Review of the Pilot PPP Schools Bundle

Introduction
1. Background to review

The Review of the Pilot Public Private Partnership (PPP) School Bundle (‘the review’), attached at Appendix 1 to this introductory note, was commissioned by the Department of Education (DoE) and carried out by AA Projects.

The review is different to a typical post-project review or ex post evaluation in that it seeks to compare in depth one group of schools, procured under a PPP contract, with another group of schools, procured under conventional contract arrangements, around the same period. There is little precedent for this type of retrospective comparative analysis between assets procured via PPP and conventional methods.

When approved by Government in 1999, the Pilot PPP Schools were among the first group of PPP projects to be advanced in Ireland. It was recognised at the time that the learning from the Pilot PPP Schools Bundle would inform future PPP policy and associated approaches.

A key post-construction review of the Pilot PPP Schools was undertaken by the Comptroller and Auditor General (C&AG) in 2004, which provided important analysis in relation to the procurement process and how value for money was assessed. The Review does not go over this ground again but instead focuses on a comparative analysis between the Pilot PPP Schools and the conventional schools some 18 years after the schools were completed. The contract for the PPP schools continues to run until 2027 and, arguably, it is only after the conclusion of the contract and the handback of the facilities that a full assessment will be possible.

When the review was originally commissioned by the DoE, the focus was primarily on obtaining learnings relating to the Pilot PPP Schools. However, as the review progressed, the comparative analysis has also brought forward learnings that are relevant to the conventional school estate, particularly with regard to how schools are maintained.

Following completion of a tender process to appoint a suitable service provider in that respect, the compilation of the review, and all underpinning analysis, was undertaken by AA Projects, a management and property consultancy based in the UK, with significant experience of working in the PPP sector. The process was overseen by a Project Team and Project Board including representatives of the DoE, the National Development Finance Agency (NDFA) and the Department of Public Expenditure and Reform (DPER). The Department would like to express its appreciation to all in AA Projects, the NDFA and DPER who contributed their expertise to this process.

The Department would also like to thank the school principals and caretaking staff in all nine schools reviewed for their support to the review.
2. Introduction to Public Private Partnerships

Public Private Partnerships (PPPs) represent one particular approach to the delivery of public infrastructure. PPPs differ from the so-called ‘conventional’ approach in a number of important ways.

First, under the PPP model, it is the private partner rather than the State that raises the finance for the design and the construction of the buildings. The State then ‘repays’ the private partner over a 25 year period through monthly unitary payments that commence after construction has been completed.

Second, under the PPP model, the State is not just procuring the construction of a building, but is making a long-term, upfront commitment to the maintenance of that building, and to reinvesting in key components of the building (an approach known as ‘lifecycling’), over the period of the contract. This is fundamentally different to conventional procurement, which generally relates only to the construction of the building, with the future operation and maintenance of the building organised and funded separately. In a PPP, maintenance and lifecycle costs are also paid through the monthly unitary charge payment.

Third, PPPs involve a more comprehensive transfer of risk from the State to the private partner. This is a key factor in assessing the value for a money of a PPP. It is an important part of the trade-off for the State in accepting that the cost of finance will be higher in a PPP than if the State borrows the funds itself directly. This risk transfer covers the design and construction phase, but also the 25 year operational period, during which deductions to the unitary charge can be applied if there are, for example, deficiencies in service or issues arise with the availability of the building.

PPPs in the education sector are ‘availability-based’, which means that payments are based on availability of the building, per the requirements in the contract, rather than being linked to user charges (as might happen on road projects through the payment of tolls by road users).
3. Pilot PPP Schools and comparator conventional schools

The Pilot PPP Schools bundle is a group of five school buildings, for which procurement commenced in 2000 and which were delivered in late 2002/early 2003.

The five schools in the Pilot PPP Schools bundle are:

- Ballincollig Community School, Ballincollig
- Largy College, Clones
- Maria Immaculata Community College, Dunmanway
- St Attracta’s Community School, Sligo
- St Caimin’s Community School, Shannon

The contract for the Pilot PPP Schools bundle, with a capital value of €63.7m, was awarded on a design, build, finance and maintain basis, with an operational period post-construction of 25 years.

The comparator conventional schools were chosen based on their broad similarity to the PPP schools, particularly in terms of age (all entered operation in 2003) and projected enrolments. These schools were procured as conventional projects, with payment of the design team and construction contractors made in accordance with milestones achieved during the design and construction phases. Operation and maintenance of the school buildings is a matter for the school authorities, with costs paid from grants provided by the DoE and, in some cases, funding raised separately.

The conventional schools are anonymised in the final review document, as their main purpose was to provide a benchmark for comparison with the PPP schools. However, all of the relevant information gathered through the review process has been provided back to the school authorities concerned and, where relevant, support has been provided by the Department in addressing issues identified.
4. Review objectives and methodology

The DoE sought to address three main objectives through the PPP Pilot Schools review. These were as follows:

- To compare the Pilots Schools with a comparator group of conventionally delivered schools
- To assess the extent to which the Department’s objectives in delivering the Pilot Schools (see beneath) have been achieved
- To deliver a methodology and template for use, as required, by the Department in reviews of other PPP projects in the education sector

With regard to the second bullet point above, the DoE originally had four key objectives in the delivery of the Pilot PPP Schools:

- To test the value for money of delivering school provision via PPP on a design, build, finance and maintain basis over a long period
- To obtain new ideas and private sector innovation on school design through an output-based approach
- To relieve school principals of the responsibility of managing school buildings, allowing them instead to concentrate on their core educational and school management functions
- To achieve better use of State-funded school buildings outside of regular school hours

AA Projects conducted the review of the Pilot PPP Schools over four phases, including:

- Planning and methodology identification
- Gathering and selecting the information
- Review and assessment of information
- Production of final report

Evidence was gathered over a period of several months from a variety of primary and secondary data sources, including detailed technical assessments at the level of each individual school in the Pilot PPP Schools bundle and in the group of four conventional schools. These assessments included:

- Room-level condition surveys, based on visual inspections, relating to building fabric and mechanical and electrical installations
- Facilities management reviews, including onsite audit of records and examination of compliance against statutory requirements
- Energy analysis, including production of a building energy rating, energy performance analysis, and review of energy management practices
- Architectural surveys, conducted by NORR, an architectural sub-consultant, to assess a range of design and construction quality issues.
• Detailed financial analysis, based on a comprehensive model developed by AA Projects
• Semi-structured interviews with key stakeholders, including school principals, the DoE and NDFA
5. Review constraints

There are a number of points that are important to highlight in informing the interpretation of the attached review.

The first is that the review should not be read as a comparison between PPP and conventional projects generally. The comparison is limited to the bundle of Pilot PPP Schools and the specific group of four conventional schools that were selected for the purposes of comparison. This is particularly important, as there have been significant changes in the PPP landscape over the period since the Pilot PPP Schools were procured, not least new approaches in how value for money is formally assessed for PPPs, and the establishment of the NDFA as a centre of expertise for the procurement of PPPs. There have also been significant updates in the technical guidance for the design and construction of school buildings generally. It should not, therefore, be assumed that findings in relation to the Pilot PPP Schools and the comparator conventional schools are equally applicable to projects procured since then.

The second point to note is that the lack of precedent for this type of review meant that a methodology had to be developed by AA Projects. This proved to be challenging, not least because there are such fundamental conceptual and operational differences between PPPs and conventional projects, particularly in the approach to maintenance and lifecycle. While a financial model is developed for PPPs based on an operational period post-construction of 25 years, there is no equivalent for conventional schools. AA Projects’ task was made more difficult by gaps in data relating to the conventional schools - arising from the passage of time since the schools were built. When AA Projects had to work on the basis of informed assumptions rather than primary evidence, this is clearly indicated in the review.

Finally, while the attached review represents one particularly in-depth approach to ex post evaluation based on comparison with other real-life projects, there are many different methodologies which can be used for evaluation, and at different points in time after a project has been procured. The methodology developed by AA Projects is a valuable addition to the range of approaches and tools that may deployed.

The Pilot PPP Schools project did not benefit from the development of a Public Sector Benchmark (PSB), which is now the standard tool used to assess value for money in PPP projects. The PSB is the estimate of how much it would cost to procure a project through conventional means on a like-for-like basis with the project being proposed for delivery by PPP - including design, construction, operation and maintenance, lifecycle, and risk transfer.

It is important to note that comparison with a PSB is not the same as comparison with a real-life conventional school project because, in the latter case, the Department has not procured a long-term operation and maintenance regime for the school buildings, and has not specified standards which must be met 25 years after the building has been completed.
6. Review findings

The attached review presents the outcome of the comparisons across the various technical areas examined by AA Projects. These comparisons then feed into a broader value for money assessment, and an assessment of how the Pilot PPP Schools have performed against their original objectives. The comparative analysis is presented in summary form in the review, but this is further underpinned by detailed technical reports prepared by AA Projects and their architectural sub-consultant.

Cost-related comparisons are generally reflected on a Net Present Value (NPV) basis, which is the standard methodology for comparison of cash flows over time.

The following are the main points highlighted by AA Projects under each of the key headings:

Design and functionality

In terms of overall design quality, the average score of the Pilot PPP Schools was higher than the average for the comparator group. However, one of the conventional schools scored highest overall. The Pilot PPP Schools were found to provide greater consistency in terms of design and construction and were assessed as being of an overall higher specification from the design review conducted. PPP capital costs (including construction, and related transaction costs such as Design Team fees, costs associated with gaining planning, contracting and mobilisation payments for service providers) were found to be 21% lower on an NPV basis than the costs of the conventional schools due to the timing of payments over 25 years, but have higher capital costs on a nominal basis.

Building condition

A detailed survey of building fabric and M&E installations demonstrated a disparity between the excellent condition of the PPP schools and relatively poorer condition of the conventional schools was identified. It was found that conventional schools had a significant higher proportion of assets ranked as ‘C’ or ‘D’, i.e. expected to fail in the near term or needing immediate replacement. It was noted that defects had previously arisen in the PPP schools, but the issues had been resolved by PPP Co. under the PPP contract; there were a number of issues identified in the conventional schools that still required attention.

1 Structural reviews were not included as part of building condition surveys.

2 It should also be noted that, subsequent to the completion of this report, and in line with its obligations to manage risk under the contract, the PPP company identified some small-scale strengthening works that needed to be undertaken. These works were underway at the time of publication of this report.
Lifecycle and residual value

Lifecycle costs for the PPP schools were found to be almost double those for the conventional schools, based on a comparison of lifecycle costs in the financial model for the PPPs and of expenditure recorded in the school accounts for the conventional schools (including Summer Works and Emergency Works Scheme grants). However, the higher costs were also reflected in the more extensive level of works undertaken in the PPP schools, which significantly reduce the risk of early failure of assets. Projecting forward to the end of the 25 year operational period, the review finds that the residual value of the PPP schools will be higher than for the conventional schools. (Residual value, in this context, refers to the cost of replacing an asset with its modern equivalent less deductions for physical deterioration.)

Maintenance and facilities management services

A disparity was found between the Pilot PPP Schools, which were able to demonstrate robust evidence of compliance with statutory requirements and the conventional schools, where there was found to be a general lack of understanding regarding statutory obligations, particularly with regard to documentary evidence of testing and inspections. There was also little evidence of maintenance planning in the conventional schools. The cost of Facilities Management (FM) service delivery to the Pilot PPP Schools was found to be 137% higher than the cost of FM service delivery to the conventional schools, based on a comparison between the FM costs in the financial model for the PPP schools and the cost of wages of cleaners and caretakers, cleaning materials and maintenance contracts at the conventional schools, as identified through the school accounts. The review, however, also underlines that this is not a like for like comparison, as the FM specifications for the PPP schools are higher than the typical FM provision for conventional schools.

Energy management and performance

The Pilot PPP Schools Bundle was designed to a slightly higher building energy rating specification than the conventional schools, although all schools were designed to the building regulations in force at the time. The review found that average electricity consumption for the Pilot PPP Schools bundle has been 10.7% less on a kWh/m² basis than in the conventional schools, while heating consumption has been 26.9% less. The review also points to monitoring and reporting of energy performance by the FM provider at the PPP schools, as well as investment in energy-saving technologies through the lifecycle fund; there was little evidence of similar approaches in the conventional schools.

Administration

From interviews with the school principals, it was found that those in the PPP schools spent little to no time (<5%) on building management, whereas those in the conventional schools spent a fair to moderate time (>10%) on this area. Peaks and troughs in their engagement were also noted by conventional school principals, ranging from the base of 10% to 25-50%, depending on building works required. The ongoing resource input from the NDFA and DoE staff on the PPP schools post-construction was noted, although it was not possible to isolate a specific cost associated with this.
Risk profile

For the Pilot PPP schools, there was a significant risk transfer to the private partner, including in relation to design, construction, construction defects, availability, performance, maintenance, financing and insurance. The review notes the benefits of this risk transfer, including with regard to resolution of latent defects and the contractual requirement that the schools remain available and in good condition. By comparison, availability, condition and services to the conventional school must be managed at the school’s – and by extension the Department’s – own risk.

Flexibility of contracts

The review notes that, in relation to the Pilot PPP schools, a variations process, which requires significant financial and legal resources, is required to advance amendments to the contract. The conventional schools offer more flexibility, and school authorities have more autonomy and control in making changes to service delivery and the building itself. However, no significant contractual variations have been progressed to date on the Pilot PPP Schools, which meant that there was no opportunity for a direct comparison of costs with works completed at the conventional schools.

Third Party Usage

Third party usage refers to the use of the school buildings by third parties outside of school hours, such as by local community or sports groups. In the case of the Pilot PPP Schools, the review notes each school has access to an additional ‘bank of hours’ allowance of 350 hours per annum, paid for within the unitary charge. When not required by the school for education purposes (such as after school study), these hours can be made available for third party usage. Beyond this ‘bank of hours’, there is a facility to charge third parties for usage of the building/facilities, with the income split between the school and PPP company, once the PPP company has been reimbursed for costs reasonably incurred. It was noted that most third party usage has occurred within the ‘bank of hours’ and therefore does not generate additional income. In the case of the conventional schools, third party usage is mostly linked to hire of sports facilities, but some schools highlighted that the facilities were also used by local community groups at no charge where the group provides a community benefit. The review notes the difficulty in comparing third party usage between the two groups of schools; financial records at the conventional schools provide an incomplete picture, as some third party usage does not incur a charge and there were no alternative records available.

Value for Money

The review undertakes an overall value for money comparison of the two groups of schools by bringing together the different components of financial analysis with the qualitative aspects of comparison. The following key points are highlighted:

- The Pilot PPP Schools have a lower NPV capital cost, as the capital costs are spread over 25 years. While PPP school capital costs on a nominal basis were higher than for conventional schools, the review notes that there was likely a significant element of risk pricing, given the new nature of the contract form and procurement route. Debt costs, which increase the overall cost of delivery are
not included in the comparison, but neither is a value attached to risk transfer [for later PPPs, this is calculated in the PSB]

- Operational costs, including lifecycle and facilities management, for the Pilot PPP Schools are significantly higher but also reflect a higher level of service delivery
- The conventional schools have a backlog maintenance requirement that is some 13 times higher on a €/m² basis than the PPP schools
- The residual value of the Pilot PPP Schools is higher than the conventional schools, given the higher specifications and significantly lower backlog maintenance requirement

Taking all of the above into account, the review notes that apportioning value to higher costs in the PPP bundle (particularly for facilities management and lifecycle investments) is subjective. However it is apparent that there is a direct relationship between the higher costs and the better condition of the PPP schools, and between the lower costs and compliance failings/higher backlog maintenance requirements in the conventional schools.

With regard to the other objectives of the Pilot PPP schools in relation to innovation, administration and third party usage, the review concludes:

- While the Pilot PPP Schools did meet the objective of achieving some innovation in school design and were designed to a higher specification, this was not very significant
- Pilot PPP School principals spend less time managing school buildings than in the conventional schools; however, the DoE and NDFA must allocate a level of ongoing resources to the PPP schools that does apply in conventional schools
- A lack of records in the conventional schools means it is difficult to make direct comparisons between the two groups of schools with regard to third party usage. A portion of the ‘bank of hours’ allocated to the Pilot PPP schools facilitates third party usage. The conventional schools facilitate third party usage on both a fee basis and free of charge basis to community groups.

In summarising its conclusions, the review notes that the outcomes of applying the PPP mechanism were positive overall. A higher level of investment has resulted in schools that were designed to a marginally higher standard, are in a better condition throughout and remain usable for longer, thus retaining a higher residual value.

The conclusions also underline the context in which the review must be considered, including the fact that the Pilot PPP Schools represented the first project of its kind in Ireland and that the market has matured considerably since then, as well as the development of guidance for the development of PPPs.

Lessons to be learned include the value of strengthening maintenance in conventional schools to ensure that they meet statutory requirements, and the importance of interrogation and review by the procuring authority of all costs presented at tender stage by PPP consortia to ensure they represent value for money.
7. Department of Education response

The DoE welcomes the Review of the Pilot PPP Schools and has noted its conclusions. As outlined above, the review will add to the body of analysis on PPPs and to methodological tools for future reviews.

PPPs are a small component of the overall school estate, and of public infrastructure more broadly. They offer an alternative approach to public infrastructure – one that has significant benefits in ensuring the long-term viability of assets but may also involve higher costs and upfront commitments. The findings of this review will have relevance beyond the school sector and constitute an important input both to PPP policy and to consideration of how our non-PPP public infrastructure stock is maintained.

While this in-depth review is the first of its kind, it is important to note that lesson learning has been a fundamental part of the roll-out of all six PPP schools bundles. Lessons learned from the procurement of each of Schools Bundle PPPs 1-4 have been considered and a lessons learned report for Schools Bundle 5 is being finalised. The lessons from each bundle have fed into subsequent bundles, resulting in a range of iterative changes, including to contractual provisions and project oversight arrangements.

The review shines a spotlight on maintenance challenges in conventional schools, and particularly a lack of understanding of statutory compliance requirements, including the retention of documentary evidence. It is envisaged that this will be addressed as part of an overall increased emphasis on maintenance consistent with objectives set out in the National Development Plan.

Next steps

The Department will publish this review.

The review contributes to the overall body of analysis on PPPs and any wider learnings can be considered by DPER and the Interdepartmental Group on PPPs.

It is also intended that the review will be shared with the European PPP Expertise Centre (EPEC), which is part of the European Investment Bank (EIB).