

# Finance and Resources Committee

10.00am, Thursday, 10 October 2019

## Appointment of specialist design team to deliver three new primary schools to Certified Passivhaus standard

Item number  
Executive/Routine                      Executive  
Wards 1 and 17  
Council Commitments

### 1. Recommendations

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1.1 That Committee:

- 1.1.1 Approves the award of the Contract for Design Services, initially to RIBA Stage 4 (Procurement stage), for three new Certified Passivhaus Primary Schools to Faithful and Gould Ltd for the contract value of £3,081,426 utilising the Crown Commercial Services Framework for Multi-Disciplinary Design Team Services.

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# Finance and Resources Committee

## **Appointment of specialist design team to deliver three new primary schools to Certified Passivhaus standard.**

### **2. Executive Summary**

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- 2.1 This report seeks approval to award the contract for multi-disciplinary design team services to Faithful and Gould Ltd under a Direct Award via the Crown Commercial Services Framework. This contract is initially to develop the design to RIBA stage 4 (procurement stage) with a break point at RIBA stage 2 (concept design). The cost to deliver the designs to RIBA stage 4 is £3,081,426. This aligns with fee levels associated with other available design frameworks and is within existing budgets. This approach will facilitate the delivery of the proposed new Primary Schools to Certified Passivhaus Standard by a suitably experienced, expert design team.

### **3. Background**

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- 3.1 In response to the Global Climate Emergency, the Scottish Government is in the process of amending the Climate Change Bill to set a 2045 target for net zero emissions for Scotland. In recognising the need to reduce emissions of greenhouse gases, the Council has set an ambitious target that Edinburgh will be carbon neutral by 2030. These targets are significant and will require a step change in the Council's approach to new building design and delivery across the whole operational estate, including learning and teaching.
- 3.2 The Council is committed to delivering new build schools which address the carbon agenda while focussing on ensuring internal comfort conditions are met, supporting excellent teaching environments.
- 3.3 Following extensive investigations and lessons learned from recent new build school designs, Property and Facilities Management has identified Certified Passivhaus as the appropriate standard to adopt in response to the challenges faced, which has previously been endorsed by the Finance and Resources Committee. Passivhaus is a proven standard which addresses the recognised performance gap between projected new building energy consumption and actual, operational, energy consumption, an issue identified at a national level. In addition, as Passivhaus is primarily a comfort standard, the rigour of this approach will

ensure optimal outcomes. Appendix 1 to this report provides an overview of Passivhaus.

- 3.4 The first non-domestic buildings, schools, in Scotland delivered to the Certified Passivhaus Standard will be a key part to addressing a low carbon future. The next step will be to consider the possibility of moving towards Certified Passivhaus Plus standard which further offsets carbon emissions through renewables.
- 3.5 The challenge faced by the Council in adopting this standard is that despite its adoption in England and Wales for numerous developments, including primary and secondary schools, there has been little or no non-domestic Passivhaus delivery in Scotland. For this reason, there is a lack of experience in this challenging standard across the Scottish design and construction sectors of industry. Consequently, the Council will be playing a critical role in stimulating the market. This is already evident with designers and contractors seeking partners with Passivhaus credentials and more openly recognising the benefits of this standard.
- 3.6 Currently the Council does not have access to experienced Passivhaus designers on its professional services frameworks. This is being addressed as a key element of the Professional Services Framework re-procurement which is currently underway and aims to have new frameworks in place by the Spring of 2020. In the current absence of this facility, this report outlines the route to securing the required expertise utilising an external, national framework to ensure successful delivery for three new double stream Primary Schools with Early Years facilities.

## **4. Main report**

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- 4.1 The Council is planning three new double stream Primary Schools with Early Years facilities. These are located within major new housing developments at Builyleon Road in South Queensferry; the new Brunstane site within Newcraighall Primary School's catchment area; and the Maybury site in West Edinburgh. The current target completion date for all three schools is August 2022, albeit this will likely be subject to delay.
- 4.2 This report seeks Committee approval to utilise the Crown Commercial Services (CCS) framework, Lot 1 Multidisciplinary Design Services, for the procurement of the Design Team for the delivery of three new Primary Schools under the Local Development Plan (LDP) programme. This appointment is permissible within the Framework under the Direct Appointment call off procedure.
- 4.3 The aim is to deliver the next tranche of three Primary Schools to certified Passivhaus standard. To de-risk this approach it is essential that an experienced Passivhaus design team is assembled. Various national frameworks have been examined in conjunction with Commercial and Procurement Services. The most appropriate identified is the CCS Framework, Lot 1 Multidisciplinary Design Services. CCS is an Executive Agency of the Cabinet office aimed at supporting the public sector to achieve commercial value when procuring professional services. The CCS framework has the facility to directly appoint the framework lead and key supply chain members, with this approach widely used. The CCS framework was

procured in accordance with the Public Contract Regulations, priced in open competition. There is no premium associated with a Direct Award under the framework, all fees are capped and cannot be exceeded by the framework consultants.

- 4.4 Utilising this route, the appointed design team would be led by Faithful and Gould Ltd (F&G) and critically includes a specialist architectural practice, Architype. Architype has delivered the largest portfolio of Certified non-domestic Passivhaus projects in the UK (over 40 buildings). This includes 13 Certified Passivhaus Primary Schools in England and Wales. Architype and F&G have a longstanding relationship and are currently delivering the latest generation of Passivhaus Primary School Designs in Oxfordshire.
- 4.5 Utilising the CCS Framework also allows the Council to meet the already challenging timescale for the design and delivery of these primary schools as the procurement process takes around 8 weeks to appoint the full design team. The design team appointed will meet the capability, experience and quality requirements of the Council and the architects will bring extensive knowledge transfer through their experience in Passivhaus design.
- 4.6 The rates provided by the CCS Framework have been benchmarked against other national frameworks and the Council's own internal Construction Professional Services Framework and are deemed to offer the Council best value.
- 4.7 The initial commission will be to develop the design to RIBA stage 4 (procurement) for the three schools. This includes the principal design disciplines (Architect, Project Manager, Cost Consultant, Civil/Structural and Services Engineering). The fee for this utilising the CCS framework Lot 1 to RIBA stage 4 is £3,081,426.
- 4.8 Following the Council championing the Passivhaus approach, other Local Authorities have expressed increasing interest. Similarly, Scottish Futures Trust have engaged in investigating this standard and recognise the benefits as a direct consequence of their increased understanding.

## **5. Next Steps**

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- 5.1 Subject to Committee approval, successful delivery of three Certified Passivhaus primary schools will be a pathfinder for the Scottish learning estate sector. This will contribute to a low and zero carbon future and be a catalyst for change for the future delivery of construction projects.
- 5.2 The contract will be managed by the service area to ensure delivery meets the performance requirements, key performance indicators and community benefits requirements.
- 5.3 In line with The Public Contracts (Scotland) Regulations 2015, the Council will issue an award notice on Public Contracts Scotland with onward notice to OJEU.
- 5.4 The delivery of new buildings to Certified Passivhaus 'Classic' Standard ensures the building fabric solutions are low energy and, critically, address user

environmental comfort requirements. This will be a first step towards adopting further enhanced solutions with the benefit of additional renewable energy provisions to Passivhaus 'Plus' (producing energy to balance consumption) if deemed appropriate, Passivhaus 'Premium' Standard (producing more energy than consumed, while recognising that this goes beyond economic benefits under current market conditions).

## **6. Financial impact**

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- 6.1 Design team fees will be capital funded from the approved current project budget of £4.025m as set out in the 2019/20 approved Council Budget.
- 6.2 Funding for the construction of the schools has been identified as referred to in item 7.4, Capital Budget Strategy 2020-2030, on this agenda, subject to achieving a balanced revenue budget over the period of the framework. Running costs of the schools will be identified as part of individual business cases.
- 6.3 Regardless of the procurement route taken, commissioning these designs to RIBA Stage 4 commits the Council to a capital expenditure of around £3m (with a break option at RIBA Stage 2 relating to a fee of around £900K). If the proposed £3.081m for the CCS framework procurement route were to be funded fully by borrowing, the overall loan charges associated with this expenditure over a 20-year period would be a principal amount of £3.081m and interest of £1.800m, resulting in a total cost of £4.882m based on a loans fund interest rate of 4.6%. The annual loan charges would be £0.240m.
- 6.4 A report on the associated cost implications of changes in the size and profile of the Council's operational property estate was considered by the Finance and Resources Committee on 23 May 2019. The report noted the need to provide for the additional revenue costs of a number of demand- and condition-led school replacements and new-builds.
- 6.5 Primary Schools designed to Certified Passivhaus Standard will realise a projected revenue saving in the order of £20k/year/school or 40% in comparison with recently delivered Primary Schools to current standards. This saving is based on the projected cost of energy in 2022. It is anticipated that energy costs will continue rise, increasing the net benefit of Passivhaus over the lifetime of the building. In addition, a Passivhaus school will have lower associated carbon emissions and therefore reduced exposure to any future carbon taxation/penalties that may be implemented.

## **7. Stakeholder/Community Impact**

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- 7.1 F&G were assessed on their community benefits and social responsibility plan as part of the award criteria for the CCS Framework. Upon appointment, F&G will work with the Council to develop a Community Engagement Plan for the three Primary Schools, that will be specifically tailored for each locality's needs.
- 7.2 F&G will work in partnership with the Council, key stakeholders, head teachers and parents to create a programme of activities that work towards achieving interaction with the Community and the Schools – these activities would include such areas as Work Placements, Employment Training, Community Engagement and Charity/Fundraising Initiatives.
- 7.3 The proposed approach will minimise carbon emissions associated with the new build schools. As these will potentially be the first new primary schools to Certified Passivhaus Standard in Scotland these schools will be pathfinders potentially attracting significant interest from Scottish Government and industry professional bodies.
- 7.4 As well as the focus on low carbon and environmental comfort, the consultation and engagement programme will be aligned to the guiding principles of the Scottish Government's Learning Estate Strategy. The overarching primary focus will therefore be to ensure provision of quality learning environments including exciting outdoor learning spaces. Public sector partners and the wider community will be consulted during the design process in order that any investment grasps opportunities to integrate service provision, enhance digital connectivity and encourage maximum community use of the facilities provided both during and out with core school operational periods.

## **8. Background reading/external references**

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Energy in Schools Annual Report – Education, Children and Families Committee, 11 December 2018

Energy Management Policy for Operational Buildings - Corporate Policy and Strategy Committee, 6 August 2019

Capital Strategy 2020-30, Finance and Resources Committee, 10 October 2019

## **9. Appendices**

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Appendix 1: Certified Passivhaus Overview

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Passivhaus is a rigorous comfort and energy standard. It aims to provide healthy and comfortable internal conditions for occupants. This is achieved in addition to a focus on low energy consumption.

The evidence indicates that Passivhaus is the only design and construction standard to consistently deliver its comfort and energy targets. There is no evidence of a performance gap between design expectations and actual outcomes. This has been demonstrated by extensive monitoring of buildings in use over more than 25 years.

Passivhaus achieves this because it is based on the rules of building physics and utilises robust modelling and optimisation tools from the onset to inform building form, orientation, fabric and glazing design. This ensures an optimum fabric solution with care in considering high insulation levels, care with glazing specifications and associated mechanical ventilation and heat recovery systems. The focus is on a built reality that matches the theoretical design.

Another key aspect of Passivhaus is its use of a rigorous system of quality assurance through which third party certifiers check that the design and construction meet the required standard for certification. This is achieved through provision and checking of extensive evidence of the design, construction and commissioning process. This places a focus on construction quality, something the council has placed significant focus on in response to the Cole Report.

A Passivhaus certified school would achieve the following

- Reduced internal CO2 levels, improving well-being and concentration
- High standards of indoor air quality and thermal comfort
- Improved resilience to summertime overheating
- Greater avoidance of building defects
- Minimised energy consumption with reduced energy bills and carbon emissions (ref Table 1 for current energy compared to PH)
- Reduced lifecycle and maintenance costs due to simpler mechanical services and controls installations

Improvements in the thermal comfort and air quality go beyond energy consumption benefits. There is evidence to support the case that these improvements realise enhanced building user satisfaction (pupil behaviour), attendance, reduced sickness and attainment.

Table 1 below provides comparison. St Johns is the most recently completed Primary School. Energy data for this building is limited and may be unrepresentative due to mild weather conditions over the last 12 months.

