APPENDIX 3

Background Information Report

by Executive Director (Education & Children's Services)

The purpose of this report is to update on the options for the replacement of Perth High School. Since the budget for this project was agreed there has been updated Scottish Government guidance for the internal ventilation standards in schools (2018) and ambitious targets have been set for the reduction of carbon emissions as a result of Climate Change (Emissions Reductions Targets) (Scotland) Act 2019).

A direction on the climate change ambitions and specification is required to progress the project to the next stage of design as a result of the approved Interim Climate Emergency Report and Action Plan approved at Full Council in December 2019.

1. BACKGROUND

1.1 Perth and Kinross Council approved and budgeted for a replacement Perth High School as part of the Capital Budget in 2018 with an indicative budget of at £50M for a 1600 pupil capacity school.

1.2 This project was budgeted based on a feasibility study and Scottish Futures Trust (SFT) space and cost metrics. These included the anticipated accommodation size and relevant building standards at the time of the study.

1.3 The climate emergency motion unanimously agreed by Full Council in June 2019 committed the Council to lead by example in accelerating the transformational change required to address the climate emergency. (link) and the Council`s Interim Climate Emergency Report and Action Plan in December 2019 (link) included an action to Investigate options and costs for Passivhaus construction methods to achieve energy efficiency and quality in areas such as Learning Estate Projects

2. CURRENT SITUATION

Design development and options

2.1 Options were developed to respond to the climate emergency motion and report which range from a building regulations compliant school to a Passivhaus option which meets the lowest energy target of 67kwh/m2/annum set by SFT (for inclusion in the Learning Estate Programme). The recent Infrastructure Commission for Scotland report (link) prioritised a net zero carbon economy and work is underway to develop a new 'Net Zero Carbon' standard by the Scottish Government for all public buildings which directs new buildings towards a Passivhaus or equivalent standard.

2.2 The standards set by Passivhaus address issues with energy efficiency by adopting a fabric first approach to make the envelope of the building as simple, airtight and insulated as possible with the highest quality standard of construction. This in turn reduces the primary heat energy demand, reduces CO2 emissions and retains heat within the building. This quality assured process equally benefits the quality of the completed building.

2.3 The table below summarises a base building standard compliant option to a Passivhaus option. All options include the accommodation required for the 1600 pupil secondary school:

	Estimated Capital (£'000) incl PKC internal costs and contingency	**Energy (kwh/m2)**	**Annual energy cost (2020 prices)**	**TonnesC02-Annum in year 1 (2019 conversion factor)***	**Notes**
Existing School	N/A	190kwh/m2	£170,447	473	Actual energy costs for 2019/20
Option 1: Base build with all briefed areas	£51,000	118 kwh/m2	£118,547	391	Includes all education accommodation requirements
Option 2: All briefed areas at Passivhaus standard	£58,300	60kwh/m2	£116,750	249	Includes all education accommodation requirements Maximum reductions in carbon from base build.

Fuel Sources

2.4 Operational carbon is the direct emission from energy consumed. Ambitions of the Scottish Government`s Climate Change Plan require 75% reductions on operational emissions from buildings by 2030 and net zero emissions by 2045. Space heating that relies on fossil fuels (gas, oil, coal etc) will likely not receive building standard consent by 2024. The base option is based on a normal natural gas heating solution, and the Passivhaus option is based on an electric air source heat pump solution, to take advantage of the increasing proportion of zero carbon electricity produced in Scotland, including for this school, a possible direct link to Perth's anticipated Smart Energy network . Looking ahead it is considered that an increasing proportion of electricity will be produced from zero/low carbon sources.

Retrofit

2.5 Building to current building standards at lowest capital cost (the base option) will result in the Council looking to upgrade / retrofit energy saving measures before 2045. This will be a growing factor across all our estate. With a 50 plus year lifespan at Perth High School, and the obligations on the Council to move

the estate to net zero by 2045 a retrofit programme will be required in the future that has been estimated at £22m at present day costs. This retrofitting energy efficiency measures (such as increased insulation, low energy electric heating) in a school in the future will be both technically difficult and disruptive.

50 year lifecycle costs

Existing emissions are 473 tCO2 per annum.

Option	Capital cost	50 year cost	50 year Energy consumption (kwh)	50 year carbon emissions(tCO2)	Annual Yr1 emissions (tCO2)
Base option	£51m	£153.2m	58.8m	14,717	391
Passivhaus	£58.3m	£151.9m	44.9m	12,450	249
Difference	£7.3m	(£1.3m)	(13.9m)**	(2,267) (15%)***	142 (36%)

*50 year cost: loan charges, life cycle costs, retrofit costs (in year 16), energy costs (all 2020 rates)
** the reduction in kwh consumed is primarily in space heating
***carbon emissions not pro rata to kwh due to different source energy conversion factors, forecast on 2020 conversion factor on electricity

The Table above shows that an additional single investment of £7.3m, generates financial savings of £1.3 m over 50 years, and reduces carbon emissions by 15%. As electricity becomes cleaner this % will increase.

3. FUNDING OPTIONS

3.1 Officers are proposing to submit a bid to the Scottish Governments Learning Estate Investment Programme – Phase 2 to include the replacement of Perth High School in the programme. This funding stream is energy performance linked. The bid has minimum energy requirements which only the Passivhaus option will meet. The outcome of the Scottish Government bid should be known by December 2020. If a bid is successful, the Scottish Government will provide revenue funding to the Council over 25 years to the value of 50% of the capital costs. It should be noted that the Council requires to fund the full capital cost of the new school even if the bid is successful.

4. ASSOCIATED RISKS

4.1 The project is still over a year away from a confirmed project cost and signing of Financial Close. There is a risk that during the detailed design process further cost pressure materialises resulting in increased costs, as is the case in all capital projects. The options presented above do not include any COVID-19 impact costs at this time.

4.2 There is a risk of failure to achieve the carbon reduction objectives, however it is intended that the energy performance of the building will be written into the final construction contract.

5. FINANCIAL IMPLICATIONS

Capital

5.1 The base option would result in estimated additional capital costs of £1M. The Passivhaus option would result in estimated additional capital costs of £8.3M.

Revenue

5.2 Both of the options reduce energy costs by approximately £50,000 per annum, compared with the current school, based on current rates.

6. CONCLUSIONS

6.1 The latest projections for the Perth High School replacement are based upon delivering low-carbon energy efficient buildings which are anticipated to be compliant with future Scottish Government standards.

6.2 The Scottish Government Learning Directorate has written to local authorities requesting an update on how each Council is developing its Learning Estate and whether they have identified any priority projects for investment that are supported by an approved financial and political commitment.

6.3 The Learning Estate Investment Programme is predicated upon Councils' meeting the upfront Capital cost of school projects. Projects approved for funding through the programme will then be eligible for Revenue grant funding equivalent to 50% of the Capital cost of the project, payable over a period of 25 years to support maintaining the condition of the buildings concerned.

6.4 A prerequisite of securing support through the Investment Programme – Phase 2 is, therefore, the inclusion of funding to deliver the project within the Capital Budget. Subject to approval to proceed with the Perth High School replacement project, it is proposed to apply for financial support for this project through Phase 2 of the Learning Estate Investment Programme.

6.5 Elected Members are requested to take account of the information contained within this report, and the associated briefing materials, in respect of a decision on the Perth High School. Elected members may wish to give direction in relation to the following, whether:

(i) Officers progress the new Perth High School project on the basis of the design most likely to attract Scottish Government funding being the Passivhaus option;
(ii) Officers submit a bid to the Scottish Government's Learning Estate Improvement Programme – Phase 2 for the project; and
(iii) Officers bring back funding solution to Council in 2021 for addressing the Capital Budget shortfall.

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Project Summary Sheet

Project Name:	**Perth High School**
Asset Type:	**Building**
New secondary school to replace the existing Perth High School	

Risk Analysis			
	Stop	**Pause**	**Continue**
Strategic	The Perth High School project is the replacement for the Council's largest secondary school and a key component of the secondary school estate. There are ongoing issues with the existing building which have already impacted on the ability to deliver services from it -		There is ongoing community engagement as part of the development of the Perth and Kinross Offer. There is a risk that if we do not pause the project until we understand the Offer, we will miss the opportunity to review the purpose and the scope of the project to ensure that the investment is affordable and best meets the needs of all the community, now and in the future.
	stopping the project would not address the identified issues and would greatly increase the risk of building failure, which would have significant negative impacts on our ability to deliver education to our young people.	pausing the project would delay addressing the identified issues and would increase the risk of building failure, which would have significant negative impacts on our ability to deliver education to our young people.	
Legal	No legal risks were identified		No specific legal risks identified however as with all projects of this size and complexity, ongoing project risks will continue.
Financial	There has been significant expenditure on this project -		As we continue to experience the economic impacts of COVID-19 we have no definitive understanding of our revenue income streams particularly in the short to medium term. In this situation, there is a risk that we cannot afford to fund this project.
	The Council has spent approximately £1.2 million to date developing the project.	Depending on how long the project was paused for, could result in additional revenue pressure for the Council.	
		Increase in project cost as a result of construction inflation. The impact of COVID-19 on construction inflation remains an unknown, however, the Building Cost Information Servicer current assessment of construction inflation is:	The impact of COVID-19 on the construction sector at this point is unquantifiable. There is a risk that the impact results in significant increase in tender prices resulting in us being unable to afford the project.

Risk Analysis				
	Stop	**Pause**		**Continue**
		2021	3.9%	
		2022	3.8%	
		2023	4.2%	
		2024	4.3%	
Reputational	• The Council has committed to replacing the existing High School on the basis of its condition and suitability – • There has been significant spend to date on the Project (£1.2M)			Given the potential opportunities which might emerge from the ongoing community engagement and the delivery of the Perth and Kinross Offer, there is a risk that in delivering a new secondary school with only limited community access there is a perception that additional opportunities for development were missed, leading to reputational damage.
	stopping the project will risk reputational damage for the Council	pausing the project will risk reputational damage for the Council		
Economic	There are positive economic impacts anticipated directly from the construction of the new Perth High School project.			No economic risks were identified with continuing the project.
	if the project is stopped, these will be lost, exacerbating the impact of COVID-19.	if the project is paused these will be delayed, exacerbating the impact of COVID-19.		
Staffing	There are PKC staff funded by the capital plan which includes the Perth High School project			There are no staffing risks associated with continuing the project.
	Stopping the project may impact on these posts.	Pausing the project may impact on these posts.		