



#### Output Specifications Development Approach Used

A detailed output specification for both design and construction and service delivery was used, based on a market-tested specification used in the United Kingdom. The design and construction specification listed the design requirements for the building supported by a Schedule of Accommodation and detailed Room Data Sheets. The service specification is consistent with the standard form of service

requirements established as part of the 'Building Schools for the Future' program in the UK, which was used for most education PPP projects between 2004-2012, with some additional requirements in relation to cleaning and waste for the additional-needs school and limited ICT provision to maintenance and infrastructure.

#### BUILT ENVIRONMENT CASE STUDY: THE UNITED KINGDOM (UK)

## Lewisham Grouped Schools Project

#### Location

London Borough of Lewisham, UK

#### Owner

London Borough of Lewisham

#### Private Partner

BY Education (Lewisham) Ltd  
(Bouygues UK, Ecover FM, HCBC Infrastructure)

#### PPP Model

Design-build-finance-operate (DBFO)

#### Operating Term

30 years

#### Contract Value

GBP 60.6 million/USD 76.7 million<sup>1</sup>

#### Asset Class

Built Environment (Education)

In August 2006, the London Borough of Lewisham awarded a contract for the 'Lewisham Grouped Schools Modernisation PFI project' to modernise several schools for the Borough of Lewisham.

This included the design, build and provision of hard and soft facilities management (FM) services for a period of 30 years for four schools: Greenvale Special Needs School, Prendergast Ladywell–Field College, City Learning Centre Facilities - Crofton campus, and Forest Hill Secondary School. The project's objective was to provide educational facilities for over 4,000 children located in the Lewisham area. Greenvale Special Education Needs School became operational in September 2007, while Crofton Secondary School, Phase 1, Forest Hill Secondary School, Phase 1, and the City Learning Centre became operational in January 2008.

The key criteria for the project were:

- design and construction of schools within the London Borough of Lewisham;
- building remodelling to ensure the facilities are fit for purpose; and
- provision of hard and soft FM services to enable education staff to focus on delivery of the pedagogical services instead of building-related issues.

<sup>1</sup> Assumed conversion rate of GBP/USD = 1.27 as at May 28, 2019.

Alignment to QI Focus Areas		Mechanisms used to achieve QI alignment	Market Comparison Analysis
<p>Sustainability and longevity of an infrastructure asset</p> <p>Ability of the asset to address the needs and meet the expectations of end users</p>	<p>The <b>longevity of the asset</b> is ensured through handback provisions. After the 30-year design-build-finance-operate contract, the site will be transferred back to the Owner, with the condition on return governed by a specified handback standard.</p> <p>Lifecycle risk is fully transferred to the Private Partner meaning that the Owner is not responsible for replacing or renewing any element of the building during the operating term. The exception to this is Information, Communication and Technology (ICT)-related infrastructure (referred to later on in this case study).</p> <p>Additionally, the Private Partner is to provide a planned maintenance function designed to not only minimise breakdowns but also extend asset life. This includes: providing an annual planned preventative maintenance (PPM) plan for each school, and agreeing it with the Owner; maintaining full records of all tests and inspections and ensuring that materials and parts are of the same quality or better as the original element or fitting.</p> <p>User feedback is sought quarterly from the Authority, Service Users and key staff at the schools in terms of assessing current needs and whether or not the assets are fit for purpose and <b>meeting the needs of end users</b>.</p> <p>Additionally, the school spaces were set up to require flexibility to meet the changing educational curriculum needs. As such, the contract includes a portering service, which includes the requirement to move and re-set up equipment to meet daily educational needs. The scope for this item also includes performing all necessary manual handling risk assessments in relation to portering activities undertaken at the request of the Owner.</p>	<p><b>Independent building survey:</b> An independent building survey is to be undertaken to assess the outstanding works required to meet the handback standard. This typically takes place up to three years prior to the expiry date. Following this inspection, a schedule of works is produced which is required for the facility to achieve the handback standards. The Owner has the option to inspect the facility again or request that the independent surveyor visits once the works are complete.</p> <p><b>Asset Documentation:</b> The handback plan ensures that all asset documentation is handed over to the Authority as part of the handback at expiry to ensure that asset knowledge is not lost.</p> <p><b>Right to audit:</b> The Owner receives monthly performance reports and attends monthly meetings; however, they can attend site and review service performance, documentation or procedures/policies as they want.</p> <p><b>Performance measures:</b> There are several performance indicators that promote long-term performance of the assets. Examples include:</p> <ul style="list-style-type: none"> <li>• <i>“No occasion of failure to deliver PPM and life cycle replacement schedules in accordance with the Project Agreement”.</i></li> <li>• <i>“No failure to replace materials and parts to the same, better or agreed standard or quality as the original part.”</i></li> <li>• <i>“No failure to achieve Acceptable Elemental Standards within stated rectification periods.”</i></li> </ul> <p><b>Customer feedback:</b> Customer feedback is sought quarterly via feedback questionnaires either in hard copy or electronic.</p> <p>Questions include the following:</p> <ul style="list-style-type: none"> <li>• <i>“Where you have contacted the helpdesk to report an incident or make a service request, how satisfied were you with the response received?”</i></li> <li>• <i>“How satisfied are you with the quality of the environment within the school?”</i></li> <li>• <i>“How satisfied are you with the quality of the outdoor spaces at the School?”</i></li> </ul> <p>Respondents are asked to respond based on categories 1-5, where 1 is not satisfied at all and 5 is very satisfied.</p>	<p>A 30-year concession period is consistent with other UK and European PPP projects. Twenty-five to 30 years is consistent with other mature markets, but this period can be shorter (15-20 years) in emerging markets.</p> <p>Handback standards and provisions are consistent with the UK market for this date of project. Earlier projects and projects in emerging markets typically have a lower standard at handback (in the early days, the focus was on delivering the projects with less thought as to what would happen at the end many years ahead). Handback requirements became more of a focus for later projects including this one, with the standards more clearly defined. This includes a higher standard for residual life provisions, meaning that the facility has to be capable of delivering to the standards required under the output specification with limited lifecycle spending for a given period following expiry.</p>
<p>Health and safety considerations during both construction and operation of the asset</p>	<p>The output specifications require compliance with applicable national health and safety legislations. The Private Partner shall <i>“Produce, maintain and implement fire and emergency management procedures in accordance with statutory and insurance requirements.”</i></p> <p>The scope of the fire and emergency management system is heavily integrated with the Owner, including providing training to the Owner.</p> <ul style="list-style-type: none"> <li>• <i>“Project Co shall provide personnel who are briefed and trained to act as emergency co-ordinators and who will manage the Fire Wardens’ operations and liaise with the Fire Brigade and any relevant Statutory Authorities.”</i></li> <li>• <i>“The London Borough of Lewisham shall provide personnel who are to be briefed and trained as fire wardens by Project Co.”</i></li> </ul> <p>In addition, the Private Partner <i>“shall allow usage of the School Facilities in case of local or national emergency as and when requested by the London Borough of Lewisham or its representative or on request by the emergency services.”</i></p>	<p><b>Performance measures:</b> The health and safety requirements are monitored by performance indicators.</p> <ul style="list-style-type: none"> <li>• <i>“Project Co should produce the initial procedures within six months of the Commencement Date”, failing which penalties apply immediately with no applicable response and rectification periods.</i></li> </ul> <p>There are specific disaster management and fire and emergency management performance indicators that require compliance and support of the Owner policies, including the joint development of the fire safety plans and other emergency plans.</p> <p>Example performance indicators are as follows:</p> <p><i>“Once the agreed disaster management plan is in place, Project Co shall carry out those actions associated with their identified responsibilities within the procedures routinely and in the event of the occurrence of an emergency. The annual programme will be agreed with the London Borough of Lewisham and the Schools.”</i></p> <p><i>“Project Co will produce detailed fire procedures in conjunction with the London Borough of Lewisham. These procedures must be continually updated and reviewed as circumstances demand.”</i></p>	<p>Compliance with national health and safety legislation is consistent with other education projects across Europe and other developed markets where such legislation is present.</p> <p>In addition, the requirement to work alongside the Owner to produce plans that are aligned with local policies is also included in many social infrastructure projects, where consistency of approach to procedures of this nature is seen as beneficial.</p>

Alignment to QI Focus Areas	Mechanisms used to achieve QI alignment	Market Comparison Analysis
<p>Social impacts and inclusiveness</p>	<p>The school facilities were built to support and benefit the education needs of the entire community at large. The Project Agreement allows for community use of the facilities outside of “core operating hours”, or non-school hours. Core hours are specifically detailed within the payment mechanism with times outside of this available for community use – this includes using the facility for community groups and meetings, sporting events and public events.</p> <p>Additionally, one of the schools includes a hydrotherapy pool, which can be effective at treating chronic illnesses. The pool is also available for use by disability groups, as part of an effort to support the needs of all community members.</p>	<p>“Project Co must carry out training for all wardens, and other officers, who perform a function under the procedures.”</p> <p>“Project Co will produce detailed procedures for a variety of emergency situations in conjunction with the London Borough of Lewisham. These procedures must be continually updated and reviewed as circumstances demand.”</p> <p>Requirements also include provisions for testing of the plans in accordance with legislation and regulations, with record keeping required to show adherence to legislation, plans and policies.</p>
<p>Alignment of the project with economic and development strategies (SDGs, national policy etc)</p> <p>Ability of the asset to respond to changes in resource availability, population levels, demographics and disruptive technology</p>	<p>Interestingly, the way that the asset was determined to most effectively respond to changes in technology was by keeping ICT with the Owner for the duration of the PPP agreement. For the project, the Private Partner’s involvement with ICT is limited to provision and maintenance of the infrastructure, while the Owner retains control of hardware (initially provided by the Private Partner through the equipment schedule, but maintained and replaced by the Owner), software and internet provision.</p>	<p><b>Performance indicators:</b> Requirements are managed through performance measures in the payment mechanism, which include examples such as:</p> <ul style="list-style-type: none"> <li>• “These tables set out the Core Sessions and Additional School Periods requirements for the Schools. In order to provide a simple but effective basis for calculating financial deductions Core Sessions during the school day have been split between morning and afternoon [...]”.</li> <li>• “[...] Core Sessions, each School may book Additional School Periods for the use of designated areas, during which the provisions of this Schedule 6 shall apply. This table will be reviewed annually, and adjustments made to the Service Payment if greater or less hours are required. [...]”.</li> </ul> <p><b>Availability Failures:</b> The use of the hydrotherapy pool is managed through Availability Failures in the Payment Mechanism, for example:</p> <ul style="list-style-type: none"> <li>• “No occasion of light flickering effect on pool water surface to an extent which may prove a problem for those with epilepsy.”</li> <li>• “No failure to maintain hoists and other lifting equipment in accordance with manufacturers’ recommendations.”</li> <li>• “No occasion of pool water temperature exceeding or dropping +/- 2°C from the required levels at set out in the Room Data Sheets.”</li> </ul>
	<p>ICT provisions retained by the Authority.</p>	<p>The concept of community use outside of core school hours is a typical provision on school PPP projects in the UK, Europe and in Australia and New Zealand.</p> <p>Some projects have attempted to incorporate public use during the school day (for example, as sports and leisure facilities) however this has proved difficult regarding safeguarding.</p> <p>Keeping ICT provisions with the Owner follows lessons learned from previous education projects in the UK, whereby long-term ICT provision was difficult to detail in specifications and pricing, leading to significant premiums being put onto the costing of the service due to the difficulty in predicting ICT needs in the future. The current approach is that ICT is either retained by the Owner or let as a short-term provision, often three to five years, during which the needs are more predictable.</p> <p>This approach to retain ICT responsibility has also been observed in other jurisdictions following similar lessons learned, including in Canada (some second wave of projects in the Infrastructure Ontario model).</p>