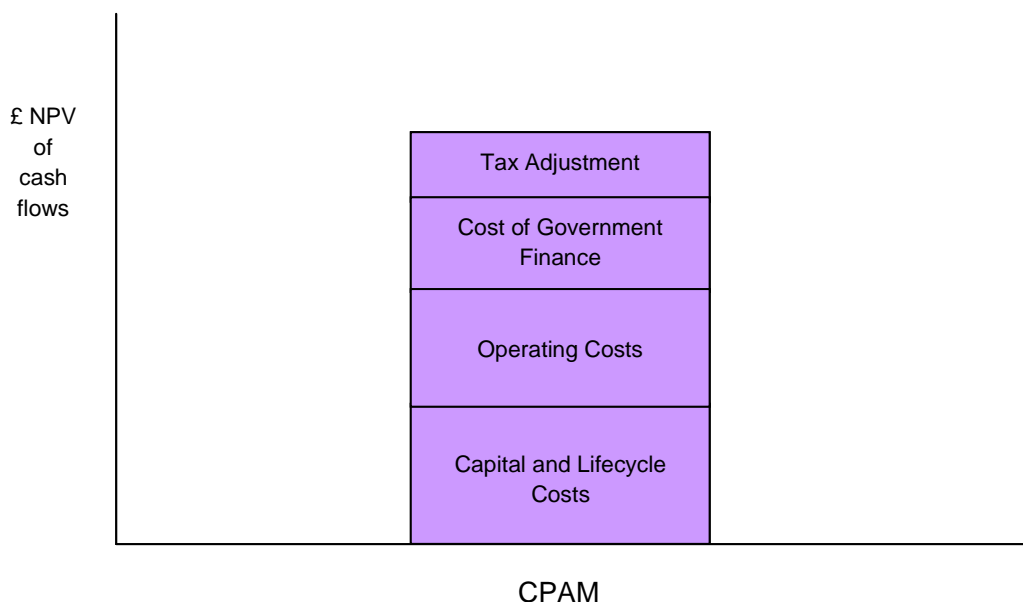
HMT Green Book guidance provides information on the approach which should be taken to develop the necessary adjustments.

The main objective of the guidance is to:

- Estimate the difference in tax liabilities between the CPAM and the private finance / DBFO (via NPD) procurement route for the same project; and therefore to
- Provide a better estimate of the net present cost of the CPAM.

The Procuring Authority should use the HM Treasury Green Book Guidance to determine the percentage adjustment to be made to the net present cost of the CPAM. Further details regarding the application of this guidance are available online.

Figure 3: CPAM step 1: quantify project costs



Contents of the Shadow Bid Model

The shadow bid model will typically be developed by Procuring Authorities in conjunction with their appointed financial advisers to inform both the VfM and affordability assessments. The shadow bid model will produce an indicative unitary charge. This unitary charge will be used as a proxy of the expected annual cost of the NPD project. The discounted unitary charge over the life of the project will be compared to the discounted cost of the CPAM to provide an indication of the VfM implications of the project. Both models will use the discount rate specified within the HMT Green Book (health projects should refer to SCIM guidance at <http://www.pfcu.scot.nhs.uk/>)

The costs in the shadow bid model will:

- Include input costs for capital, lifecycle and FM costs. These may reflect the costs included within the CPAM but adjusted to reflect likely private sector delivery outcomes, any efficiencies and the likely private sector view of risk and return.
- reflect market based financing and taxation assumptions as well as encompass bid development and delivery costs, management & insurance overheads and private sector returns. Procuring Authorities who wish to benchmark financing assumptions against previous NPD projects should contact the SFT to discuss banked rates and interest rate buffers in commercial confidence.

- an element of risk quantification and Optimism Bias would be applied to the shadow bid, especially at the earlier stages of project development (particularly if CPAM costs are included within it). See section 5 for further information.

The inputs of the NPD shadow bid model should not seek to forecast refinancing gains. It is not essential that NPD bids are refinancable and given the lack of certainty around the timing and amounts involved in refinancing it is not appropriate to evaluate this issue in quantitative terms for affordability or VfM assessments (unlike the evaluation of surpluses as discussed later). If the ability to refinance is a key consideration for the Procuring Authority it should be evaluated in qualitative terms only.

At Stage 3 Procurement Level, the inputs to the shadow bid model can be used to benchmark and evaluate the actual bid submissions (e.g. financing approach, private sector returns etc).

NPD Surpluses

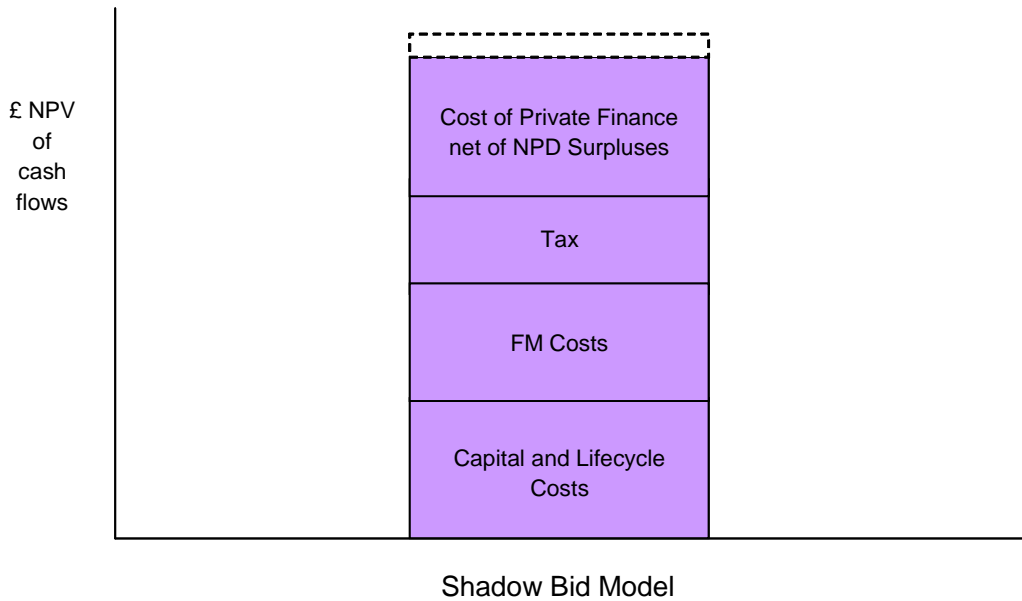
Under a NPD structure, surpluses are distributed for the benefit of the public sector or wider community. Where surpluses are available for distribution within the shadow bid model, this cash flow should be taken into account in carrying out the Value for Money assessment. The cash flow from surpluses should be risk-adjusted to reflect the likelihood that it will occur and discounted back using the discount rate specified within the Treasury's Green Book, consistent with the Unitary Charge cash flow. Further information on the NPD structure is available online at:

<http://www.scotland.gov.uk/Topics/Government/Finance/18232/NPDExpNote>

Where the Value for Money margin of an NPD procurement relies on the receipt of the surpluses defined in the shadow bid model, the Procuring Authority should ensure that the Project will also deliver Value for Money on qualitative grounds in accordance with the VfM guidance.

The preference of the Procuring Authority for receiving a defined level of surpluses should be considered alongside the efficiency of generating the level of surpluses required. If the level of surplus required from the NPD model is artificially high, the Unitary Charge will increase to reflect this and the model is likely to become inefficient.

Figure 4: Shadow bid model step 1: quantify project costs



General Points to Note

When utilising bespoke models there is no requirement to reconcile different VfM quantitative outturns between Stages 1, 2 and 3.

In circumstances where public funding (for example, via the prudential regime) is part of a potential NPD solution, the quantitative assessment models utilised to test VfM of an NPD funding solution and Conventional Procurement should reflect the applicable terms of the public funding.

The assumptions included in both the CPAM and the shadow bid model should be based on the current market rates within the relevant sector, incorporating project specific adjustments if necessary. Further information on banked rates can be obtained from SFT.

Other areas to consider

Residual asset values

Residual asset values and where applicable receipts must be treated consistently across both the CPAM and the shadow bid model.

Expiry of the Contract

If, at the conclusion of a NPD contract, the public sector retains or accepts the asset or pays an agreed consideration (e.g. open market value), then the public sector is left with an asset

with a remaining useful economic life. The treatment envisaged in the contract, and therefore reflected in the shadow bid affordability model, should also be reflected in the CPAM adjusted for public sector management of this transfer.

In practice, there is unlikely to be a material difference between the treatment in the Shadow Bid and the CPAM and it is usually legitimate to exclude the residual value on the grounds that it will not affect the comparison. The key point is to achieve consistency of approach, i.e. include or exclude the deduction in both calculations. However, it is best practice to include the figures as this demonstrates that the matter has been addressed.

Wider VfM factors

Procuring Authorities should take account of any differentials in the benefits or risks arising from alternative procurement options, for example in terms of the timing of or the quality of service delivered (see Annex C). Specialist assistance maybe required here. Where the relevant risks and benefits of different procurement strategies are noted, reference should be made to the Scottish Government Construction Procurement Manual that refers to alternative procurement options.

5. Discounted Cash Flow

The discounting process is central to the quantitative VfM analysis. It evaluates the cashflows including the effect of any risk adjustments, generated by the procurement, and calculates the overall Net Present Value (“NPV”) of the project.

The effect of discounting is to bring a variety of different values and ranges of future cash flows back to today’s values so that they can be compared. That is, to produce the NPV of a stream of future cash flows. In the case of the CPAM the NPV is a net cost figure, i.e. all of the costs of the project to the client less the receipts associated with the project. Discounting is particularly important because the cash flow profiles of the CPAM and the private finance / NPD option are very different. An example of a discounted cash flow and NPV calculation is provided at Annex A.

It is important that the discounting assumptions used are consistent to facilitate a valid comparison of NPVs across options. As such, annual cash flows should be assumed to arise mid-period.

The recommended discount rate, in accordance with the HMT Green Book, section 5 “Appraising the Options” is currently 3.5% (real) for the first 30 years of the appraisal period

and 3.0% for years 31 – 60. Calculating the present value of the differences between the streams of costs and if applicable benefits provides the net present value (NPV) of an option. If necessary, the effect of expected future inflation in the general price level should be removed by deflating future cash flows by forecast levels of the relevant deflator. Over a long-term period, the Bank of England's annual inflation target is the appropriate measure of prices to use as a general deflator.

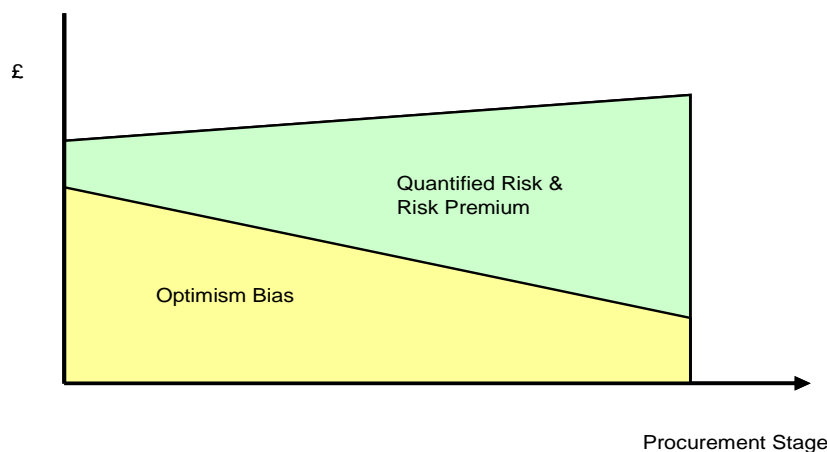
6. Risk and Optimism Bias

The cost of procuring an infrastructure project cannot be calculated with certainty during the procurement process, as such risk should be considered and analysed to provide realistic estimates for both the CPAM and the shadow bid model. There are three types of risk to be considered:

- Quantified Risk – risks which can be identified and valued;
- Risk Premium – the cost associated with transferring risk to the private sector; and
- Optimism Bias – covers all risks that cannot be quantified.

All project risks should be captured by the risk management process in place and considered under one of these headings. At the outset of a procurement it is expected that Optimism Bias will account for most of the risk attributed to the project. As the procurement progresses, detailed risk analysis is performed and the level of confidence in the capital / time assessments increases, thereby allowing some risks to transfer from the unquantified Optimism Bias category to Quantified Risk.

Figure 5: Development of risk analysis



The following section describes how these three categories of risk should be identified through a robust risk management process and incorporated into the quantitative value for money assessment.

Quantified Risk

Quantified risks are those which can be identified and valued at any one time. As explained above, this is an iterative process whereby the amount of quantified risk will increase throughout the procurement process.

The Risk Matrix is a useful management tool in the identification and quantification of project risk. This is described in detail in the following section.

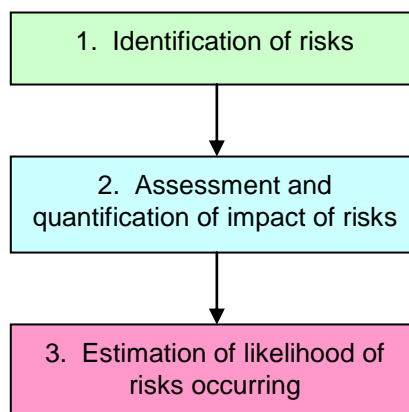
Quantified risk should be incorporated into both the CPAM and the shadow bid model for evaluation purposes. The amount included in these models will vary depending on the amount of risk retained by the public sector and the amount transferred to the private sector. A risk allocation exercise should be undertaken to assess which party is best able to manage quantified risk and to determine which risks each model should incorporate. This process is discussed further later in this section.

Risk Matrix

The construction of a risk matrix is a fundamental part of the procurement process and is key to quantifying risk.

The construction of the risk matrix usually comprises the following broad steps:

Figure 6: Risk Matrix Development



1. Identification of risks

The first step is to compile a list of all the risks that may be relevant to the project. This will provide a means for monitoring the evaluation and allocation of risk throughout the procurement exercise and will eventually build up into the risk matrix.

The development of the risk register is an iterative process and must be revisited throughout the project.

The risk register must be as comprehensive as possible. For large projects, this process is likely to be a complex exercise as the number of separate risks and the scope of inter-relationships involved may be substantial. Workshop sessions incorporating both public and private sector experience will help to achieve a comprehensive coverage of all risk areas.

2. Assessment and quantification of impact of risks

Having identified all of the relevant risks to be included in the risk matrix, it is necessary to quantify and assess the timing of the possible consequences.

The best approach is to use empirical evidence whenever it is available, when it is not, commonsense approximations should be used.

Quantifying the impact of project risks can be made easier by banding the risks together into a smaller number of categories according to their impact. According to the HMT Orange Book Guidance on the Management of Risk, a categorisation of high / medium / low may be sufficient. Alternatively a more detailed analytical scale such as “insignificant / minor / moderate / major / catastrophic” may be preferable. The amount of time and resources that are devoted to quantifying risks should relate to their likely materiality.

Even when it appears that costing a risk is impossible at first, it should be listed in the matrix, to be revisited and refined when information becomes available. Risks should not be ignored.

When assessing the consequences of any risk, thinking should not be restricted to the direct effects. Consideration should be given to the wider knock-on effects, particularly when the

event causes delay and is on the critical path. This requires care as there will be interaction between different risk events.

The ultimate objective is to be able to add up the consequences of all risk elements to obtain the net present value of the risk adjusted costs and benefits of the project. It is important to make a sensible assessment of when the consequence of each risk will arise as this will affect the NPV of that consequence.

Care must be taken to avoid double counting the same risk, e.g. incorrectly counting the cost of insurance products available to cover a particular risk (whether taken up or not) as well as counting the impact of the risk covered by such insurance.

3. Estimation of likelihood of risks occurring

A key practical issue is how to arrive at the relevant probabilities, in a manner that is reasonable, consistent and transparent. Out-turn costs from previous similar procurements (and comparisons with original estimates) is an ideal source of information, if available. Otherwise, predictions should be based on experience of past events together with any foreseeable changes or developments which would deliver improvement.

Estimating probabilities will inevitably require the use of assumptions – it is important to ensure that such assumptions are reasonable and fully documented, as they may be open to challenge later on in the procurement process.

The Treasury Orange Book Guidance on the Management of Risks also provides examples of the categorisation of the likelihood of risk realisation. A simple categorisation of high / medium / low may be sufficient, otherwise a more detailed scale such as “rare / unlikely / possible / likely / almost certain” may be more appropriate. There is no absolute standard for the scale of the risk matrix – the Authority should make a judgement about the level of analysis that it finds most practical for its circumstances. The probability of the risk occurring is multiplied by the quantification of the impact to give the expected value of the risk.

Table 1 below shows how probabilities can be used to derive the expected value for the cost of a risk.

Table 1: Likelihood of Risks and Expected Costs

Probability of risk event occurring			Outcome £m		Total £m
High	0.8	*	10	=	8.0
Low	0.2	*	48	=	9.6
Expected Cost					17.6

The objective is to follow reasonable procedures at all times, to be as systematic as possible and to record the decision making process to facilitate subsequent audit.

Insurance

Insurance can help cost and allocate risk.

Much of the public sector historically does not use commercial insurers, rather they self insure. This is because commercial insurance would not provide value for money for the government because the size and range of its business is so large that it does not need to spread its risk, while the value of claims is unlikely to exceed its premium payments.

The CPAM should include an estimate of the value of each uninsured risk, taking into account the likelihood of such costs arising. Where the government does use commercial insurance, the cost of premiums should be included in the CPAM analysis but care should be taken not to double count the risk insured.

Allocation of Risks

Comprehensive risk analysis allows the Procuring Authority to consider whether responsibility for the financial consequences of any of the risks should be allocated to the private sector. The objective is to obtain an optimal balance by transferring risk, whenever the benefit to the Procuring Authority is greater than the cost of transfer. It is only following detailed negotiations between parties that the final balance is achieved.

Initially, all relevant and material risks should be identified and assigned to the CPAM, as all of these risks will be held by the public sector client under a conventional procurement. However, the procurement process, whether as a NPD, design & build or a hybrid model, will seek to transfer some of these risks and as such the risk profile for the Procuring Authority

will differ under a conventional procurement and a NPD procurement scenario. While a large proportion of risks are retained by the public sector in a conventional procurement model, the purpose of an NPD procurement is to achieve an optimal level of risk transfer to the private sector. Therefore it is useful to distinguish between:

- Risks which are transferrable from the public sector to the supplier (e.g. design risk)
- Risks which are retainable in the public sector (e.g. policy risk)
- Risks which are shared by both parties by contractual agreement.

By distinguishing between these risks for each procurement route option, the Procuring Authority can quantify the amounts to be incorporated into the CPAM and the alternative options in respect of quantified risk.

Risk transfer is likely to be the subject of much negotiation and therefore the preliminary allocation may differ from the final negotiated position. Therefore it is important to revisit the risk assessment and its impact on the quantitative value for money assessment throughout the procurement process.

Risk Premium

A risk premium will be included in the cost of risk transferred to private sector, effectively representing the value of the risk to the contractor.

Risks should be transferred when the cost of transfer is lower than the cost of the Procuring Authority retaining and mitigating the risk.

Cost of risk transfer includes the one-off cost of specifying the risk to a level suitable for inclusion in a legal contract.

Optimism Bias

Optimism Bias is the demonstrated systematic tendency for appraisers to be over-optimistic about key project parameters – appraisers tend to over-state benefits and understate timings and costs. The HMT Green Book recommends that a quantitative adjustment is applied to project costs to compensate for this tendency. Optimism Bias effectively represents all risks which cannot be quantified and should reduce as costs become more certain and risks are identified and quantified.

The application of Optimism Bias throughout the procurement process allows the Procuring Authority to make a more reliable estimate of the total cost of the project. As such, it is anticipated that the overall cost level (including risk and Optimism Bias) will not increase materially throughout the procurement.

Adjustments should be made to both capital and operational costs to compensate for such bias. This will have the effect of increasing cost estimates and decreasing and delaying the receipt of benefits.

Adjustments should be based on empirical evidence from past similar projects, taking project specific factors into account.

The HMT Green Book provides recommended adjustment ranges for various project types and detailed guidance on the application of these adjustments. This guidance can be found both in the main body of the Green Book and at:

http://www.hm-treasury.gov.uk/media/D/B/GreenBook_optimism_bias.pdf

Annex B of this guidance note provides a summary of the Green Book Optimism Bias section. Please note, NHS organisations should apply SCIM guidance and templates at:

<http://www.pfcu.scot.nhs.uk/>

Incorporating Risk into the Quantitative Value for Money Assessment

It is appropriate to add in an element of risk and Optimism Bias to both the CPAM and privately financed options.

Quantified Risk and Risk Premium

The Procuring Authority is likely to retain more risk under a conventional procurement than under a privately financed option such as an NPD. The risks retained by the Procuring Authority under the conventional procurement option should be assessed by reference to the likely cash flows estimated to occur (per example in Table 1). By making informed assumptions about the timing of these risk events, the estimated resulting cash flows can be discounted on the same basis as the other costs (as illustrated in Annex A) and included in the calculation of the total CPAM.

Under an NPD solution significant risk will be passed to the private sector and therefore the cost of mitigation and the risk premium will be incorporated into the shadow bid model costs. It is likely that the shadow bid model cost inputs provided by advisers will be appropriately

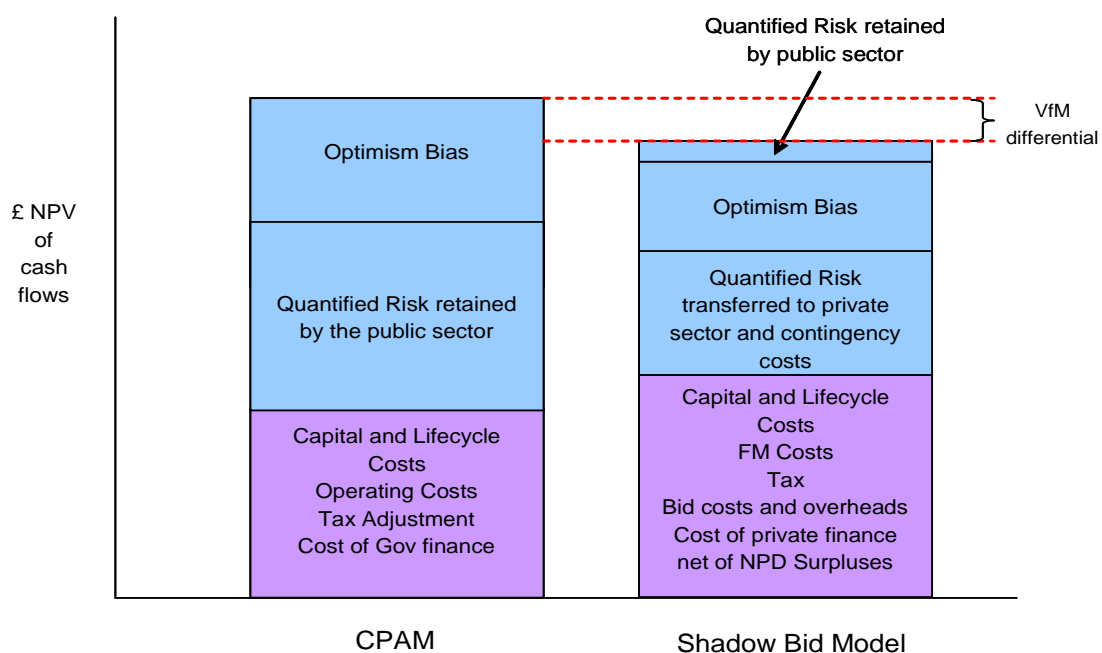
risk adjusted by including insurance costs, appropriate adjustments to cost inputs and the pricing of debt to reflect the cost of risk transferred to the private sector.

Details of project delivery risk and the project risks retained by the public sector under the preferred route should be formally reported to the Project Board to confirm the acceptability of the exposure to the public sector.

Optimism Bias

Quantitative assessments throughout the procurement of the project will often use similar capital costs for both the CPAM and the NPD assessment. Since the key area which Optimism Bias assessed (the systematic tendency of evaluators to underestimate time and costs and overstate benefits) will affect both investment routes if similar cost inputs are used. It is generally expected that at the Stage 3 Procurement Level assessment, Optimism Bias will be higher for the CPAM option. However, it is recognised that contractual arrangements can be put in place under conventional procurement that provides NPD type protections to mitigate some time and cost overruns (e.g. Design and Build contracts). However, generally Procurement Level Optimism Bias should be significantly greater for the Conventionally Procured option due to the contractual structure of the NPD.

Figure 7: CPAM and shadow bid model step 2: Incorporation of risk and Optimism Bias into quantitative assessment



Retained Risks and Risk Mitigation

Even after risks have been identified, costed, examined for sensitivity and significance, and allocated to one or other party, Authorities still cannot ignore the issue of risk. They must manage retained risks to ensure that they are minimised and mitigated. This is an important part of the process of minimising procurement costs.

Many procurement risks have traditionally been borne by the public sector with the intention that they should be minimised through the development of a risk management strategy. However, even without NPD, some risks may be transferred by, for example, using an exemption clause on a contract, or by taking out insurance. Remaining risks should be monitored and minimised through the lifetime of the risk, generally that of the project or its particular phases (e.g., construction).

Risk mitigation involves taking actions which control risks in practice. Mitigation can control either or both impact and likelihood. Note that some mitigation practices can produce new risks, or can affect others, and can be costly. Generally, obtaining information and therefore reducing uncertainty is an important means of lowering risk.

7. Sensitivity Analysis

Sensitivity analysis involves the consideration of the effect on the project's net present value if the assumptions made turn out to be incorrect.

Where practical (after the final bids have been received) the analysis should be used to identify the changes in assumptions which would result in bids exceeding the CPAM.

Another key objective of sensitivity analysis is to establish the relative degree of firmness that should be attached to the central estimate of the net present value that has been produced. (It is not the objective of sensitivity analysis to produce a forecast of how likely it is for the outturn to be within a certain range.)

There are a number of more sophisticated techniques which can be employed to carry out further assessment of the combined project risk, such as Monte Carlo Simulation. These techniques can be costly whether carried out by an Authority's own economists, accountants or statisticians or by external consultants. There must be good reason for undertaking sophisticated analysis – it will not be necessary for every project.

Annex A Discounted Cash Flow Example

The following table provides an example of a discounted cash flow forecast used to calculate a NPV. Note that The GEM model is available to assist NHS organisations performing these calculations.

Table 2: Discounted Cash Flow Example

Year	Project Year	Cashflow	Discount factor (3.5%)	Discounted cashflow
2008/09	0	1,000	$1/(1.035^{0})$ =1.000	1,000
2009/10	1	1,000	$1/(1.035^{1})$ = 0.9662	966
2010/11	2	1,000	$1/(1.035^{2})$ = 0.9335	934
2011/12	3	1,000	$1/(1.035^{3})$ = 0.9019	902
2012/13	4	1,000	$1/(1.035^{4})$ = 0.8714	871
2013/14	5	1,000	$1/(1.035^{5})$ =0.8420	842
2014/15	6	1,000	$1/(1.035^{6})$ =0.8135	814
2015/16	7	1,000	$1/(1.035^{7})$ = 0.7860	786
2016/17	8	1,000	$1/(1.035^{8})$ = 0.7594	759
2017/18	9	1,000	$1/(1.035^{9})$ = 0.7337	734
2018/19	10	(500)	$1/(1.035^{10})$ = 0.7089	(355)
Net Present Value				8,253

Annex B Optimism Bias and Risk

The HMT Green Book requires risk to be accounted for at all stages of project appraisal, and therefore this will be applicable at Stages 1 to 3 of the VfM guidance. This will be quantified generally in the form of an uplift for risk and or Optimism Bias. Optimism Bias and risk analysis are closely linked. A key concept is that risk analysis operates to eliminate the effect of Optimism Bias.

In accordance with the Green Book, where a full project risk analysis would not be feasible for the range of options being assessed at the various stages, an indicative adjustment for Optimism Bias should be used to account for the fact that the initial estimates of costs, timescales and benefits are likely to be over-optimistic.

In respect of capital costs and time overruns, Procuring Authorities may use their own historic evidence of how much outturn costs have diverged from initial estimates, or they may refer to the Optimism Bias paper provided as supplementary guidance to the Green Book or other relevant studies (e.g. Bent Flyvbjerg BDT study). The HMT guidance on Optimism Bias provides useful comparative data and also a framework for assessing a project's and procurement option's susceptibility to these risks. Any sector specific evidence or studies should be applied (e.g. recognised assessment models and OB parameters in Health, Transport etc). Objective data and evidence should, wherever possible, support adjustments to costings within VfM assessments.

For calculating capital cost and time overruns, the HMT Green Book framework first enables the project itself to be categorised into risky or less risky bands according to the type of construction involved. Secondly, the guidance provides a set of "contributory factors" to risk, each of which is weighted. By reviewing the project in the light of these, its susceptibility to risk can be further assessed. The data can then be adjusted according to the project's own inherent riskiness.

As well as capital related time and cost overruns elements, Optimism Bias should also be assessed in respect of shortfalls and increases in operating costs (including lifecycle costs).

In general "Optimism Bias" refers to the under-estimating of costs both pre and post FBC. However, whilst most elements of pre FBC Optimism Bias (eg., due to changes in scope or a

project) are likely to apply equally to all procurement options, post FBC Optimism Bias (e.g. due to unexpected construction cost overruns) will vary between procurement options. The concept of Optimism Bias has therefore been further developed in the HMT VfM Guidance and in the application of the HMT VfM model.

Application of Optimism Bias and risk to VfM Guidance

Over the period of the chosen procurement route, Optimism Bias adjustments should be reviewed. The reason for this is two fold:-

- as appraisers of projects are uncertain about the future, objectives, requirements and risks that cannot originally be envisaged are often ignored, and
- experience shows new objectives, requirements and risks emerge during the course of a project and therefore should be planned for.

Certainty will therefore be less at the Programme Level Stage as opposed to the Procurement Level Stage. Thus it is expected that over the course of a procurement Optimism Bias will be reduced to the extent that there is increasing confidence in the capital cost/time assessments and project-specific risk analysis has been undertaken relative to the type of procurement (NPD or Conventional) and the technical solution envisaged.

It is expected that conventional and NPD procurement are affected similarly in respect of changes to scope and service requirements, however, under NPD procurement it is expected that once awarded, uncertainties that remain inherent in a project will not impact on a Procuring Authority to the same extent and exposure as conventional procurement. The greater development of an NPD project and greater associated risk transfer at FBC stage will also provide more certainty of costing.

A key element in relation to the outcome of the VfM assessment between different procurement routes (for example NPD and non NPD) is how Optimism Bias is applied to the cost inputs of different options. The following general guidance should be applied:-

- it is appropriate to add in an element of OB and risk to both the CPAM and NPD options. The application of OB to the shadow bid enables a more realistic affordability test and VfM test at Stage 2 (and Stage 1 if applicable).

- the quantitative economic test at the Stage 2 Project Level Assessment will often use similar capital costs for both the CPAM and NPD assessment. Hence the key area that Optimism Bias is addressing (being the systematic tendency of evaluators to underestimate time and costs and overstate benefits) will affect both investment options if similar cost inputs are used. Note, in reality it is likely that the private sector would have different base costs given the perceived risk profile of an NPD, as opposed to the public sector pricing a publicly procured solution. Technical advisers should be consulted in respect of this. Adding an uplift for OB but mitigated as appropriate to the shadow bid affordability model (if one is being utilised) addresses this potential systematic tendency to under-price costs.
- the HMT spreadsheets differentiate between Optimism Bias Pre FBC (from OBC to FBC) and Optimism Bias Post FBC. These assessments look at actual costs vs. estimates at these stages for both CPAM and NPD procurement options. The Pre FBC Optimism Bias factor represents the increase in the estimated costs or shortfall in the income or benefits of a project between OBC and FBC. The post FBC Optimism Bias Factor represents the increase in addition costs or income shortfalls between the details provided in the FBC and the completion of the associated asset.
- it is generally expected that for the post FBC assessment, Optimism Bias will be higher for the non NPD option. However, it is recognised that contractual arrangements can be put in place under conventional procurement that provides NPD type protections to mitigate some time and cost overruns (e.g. Design and Build Contracts). However, generally Post FBC Optimism Bias should be significantly greater for the Conventionally Procured option due to the contractual structure of the NPD.
- Additionally, in order to ensure comparability, Optimism Bias post the construction phase of a conventionally procured scheme should also be assessed. This reflects that under traditional or conventional procurement as well as time and cost overruns, there may be additional costs which will not be the case under NPD (for example once the service or asset is in operation under NPD, costs of repair from design fault etc cannot be passed onto the public sector whereas often they will be under conventional procurement).
- the levels of Pre and Post FBC Optimism Bias Factors will invariably vary from sector to sector and from project to project. Going forward public sector bodies should retain

and share data bases. Guidance to Procuring Authorities will be produced in respect of this.

- in calculating OB under the Mott MacDonald study template (HMT Green Book), it is anticipated that the same classification of "building type" will be used for different investment options, but the NPD option will be significantly more mitigated because of the NPD commercial and contractual structure and procurement methodology that will be in place for that type of procurement
- Optimism Bias and any bespoke project risk uplift on the CPAM will typically reduce as the procurement develops (typically base costs of the CPAM would be adjusted as additional information becomes available). When allowing for this, it must be considered in the context that the CPAM will often be a hypothetical public sector solution
- generally in a CPAM, a cost premium should be added to operating and lifecycle expenditure to reflect Optimism Bias that is inherent in the Procuring Authority's estimate of costs incurred and / or service performance achieved. It is expected that these risks are priced in an NPD model or shadow bid model
- a unique or unusual project, (therefore not covered by the Optimism Bias guidance), should be adjusted for using data from the nearest equivalent project type.

For further details, refer from paragraph A55 of the HMT Quantitative Assessment User Guide.

Relationship with Risk Assessment

In assessing risk and Optimism Bias, it should be ensured that there are no elements of double counting (for example construction cost over-runs) from separate calculation of Optimism Bias and a full risk assessment. Under NPD procurement, once a full risk analysis has been carried out, and figures have been firmed up in the light of prices and completion dates committed to by bidders, there should be little or none of the Optimism Bias adjustment left. Any contingency element that is not part of base costings should be considered as part of the risk pricing.

The pricing of OB does not remove the requirement to undertake a bespoke project risk uplift when assessing VfM. The bespoke project risk uplift in the CPAM will assess certain unfavourable events happening and their cost, on a probability basis linked to the base value of the scheme (typically by an expected value approach). In addition, contingency allowances should be applied to cover any remaining unanticipated risks. By the time that bids have been received, generic assessments of Optimism Bias should be replaced by specific risk assessments in the CPAM at Stage 3. Note, it is acknowledged that in many cases the CPAM is a hypothetical project and therefore will not be developed to the same degree as the NPD. Given it will not be tested in the market, there will be little project-specific risk, therefore, a large element of OB may remain.

Utilising the HMT model and addressing pre and post FBC Optimism Bias may negate or remove the requirement to undertake a bottom up bespoke risk adjustment to the CPAM (via workshops and risk a pricing exercise etc) at Stages 1 and 2 if it is demonstrated that all relevant risks are assessed and priced within the Optimism Bias assessments. However, in Scotland it is recommended that as a minimum, Procuring Authorities should complete a risk analysis and risk pricing exercise. This methodology will be applied to develop the risk adjustment to the CPAM in Stage 3.

As well as risk pricing, Procuring Authorities must undertake an internal risk identification and risk management strategy on a project by project basis.

At all stages, Procuring Authorities should refer to previous evidence, previous procurements and risk workshops to support levels of Optimism Bias and risk.

VfM Assessment Stage	Risk Assessment Details	Comments
Programme Level	Optimism Bias uplift (use Green Book OB study or sector specific models) or other information to inform level	<p>If bespoke risk figures are available through historical evidence or via a risk workshop, reduce OB accordingly.</p> <p>Risk would be added to both NPD and conventional procurement methodologies (but different levels, mitigation etc)</p> <p>Pre FBC Optimism Bias added to NPD and Conventional procurement</p>

VfM Assessment Stage	Risk Assessment Details	Comments
		<p>assessments</p> <p>Post FBC Optimism Bias added to conventional procurement</p>
Project Level	<p>Run bespoke risk workshop / Optimism Bias assessment</p> <p>.</p>	<p>As above</p> <p>Contingency Allowances can cover any unanticipated risks</p> <p>Need to refine Optimism Bias up to the point of procurement to inform affordability estimates</p>
Procurement Level	<p>Use Optimism Bias studies, bespoke risk workshop outputs and any contingency elements noted by technical advisers</p> <p>Refine Optimism Bias against live bids</p> <p>Assess Optimism Bias impact post construction phase for each procurement method (it will be different under each methodology)</p>	<p>As above</p> <p>Differentiate between different levels of pre and post FBC Optimism Bias for NPD and Conventional procurement (taking into account contractual risk responsibilities)</p> <p>Reduce Optimism Bias as confidence in capitals costs etc increases – greater the development of the project, the greater the confidence in risk information</p> <p>Ensure no double counting of risk / Optimism Bias</p>

Annex C Wider VfM Factors and Valuation of Financial / Non Financial Benefits

In assessing the overall value for money of different procurement options, consideration should be given to the possibility that different procurement routes may lead to wider (non-financial) benefits and costs. If there is good evidence to suggest that different procurement routes would lead to differential benefits (or costs), then this should be taken into account in the VfM assessment.

Factors that should be considered are those that have a differential impact on NPD versus conventional procurement. These may include (although not in every case) factors such as the quality of the design, environmental considerations or innovations that can be adopted for wider use by the Authority (where there are not intellectual property right issues). These factors can have a significant impact on the quality of service delivery and should not be down played.

Quantitative Assessment

The quantitative assessment relies upon a sound evidence base, wherever possible built up from past procurement experience in relation both to NPD and conventional procurement routes. This evidence base needs to be continually refreshed by the incorporation of new information from projects at all stages of procurement and operation, particularly where there is a differential due to the procurement method. If the current evidence base is inadequate, then other information should be sought to justify the inputs into the model and steps taken to remedy this gap for future procurements.

Factors that are common in nature and economic effect to both procurement methods should be ignored.

If a value is imputed to any of these wider VfM factors, then that value must be explained and substantiated by the Procuring Authority. In all circumstances, a “base case” Conventional Procurement Assessment Model should be established which assumes like for like timing and equivalent specification and assumptions to that being delivered in the private sector bids. This will help to ensure that the impact of the assumptions about wider VfM factors is wholly transparent. Sensitivity testing of the assumptions about wider VfM factors should then be undertaken.

Qualitative Assessment

In practice, it may not be feasible to quantify and value all wider VfM factors in the assessment. In such circumstances it may be more transparent to describe these factors in qualitative terms.

Examples of Wider VfM factors

Wider VfM factors include externalities and non-market impacts. These result when a project produces benefits or costs, either to the Procuring Authority or to the public sector as a whole, that are not directly included in the price of that particular project. Externalities can be positive and negative in economic effect. Examples of project externalities might include:

- changes in operating practices achieved by involving the private sector in the delivery of services, which are then used as an exemplar to inform and influence operating practices where similar services are being provided under conventional arrangements;
- on the one hand, developing or, on the other hand, eroding specialist project and/or procurement management skills through over-reliance on one or other procurement methodologies;
- cultural barriers in an organisation being eroded by introducing a mixed economy of providers with different standards of corporate and individual behaviour.

Innovation can also be an important factor. Where, for example, the scope for innovation in the provision of the required service or project is judged by the Procuring Authority to be high, a case could be made for ascribing a value to innovation for the private finance / NPD Option. Although difficult to quantify, valuing innovation may be particularly relevant where:

- the asset and/or associated service modelled for the purposes of determining the CPAM Option is acknowledged to be based on practices that are conservative;
- good evidence exists that approaches to the delivery of an asset and/or service that differ to those assumed for the CPAM Option are in common use in related sectors, in other parts of the country or perhaps even, in other countries;

- the asset and/or associated service modelled for the purposes of determining the CPAM Option is subject to obvious physical or service constraints that would not be imposed in the same way on NPD partners (for example, where an NPD partner might be able to offer a significantly different balance between new and refurbished buildings to that in the CPAM Option).

Timing of delivery may also be a factor. In general, NPD deals take longer to negotiate than conventional procurement options. However, once procured evidence suggests that the construction phase of projects is quicker, and less subject to time overruns. If good evidence exists to support assumptions about the likely overall timing of projects, then this may be factored into VfM assessments. This is likely to involve bringing forward both the benefits and the costs of the project (e.g. where payments for a new road are likely to begin more quickly than might have been assumed in the base case). Such arguments should not, however, be based solely on assumptions about likely capital budget constraints. Decisions about procurement routes should be based solely on VfM – not accounting treatment.

As a sensitivity in procurement, an assessment of the impact and value of the differential benefits reflecting a switch back to Conventional Procurement (from NPD Procurement) can be undertaken. This would reflect the delay that a “switch” would cause.