From: Rebecca Spore, Director of Infrastructure

To: Peter Oakford, Deputy Leader and Cabinet Member for Finance, Corporate and Traded Services

Subject: Inflationary Pressures on Capital Construction Programmes

Key Decision: Expenditure or savings of more than £1m and affects more than 2 Electoral Divisions

Classification: UNRESTRICTED

Future Pathway of Paper: Policy and Resources Cabinet Committee

Electoral Division: All

Summary: The national fiscal and economic context is an important consideration for the Council in setting and managing its revenue and capital budgets. The budget report to County Council on 10 February referred to the extraordinary and unexpected challenge to the UK economy and economies across the world arising from the COVID-19 pandemic. Kent County Council (KCC) has a significant Capital Construction Programme, which has been adversely impacted by the inflationary pressures facing the UK construction industry.

This report seeks to ensure that KCC has sufficient capital allocated and effective contractual management arrangements in place to deliver the programmes and projects, with anticipated additional costs as set out in the Medium-Term Financial Plan. A decision is required to implement these in the time available to avoid disruption to front line services and to secure the contractual arrangements for the provision of key infrastructure projects, including the provision of school places to meet KCC's statutory duties.

Recommendation(s): The Deputy Leader and Cabinet Member for Finance, Corporate and Traded Services is asked to consider and endorse or make recommendations on the proposed decision to:

1. note the £28.8 million estimated impact on capital budget spend in the Medium-Term Financial Plan of £339.3 million across the capital programme for 2022-23, were already approved via key decision or covered by appropriate delegated authority to be funded from the options identified in paragraph 5.9 of this report;

2. consider the use of Fluctuation clauses when deemed necessary to control costs to KCC and alleviate adverse effects to the main contractor supplier of the rise in material costs; and

3. delegate authority to the Director of Infrastructure or the Corporate Director of Growth, Environment and Transport (for Highway Schemes), in consultation with the Corporate Director of Finance and the Deputy Leader and Cabinet Member for Finance, Corporate and Traded Services, to take the necessary actions, including but not limited to entering into contracts and other necessary documentation to enable the delivery of the capital programme taking into account construction and inflation where existing Record of Decisions levels are needed to be adjusted.

1. Introduction

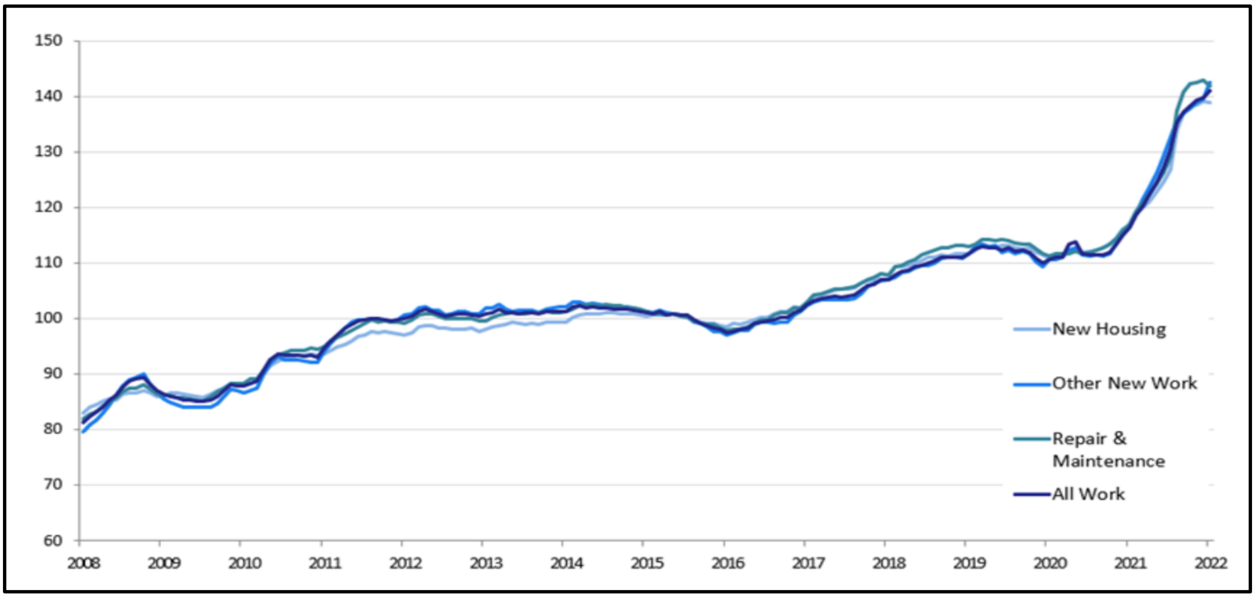
1.1. The construction industry, in the past year has experienced acute inflation pressures, long material lead times and sporadic material supply. This has been directly linked to material and labour shortages. The identified key causes of the shortages are the effects of:

- COVID-19 Pandemic on; the manufacturing industry; sudden increase in demand on the construction industry post the global lockdown and decreased supply chain due to administrations.
- Brexit on; supply of construction workers and hauliers to transport the construction material and complying with regulations.
- Changes in UK Government legislation and Building Regulations and requirement to meet Net Zero targets.
- Rising cost of wholesale energy.
- Indirect effects of the Russian invasion of Ukraine.

1.2. This report seeks to inform on the impact that cost inflation and the sporadic supply of materials has had, and will continue to have, on KCC's capital programme budgets and the delivery programme. The report will also suggest mitigation measures to assist in reducing the impact of the cost inflation where possible.

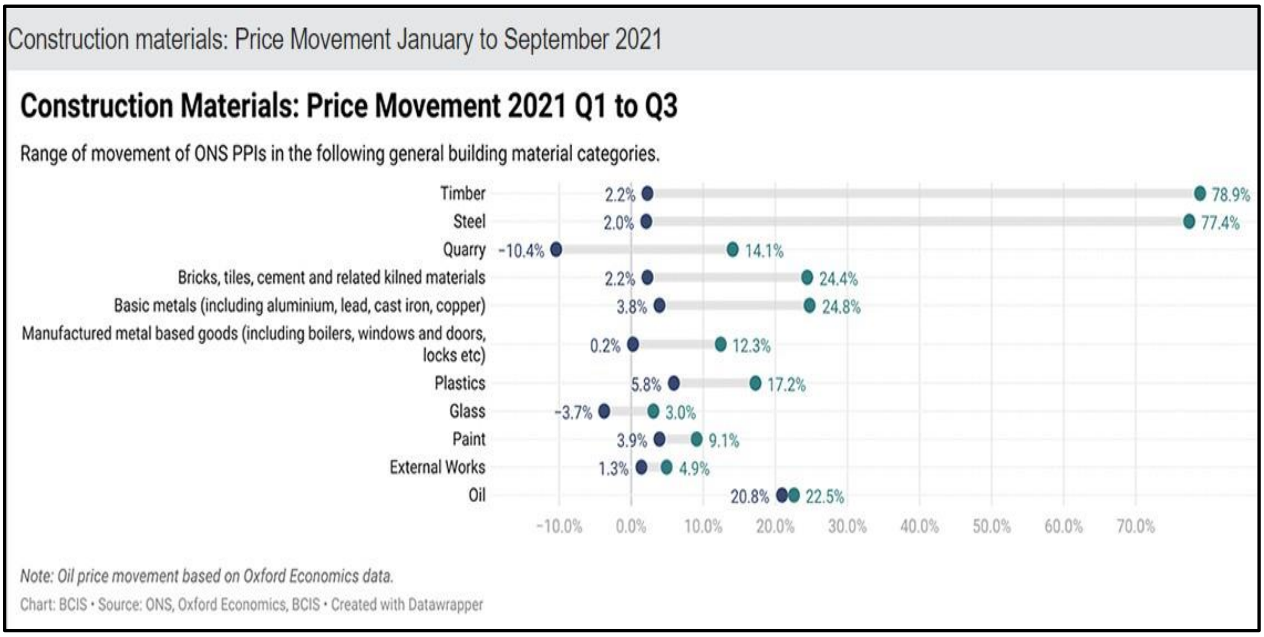
2. Current Position

2.1. Since the first quarter of 2021, The Department for Business, Energy, and Industrial Strategy (DfBEIS) are reporting that all sectors of work within construction experienced a 21% annual price rise on construction materials. The (DfBEIS) Graph 1 below shows an unprecedented sharp rise in the Construction Material Price Indices (CMPI) in the UK during 2021.



Graph 1 - Construction Material Price Indices, UK taken from DfBEIS Monthly Statistics of Building Materials and Components Commentary, February 2022.

2.2. The Building Cost Information Service (BCIS) Graph 2 below, shows the severity of the material price increases of key materials on construction projects from 1Q2021 to 3Q2021.



Graph 2 - Construction materials: Price Movement from 1Q2021 to 3Q2021 taken from BCIS news Construction materials cost increases reach 40-year high

2.3. Table 1 below shows construction materials experiencing the greatest price increases and decreases in 12 months from January 2021 to January 2022. The aggregated construction material price index hides larger price movements for some specific products and materials. The three largest increases and two decreases are presented.

Construction Materials	**Year-on-year % change**
Greatest price increases	
Fabricated structural steel	51.0
Particle board	45.4
Concrete reinforcing bars	40.0
Greatest price decreases	
Insulating materials (thermal and acoustic)	-3.3
Gravel, sand, clays & kaolin (including aggregate levy)	-3.3

Table 1: Construction materials experiencing the greatest price increases and decreases in 12 months to January 2022, UK

2.4. The data provided above does not consider the effects from the conflict in Ukraine. However, it is predicted that the war will have inflationary pressure on construction materials.

2.5. It is predicted that the direct impact of the conflict on material supply and cost in the UK is low as the total share of construction material imports from Russia, Ukraine and Belarus is less than 2%.

2.6. Indirectly the UK is likely to suffer shortages due to the sanctions via European firms that form part of the UK supply chain (firms that produce construction materials that contain petro-carbons or consume copious amount of energy in manufacturing). These firms are heavily reliant on Russia for energy (Russia supplies 30% of Europe's oil and 35% of its natural gas). Some European firms also rely on Russia for supply of raw materials such as copper and timber. Once this supply source is removed, sourcing alternative suppliers may not be available or may be more expensive – as this involves brokering fresh deals which may cost more, this is still an unknown and cannot be forecast in this report.

2.7. The Contractors Leadership Council (CLC) are also reporting anticipating that the contractors current tender pricing strategies will become increasingly difficult to maintain, due to issues resulting from the Ukraine conflict which include, but are not limited to, inflation and supply chain instability. They expect that the longer the conflict continues the more severe the impact will be.

2.8. The level of uncertainty around the impact of the conflict has resulted in material suppliers being unwilling to hold their prices for 24 hours, which poses an issue for contractor's who are tendering, as they cannot provide a fixed price to the client, without risking making a loss when the true impact is realised.

2.9. The following non-financial mechanisms have been incorporated to support contractors who are already in contract with KCC:

- Contractual Mechanisms – facilitating the early procurement of materials that can be purchased in advance and either stored on or off site.

- Increased flexibility in material selection to allow options that were readily available at the time, with minimum impact on the quality of the build.

2.10. These supporting mechanisms have been vital to ensure that KCC contractors have had the required support, to enable them to deliver projects during the unprecedented crisis they faced during the summer months of 2021 (2Q2021 and 3Q2021). The contractors experienced a relatively stable period in 4Q2021, and this sentiment was echoed in the press. Nationally 4Q2021 was less volatile than the preceding quarters.

2.11. Material price increases will impact capital projects without construction contracts and are due to be procured. There are some projects that have already been procured but with long programmes and substantial variations or have programmes that have been extended or phased and still on site. These projects will also be affected.

2.12. The increase to input costs will be reflected in the tender returns that KCC will receive. The press is reporting that the main contractors have been absorbing some of the impact by reducing their profit margins to ensure construction projects are not shelved. However, CLC do not see this position continuing to support the rising fuel costs and the potential impacts of the conflict in the Ukraine.

2.13. KCC will inevitably have to absorb some of the impact through construction costs that will exceed the current programmes budget levels.

3. Impact Assessment

3.1. Capital projects procured before the crisis peaked in the summer months were delivered to contractual dates and costs, predominantly due to the KCC contractors procuring early and having the buying power that some smaller contractors lack. Maintenance projects procured in the months leading to the peak of the crisis (summer months 2Q2021/3Q2021) experienced delays due to lack of materials and or long lead times. Some projects could not be procured due to the limited number of suppliers available to tender for smaller projects.

3.2. Although the mitigation measures implemented so far have been sufficient to allow for the delivery of majority of the capital projects, it is now evident that this is no longer sustainable, due to the level of inflation predicted in the coming year and the unknown inflation resulting from the conflict in the Ukraine.

3.3. The KCC construction programmes / projects that will be impacted are split into education and corporate programmes, major highways projects and highways asset management programmes.

3.4. Education Programmes

3.4.1. The Basic Need Programme

This delivers new pupil places by expanding existing maintained schools, free schools, or academies, and by establishing new schools. In the next 6 months there is a need to procure construction contracts that are set to deliver over 326 school places. These schemes, based on forecasted tender price indices, will experience the highest impact of the crisis.

Further procurement will also be required for delivery of a further 2,946 school places by September 2023. The impact will be dependent on when the construction contracts will be procured, and the prevailing market conditions at the time.

3.4.2. Annual Planned Enhancement Programme

There are over 330 KCC maintained schools, made up of nurseries, primary and secondary schools. The schools are maintained under this programme which are allocated an annual fixed base budget.

- Day-to-day emergency - £3 million base budget per annum (2022/23).

- Major Projects – These are planned maintenance works, based on condition surveys. There is a £4.9 million base budget per annum, however, the impact has been assessed on a value of £13.9 million worth of works to be procured in the remaining months 2021/2022 and 2022/2023. The reason for the higher value of project works to be procured is:

- Robust Condition Survey Programme
- Deferred projects from previous years
- Facilities Management referrals – that is replacing end of life equipment
- Schools deferring maintenance works
- Resultant works from structural surveys
- Compliance referrals

- Schools Access Initiative – these works involve adjusting schools for accessibility requirements of children and have a £750k base budget per annum. The impact will be assessed on known works planned for the remaining months of 2021/2022 and 2022/2023 valued at £800k.

3.4.3. ***Modernisation Programme***

Schools' upgrade/improvements – The majority of projects involves replacing or repairing temporary school accommodation and there is a base budget of £2million. Inflation is being applied on the identified works required in 2022/2023 valued at £1,723 million

3.5 **Corporate Programmes**

3.5.1 ***Modernisation of Assets Programme (MOA)***

KCC has over 335 corporate buildings which include libraries, adult education centres, youth clubs, children's centres and offices. The MOA programme covers planned and emergency works with the main items of expenditure including repair and replacement works of roofs, building fabric items, doors, and mechanical and electrical items including boilers, lighting and alarm systems. The MOA is allocated on an annual rolling programme budget and in previous years KCC has also authorised / provided additional one-off funding to support delivery of a backlog of maintenance projects under the Maintenance of Assets Plus (MOA +) programme. The impact assessment has been made on the most likely procurement dates of these projects.

3.5.2 ***Individual Capital Projects***

A number of capital projects have been identified that will be impacted by the increase prices on materials.

3.6 **Growth, Environment and Transport**

3.6.1 The GET capital programme is significant, with a 10-year budgeted spend of £0.9bn and a 2022/23 budget of £193m. GET is the place-based directorate and the vast majority of spend is within the Highways service. Highways Asset Management "HAM" accounts for £79m, with other projects accounting for the balance (£114m).

3.6.2 **Highways Asset Management**

The annual budget for Asset Management within Highways is set at approximately £70m but there is some re-phasing of spend for 2022/23 and therefore the budget available is c£79m. The HAM budget (funded by DfT grant and KCC borrowing £25m) is not uplifted annually for inflation, whereas all projects include some level of indexation and price risk. Therefore, the purchasing power of the HAM budget, which is some way short of "steady state" requires more than £100m per year and creates a significant asset management backlog of c£700m and rising. Projections for inflation pressures range from 7-10% and a mid-range pressure of £6m has been included in this report, part of which is the annual unfunded inflation element (c3-4% depending on RPIX indices) with the balance being the latest uplifts caused by the COVID-19 pandemic and the indirect effects of the Russian invasion of Ukraine.

Without further funding, the only way that these inflation pressures can be managed is by further reducing the funding made available in terms of the asset management approach. Spend will still be allocated on a risk-based approach, but the backlog will inevitably increase in a steeper incline and there is likely to be further pressures on the Urgent and Safety Critical capital budget, including asset failure as well as more reactive revenue works.

3.6.3 **Highways Capital Programme**

The majority of projects within the Highways Capital Programme are externally funded with monies already awarded or allocated towards delivery. The current programme is based upon earlier cost estimates that were provided as part of the relevant individual business case submissions. So, whilst some projects are currently in the delivery stage, several are due to award contracts within 2022/23, which will highlight further increases in prices and a likely uplift in the total cost. One recent example has demonstrated that the market has reacted with a 19% increase in costs on one large highway improvement scheme.

Although the majority of concern is around base prices rising, the highways programme is also facing material shortages and pressure on the price of fuel (including the end of red diesel). There is also concern over increased labour costs with limited resource availability, due to larger projects such as LTC and HS2 being progressed and a redirection of external funding to the Midlands and North.

It is currently being explored whether additional calls can be made to those providers of grants, however, it should be noted that where this is not possible, the risk remains that KCC will need to fund any additional pressure (including inflation). This is due to the fact that the majority of grant awards require KCC to become the accountable body for these funds and cover any potential overspend.

On several projects, the available match funding from S106 contributions will also be challenged as many agreements have indexation clauses which the County Council can call on to cover any potential increase.

4. Contractual Position

4.1. The majority of KCC construction contracts are fixed lump sum contracts. Therefore, once in contract, the risk of material cost increases after the contract date sits with the contractor, unless KCC issue a contract variation. In such instances, the risks of no availability, long lead times and material cost increases in the variation may rest with KCC.

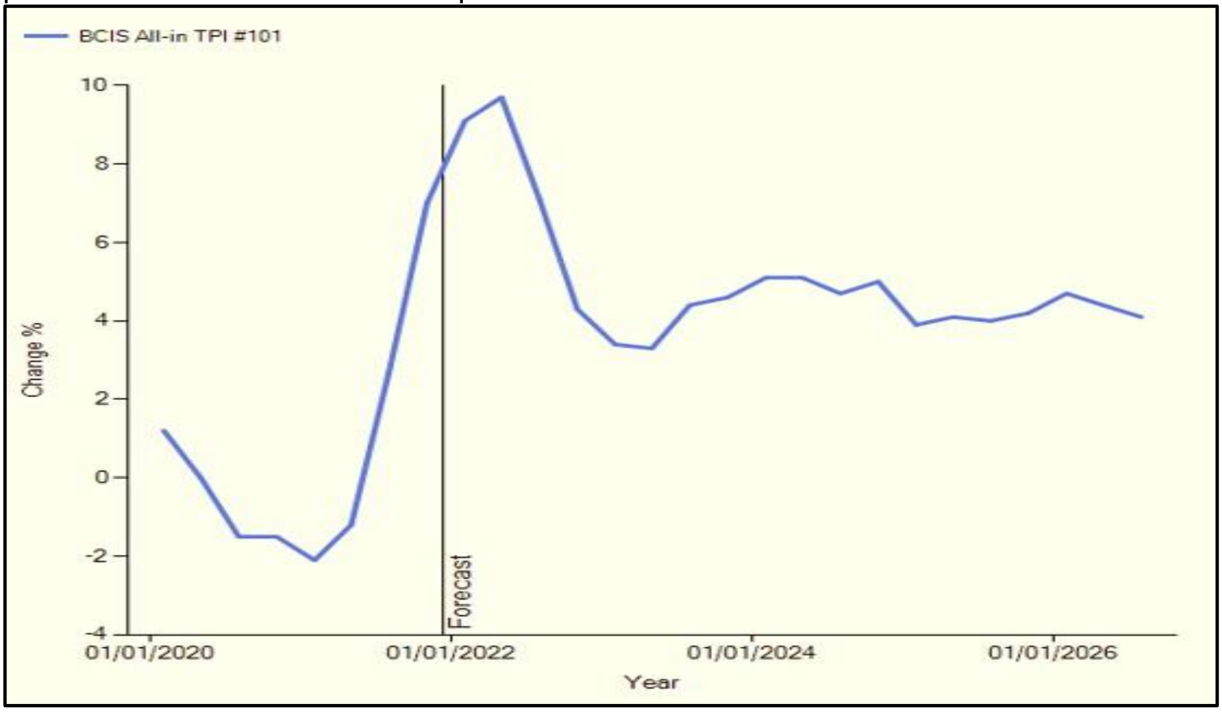
4.2. The contractors ordinarily manage this risk by incorporating a risk allowance in their tendered sum. This results in higher tender sums for KCC, but cost certainty on projects. However, since the construction cost inflation started, KCC have been engaging with the main contractor supply chain to manage and control costs using other contractual mechanisms, such as encouraging contractors to place orders early and paying for materials off site using Vesting Certificates or storing the materials on site.

4.3. Other contractual mechanisms are available to KCC with varying levels of security and risks. The two key contractual mechanisms available are:

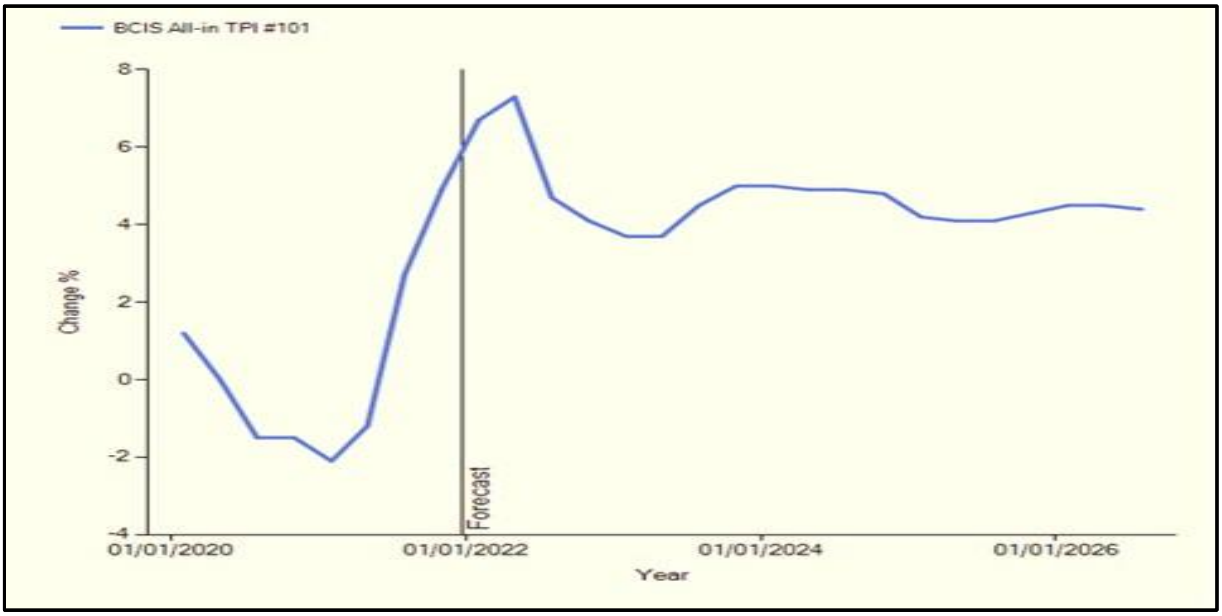
i) Advanced Payment Bonds (APB) – these can be used to facilitate early procurement to deal with shortage of materials. This solution comes at a premium to KCC (bond security is charged to KCC) and is less suitable to deal with the rise of material costs.

ii) Fluctuation clauses - KCC retain risk of material costs and adjustments are made based on agreed inflation indices.

4.4. It is expected that contractor tenders will be higher than in previous years as shown above by the forecast from the BCIS TPI indices and the impact assessments. However, the market remains volatile, and the indices are constantly changing to capture market movements. This is reflected in the two graphs below showing the annual predicted changes recorded on 3 December and 17 December 2021. Graph 3 predicted prices would rise and peak at an unprecedented annual rise of 9.7% in 2Q2022. Graph 4 shows the revised position two weeks later to be a predicted annual rise of 7.3%.



Graph 3 - Annual tender price percentage inflation as predicted on 3 December 2021



Graph 4 - Annual tender price percentage inflation as predicted on 17 December 2021

4.5. To ensure the level of expected risk included in tenders is not excessive, fluctuation clauses can be used. Using fluctuation clauses can ensure the risk is calculated at the time it is presented. This can be of benefit to both KCC and the main contractor in that KCC do not pay excessive risk allowances included in their tenders and the main contractor has peace of mind that when the prices increase, they will be compensated for it on an open book basis.

5. Financial Implications

5.1. The capital allocation for projects / programmes have been set based on historical project cost data. These allocations will no longer be sufficient to cover the expected higher tender prices**.**

5.2. The analysis only includes works that are not in contract (i.e. not included in any contract sums) because works in contract are fixed if KCC do not change the requirements after the contract is let. The analysis has assumed 4Q2021 as the base date of all budgets.

5.3. Percentage inflation has been taken to the point when the works will be procured (on the smaller projects or on “phased projects”) and the assumed mid-point of the construction programme (on larger projects).

5.4. The current total capital allocation against the programmes identified is insufficient to absorb the additional pressures identified above. Additional funds will need to be allocated to meet the costs. These are summarised in the table below:

Programme /Projects	Forecast (without inflation)	Calculated Inflation Pressure	Forecast (with inflation)
Education Projects: *Basic Need up to 2023/2024*	£125,363,995	£8,740,376	£134,104,371
Education Projects: *Annual Planned Enhancement and Modernisation* up to 2022/2023	£16,437,955	£334,310	£16,772,265
Corporate Projects: MOA & MOA+ up to 2022/2023	£14,931,921	£674,668	£15,606,589
Corporate Projects: Capital Projects up to 2022/2023	£22,828,435	£1,101,291	£23,929,726
Major Highways Programme*	£114,000,000	£12,000,000	£126,000,000
Highways Asset Management Programme	£79,000,000	£6,000,000	£85,000,000
Total	**£372,562,306**	**£28,850,645**	**£401,412,951**

*calculated on current forecast position before any schemes are removed

5.5. The £28.8 million will be used as a contingency figure to cover higher tenders' values and any fluctuation adjustments that may be employed in administering the contracts where it is evidenced that any construction inflation cannot be mitigated.

5.6. KCC Infrastructure, Highways and Directorate teams, professional advisors, will continue to liaise with the supply chain to monitor the situation and use all available options to minimise the effects of material inflation.

5.7. The market has been volatile in the last twelve months, and it is predicted this will continue for most of the year of 2022 and the expectation is the market will start stabilising nearer the end of 2022 into 2023

5.8. As the impact on budgets exceeds £1m and will take the project costs over the allocated budgets, a decision is required to authorise use of funds to meet the effects of material inflation over and above current Record of Decision levels or contract values for contracts which are authorised under delegations.

5.9. The current level of inflation is unprecedented and a national issue, which will be impacting on all public sector organisations. Alongside, continuing to lobby government, it is proposed that if it is demonstrated that construction inflation cannot be mitigated, the short-term pressure will be funded from slippage in the current capital programme, which for 2021-22 will be at least £45million. This will require a reprioritisation of the current programme (statutory, health and safety capital spend) removing or delaying lower priority projects that are KCC funded and which have not yet started to deliver a balanced capital programme. It is recognised that over the three year period, there can be no additional prudential borrowing.

5.10. There are a number of funding bids which are expected to be announced shortly which include high needs funding and the DFE school rebuilding programme. These have yet to be finalised and announced, but any success would reduce the current pressure on the capital programme.

6. Legal Implications

6.1. In the absence of mitigation action and additional funding in relation to the school projects due to complete for September 2022 and September 2023, KCC will not be able to meet its statutory duties to provide school places in line with the Kent Commissioning Plan or deliver urgent works across the education and corporate estate which could lead to building closure.

7. Equalities Implications

7.1. An impact assessment has not been carried out, but it should be noted that failure to implement measures will impact on the delivery and quality of school places and accommodation.

8. Governance

8.1. The funding, mitigation activity and delegated authority provided by this decision applies only to capital programme projects approved via the necessary formal governance arrangements (Executive Decision or appropriate delegated authority).

9. Conclusion

9.1. The implementation of the rising fuel prices, the ongoing effects of COVID-19 and BREXIT will continue to impact the cost of construction throughout 2022. Current indices show predicted impact on tender prices (as recorded on 17 December 2021), and this reflects that the current capital allocation against the projects / programmes is insufficient. Due to the volatile and unpredicted nature of the crisis the true outcome can only be ascertained nearer the time of procurement and the capital project team have some contractual mechanisms to reduce the impact, but additional funding is required to deliver the schemes included within this report.

10. Recommendation(s)

Recommendation(s): The Deputy Leader and Cabinet Member for Finance, Corporate and Traded Services is asked to consider and endorse or make recommendations on the proposed decision to:

1. Note the £28.8 million estimated impact on capital budget spend in the Medium-Term Financial Plan of £339.3 million across the capital programme for 2022-23, were already approved via key decision or covered by appropriate delegated authority to be funded from the options identified in paragraph 5.9 of this report;

2. consider the use of Fluctuation clauses when deemed necessary to control costs to KCC and alleviate adverse effects to the main contractor supplier of the rise in material costs; and

3. delegate authority to the Director of Infrastructure or the Corporate Director of Growth, Environment and Transport (for Highway Schemes), in consultation with the Corporate Director of Finance and the Deputy Leader and Cabinet Member for Finance, Corporate and Traded Services, to take the necessary actions, including but not limited to entering into contracts and other necessary documentation to enable the delivery of the capital programme taking into account construction and inflation where existing Record of Decisions levels are needed to be adjusted.

11. Background documents

- None

12. Contact details

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