

**COASTAL RISK MANAGEMENT PROGRAMME – REVISED
PROCUREMENT OF A CONSTRUCTION CONTRACT TO DELIVER
THE COASTAL DEFENCE IMPROVEMENTS**

CLIMATE CHANGE (COUNCILLOR CARO WILD)

AGENDA ITEM: 2

Appendix 1, A and B to this report is exempt from publication on the basis that it contains information of the description set out in paragraphs 14 and 21 of Part 4 of schedule 12 A of the Local Government Act 1972 and in all the circumstances of the case, the public interest in maintaining the exemption outweighs the public interest in disclosing the information.

Reasons for this Report

1. To seek Cabinet approval on the revised design for the coastal protection scheme and the full business case to be submitted to Welsh Government for the Coastal Risk Management Programme.
2. To provide a briefing to Cabinet on the financial agreement with Welsh Government to fund the delivery of the coastal protection scheme.
3. To seek Cabinet approval for the delegation of the award of contract following Welsh Government approval of the Full Business Case, to deliver the coastal defence improvements.
4. To seek Cabinet approval to commit to the funding contribution within the financial implications in Appendix 1.

Background

5. Following assessment reports; *Rover Way Foreshaw Coastal Defence Assessment, Mott McDonald, 2009* and *Cardiff Council Coastal Erosion Risk Assessment, Atkins, 2013*, there was an identified need to improve the condition of coastal defences in the River Rhyrne and Coast around Rover Way.
6. The Coastal Risk Management Programme is in Cardiff Council's Corporate Risk Register.

7. The proposed scheme will reduce flood risk to 2,326 residential and 204 non-residential properties in southeast Cardiff.
8. The scheme has been revised removing the element of river and coastal protection protecting Lamby Way landfill and associated infrastructure.
9. Welsh Government have confirmed the Coastal Risk Management Programme grant will not fund any costs associated with the protection of Lamby Way landfill and associated infrastructure.
10. The scheme will provide defence for a 1 in 200 year severe weather event, plus an allowance for climate change influence of 40%.
11. A procurement exercise took place from October 2021 to January 2022 with one tender submitted.
12. Although the tender was valid, the Contractor was unable to accept award of the contract due to significant inflation following the outbreak of war in Ukraine. The NEC Option C Target Cost contract could not be legally modified to include the X1 clause for inflation.

The Outline Business Case

13. Cardiff Council received 100% funding from Welsh Government for the development of the Outline Business Case. Based on the assessments undertaken the preferred option identified was Option 6 to improve the coastal protection measures as follows:
 - Rock revetment along the coast to manage erosion and wave overtopping
 - Sheet piling along Lamby Way Roundabout
 - Maintain earth embankments elsewhere and raise low points in earth embankments where required to reduce flood risk.
 - Rock scour protection added to Lamby Way Bridge.
14. The consultancy services for the Outline Business Case were carried out by Jeremy Benn Associates (JBA) and procured under the Construction Consultancy Framework managed by the National Project Service (NPS), using the relevant 'Water Management' Lot under the framework.
15. Welsh Government accepted the submitted Outline Business Case in March 2018 as part of a funding application, to proceed to the Full Business Case.

The Full Business Case (revised)

16. Cardiff Council has received 100% funding from Welsh Government totalling £1.13M for the development of the Full Business Case to deliver the detailed design and cost estimates to construct the coastal defence improvements.
17. The development of the Full Business Case and detailed design was awarded to

JBA following a competitive tender under the NPS Framework.

18. There was a requirement to develop the design and full business case concurrently with all required permissions, consents, and licenses for construction, including planning permission, marine license and flood risk activity permit.
19. With agreement with Cardiff Council. JBA employed a Contractor, Knights Brown, to provide Early Contractor Involvement (ECI) advice through the developed and detailed design stages. This enables the Client team to benefit from the knowledge and experience of a Contractor to advise on buildability of the design, programme and cost estimating whilst maintaining control of the design and statutory processes.
20. The preferred option in the Full Business Case, as indicated in the Cabinet Report dated 17th June 2021, for the coastal defence improvements is as follows:
 - Rock revetment along the coast to manage flood and erosion risk in front of Rover Way to the River Rhymney.
 - Raising earth embankments to reduce flood risk.
 - Installation of Sheet Pile with Dycel blocks and brushwood scour protection on the fronting slope along Lamby Way Roundabout.
 - Increase earth embankment at Parc Tredelerch and construct a flood wall at Windsor Gardens in Year 50.
21. Section 5 of the Outline Business Case preferred option (Windsor Gardens and Parc Tredelerch) have been delayed 50 years as there is no flood or erosion risk under present day conditions. Therefore, there is no criteria to support Welsh Government funding for this work at this time.
22. The cost to deliver Section 5 in 50 years' time has been estimated at £3.15M at the time of delivery. Welsh Government have confirmed they will not fund this element at this time.
23. The revised scheme removes the rock revetment along the coast in front of Lamby Way landfill and the erosion protection on meanders opposite Lamby Way roundabout and Cardiff Sailing Club. This change only removes protection to infrastructure relating to Lamby Way landfill and associated aspects such as highways and solar farm.
24. The risk of flooding of 2,326 residential and 204 non-residential properties in southeast Cardiff will be reduced. However, the current risk relating to the infrastructure of Lamby Way Landfill, highways and solar farm will remain. It is intended following the completion of the improvements to remove the risk from the Corporate Risk Register and manage the ongoing risks at a Directorate level.
25. A flood gate will be installed at the access to Cardiff Sailing Club which will need to be maintained and closed when there is a risk of flooding. This will be managed and maintained as part of the flood assets within the Assets and

Engineering Team with operational aspects managed within Highway Operations.

26. The principle of the design is to minimise concerns relating to existing habitats in the tidal influence within the river and coastal foreshore whilst ensuring the coastal protection improvements have limited ongoing maintenance.
27. The full business case presents the preferred option as economic viable with a Benefit Costs Ratio of 1.6. The benefit cost ratio is an indicator showing the relationship between the relative costs and the benefits of a proposed project, expressed as monetary or qualitative terms. Projects with a value greater than 1.0 deliver a positive net present value to the investment being made.
28. The increase in estimated construction costs from the 2018 Cabinet Report has come from a requirement to design for an increase in climate change influence from 30% to 40% as required by Welsh Government and the site investigation boreholes undertaken during the detailed design process.
29. The cost increase relating the climate change is influenced by the following changes:
 - Coastal defences are now larger in height and profile.
 - River section defences are now raised and previous infills defences now require much longer stretches of defence to be constructed and raised.
30. The cost increase relating to the geotechnical site investigations is influenced by the following changes:
 - The results indicate much larger sheet piles are required.
 - Due to the location of bedrock the length of sheet pile is limited. This means that the slope in front of the sheet pile must be maintained to prevent failure. This led to the addition of scour protection to the bank slope fronting the sheet pile sections to retain the slope. The design will also replace the mud over the scour protection on the upper slope to maintain designated mud habitats.
31. The estimated internal costs to deliver the scheme is included in the £5.6M on costs. This will cover the following aspects:
 - Contract Management
 - Cost Management
 - Supervision of work
 - Ongoing support from JBA as designer
 - £5M allowance for risk relating to contract delivery, including inflation
32. The scheme will provide protection to existing key infrastructure, such as Rover Way, adjacent businesses and associated utilities.
33. The scheme will provide a gravel/stone dust path to form part of the Wales Coastal Path linking with existing public rights of way.
34. Construction of the coastal improvements need to commence before 31st March 2023 to meet the requirements of the Welsh Government Coastal Risk

Management Programme (CRMP).

Submission requirements and timelines

35. The Cardiff Coastal Improvement project is identified within the Welsh Government Coastal Risk Management Programme (CRMP). A funding letter from Welsh Government to enable the delivery of coastal defence improvement will not be issued without the following information being provided:
- Full Business Case with tendered costs for the works.
 - Planning consent.
 - Marine Licence (NRW).
 - Copy of the published Coast Protection Notice and report on representations received.
 - Copy of Coastal Protection Act Approval.
 - Any other statutory consents required to carry out the works.
 - Confirmation Land agreements/Crown Estates agreements are in place to enable construction.
 - General Arrangement Drawings.
 - Tender Appraisal Report.
 - Copy of successful tender.
36. The Council has received the Marine Licence dated 21st July 2022 and planning will be reviewing the scheme at the November Planning Committee to support the process of planning consent.
37. The key programme dates are as follows:
- i. Submission of Final Business Case to Welsh Government – October 2022
 - ii. Open tender for delivery of the coastal improvement project – October 2022
 - iii. Award tender for construction contract – January 2023
 - iv. Construction commencement – March 2023
 - v. Construction completion – August 2025

Procurement Strategy

38. Cardiff Council commissioned Faithful & Gould to provide a procurement options report to review the best approach to procure the scheme.
39. Due to the specialist nature of the construction, the recommendation was not to utilise the frameworks available. Although, this may have provided the quickest procurement route, there was a need for the contractors on the frameworks to engage specialist contractors due to the nature of the work. It was felt this would have adversely influenced the cost of the contract and may have led to similar procurement timescales.
40. The approach will be an open tender. This approach allows any contractor to submit a tender for the construction of the coastal improvement schemes.
41. The contract to be used is a target cost contract (NEC ECC Option C) to share risk and reward in the construction stage. This approach should prove attractive

to the market due to the incentives provided by pain/gain mechanism and shared risk between parties.

42. The risk profile for this project is high and Cardiff Council will likely get better value for money with this approach compared to a fixed sum contract where contractors would likely include a significant risk allowance within the lump sum price.
43. The tender assessment will be based on a 60 price / 30 quality / 10 social value split.

Financial Agreement with Welsh Government to deliver the Coastal Protection Scheme

44. The Welsh Government Coastal Risk Management Programme provides a one-off opportunity for local authorities to implement coastal improvements with Welsh Government contributing 85% of construction costs (previously 75%).
45. The purpose of the Welsh Government funding is to assist local authorities in meeting ongoing revenue pressures and free up additional resources to self-finance the coastal risk management project approved through the business case submitted by a local authority.
46. Welsh Government will provide revenue funding to 85% of the capital value of the coastal scheme as a contribution towards the cost of construction work over a 25-year period from the start of the 2022/23 financial year in which work will commence. This un-hypothecated funding will be paid through the Revenue Support Grant (RSG), to support the level of borrowing which will need to be undertaken by the Council. The risk of borrowing in terms of timing and interest costs remain that of the local authority.
47. The constructions costs are the tendered cost from the successful contractor and an additional cost relating to risks delivering the scheme in the form of a risk register approved by Welsh Government within the full business case. This provides a defined cost for the scheme which will be used to determine the upper limit contribution made by Welsh Government. If costs of the project exceed the defined cost of the scheme, all costs will need to be met by the Council in full. No additional WG funding would be available.
48. Cardiff Council will be responsible for funding 15% of the total cost of the scheme following the tender award plus 100% of any costs over those identified in the risk register.
49. Funding for the coastal scheme is comes from supported borrowing from Welsh Government and a Council contribution. The Council contribution is above the levels identified in the Capital Programme. The additional funding to meet the Council's contribution will be managed using earmarked reserves and prioritisation of unallocated grant as set out in the financial implications. Any further costs in excess of the estimate will require movement within the existing approved Capital programme including budgets relating to Council maintained assets in Highways.

Revenue implications for ongoing maintenance

50. The future maintenance costs per annum have been estimated at £165,000 per annum or £16.5M for the 100-year life of the asset.
51. Like structures, such as bridges, the maintenance costs for the flood defences would not be evenly spread across the life of the asset and there would be key intervention periods for maintenance work. The flood gate for the Cardiff Sailing Club will be maintained as part of the highway asset.

Ongoing risks to Lamby Way Landfill and infrastructure

52. Two slips have occurred along the riverbank edging to Lamby Way Tip. Geomorphological assessment verified that an additional section not within the outline business case should be included. This led to the addition of erosion protection works to the meander opposite the sailing club.
53. This protection work has been removed from the contract due to constraints of budgets and Welsh Government confirming this element would need to be funded 100% by Cardiff Council.
54. The infrastructure will continue to be monitored and any protection works required will need to be undertaken by a separate contract.
55. The Flood Management Team will undertake a separate exercise to ascertain the ongoing risks associated to Lamby Way Landfill and associated infrastructure.
56. The cost to protect Lamby Way landfill site and associated infrastructure is estimated at over £10M. However, a decision may be made to protect the infrastructure at a lower level as the Council would not need to meet the Welsh Government requirements from Coastal Risk Management Programme funding and there is significantly less risk to residential properties.

Local Member Consultation

57. The Flood and Coastal Risk Management team consulted the relevant local members from Rumney, Splott, Trowbridge, Adamsdown and Penylan. These wards are impacted by the extent of flooding, if a scheme did not proceed.
58. Local Members have received updates as the scheme has progressed with the latest consultation taking place on 18th May 2021 in relation to the principle design for the coastal protection scheme.

Scrutiny Consideration

59. The Coastal Risk Management Programme was scrutinised by Environmental Scrutiny Committee on 6th March 2018. The Environmental Scrutiny Committee will consider this report on 26 September 2022. Any comments received will be report to the Cabinet meeting.

Reasons for Recommendation

60. To note the revised design for the coastal protection scheme and the financial requirements within the full business case to be submitted to Welsh Government for the Coastal Risk Management Programme.
61. To approve the delegation of the award of contract following Welsh Government approval of the Full Business Case, to deliver the coastal defence improvements.
62. To commit to the funding contribution for the construction coastal protection scheme.

Finance Implications

63. Finance implications are contained within confidential Appendix 1.

Legal Implications

64. The report recommends, amongst other things, commencing procurement. The estimated value of the procurement is such (above threshold) that the contract must be procured in compliance with one of the competitive procedures set out in the Public Contracts Regulations 2015 ('PCR'). In this case it is proposed that a provider will be secured by using the Open procedure under the PCR. The use of the Open procedure should meet the PCR requirement but please note:-
 - i. All interested parties can submit a tender – if this is an active market with many potential bidders then the process could prove cumbersome in terms of the number of bids received . Conversely if there are few potential bidders then this should not prove a problem.
 - ii. If the Open procedure is used then no negotiation with bidders is permitted.
 - iii. The procedure tends to be most suitable where tenders will be easy to evaluate.
 - iv. All tender documentation will be required to be available at the date the contract notice is published . Legal advice should be sought on the procurement documents including the form of contract.
65. It is noted that the service area wishes to use the NEC4 option C form of contract. Further legal advice should be sought but generally, Under Option C, the Client and the Contractor agree a target price. In addition, they agree their respective shares of any savings made if the "actual" price of carrying out the works is less than the target price, or any overrun if the target price is exceeded. Option C therefore provides a means by which financial "pain" and "gain" are shared between the Client and the Contractor.
66. Some of the key points to note about Option C are that:
 - i. the target price is subject to adjustment as a result of compensation

events, such as changes/variations to the Scope;

- ii. the Contractor is paid the full cost of carrying out the works (subject to any Disallowed Cost) plus its Fee, regardless of the target price, until completion of the whole of the works. Following that the Contractor's share of any savings or overruns assessed and taken into account by way of a payment adjustment ;
 - iii. any target price should be set at a realistic level.
 - iv. The practical operation of Option C requires considerable management input, particularly on the part of the Project Manager in assessing amounts due to the Contractor
 - v. Consideration will be required as to what options , additional clauses and amendments (if any) are to be made to the standard form . When matters were previously tendered the contract terms did not contain optional clause X1 (price adjustment for inflation) and consideration will need to be given to how risk is to be allocated in this regard.
67. The Council (as the relevant Coast Protection Authority) has a discretionary power for managing coastal erosion under the Coast Protection Act 1949 ("the CPA") The powers set out in the CPA allow the Coast Protection Authority to carry out capital works and along with The Coast Protection (Notices) (Wales) Regulations 2003 it sets out the procedural requirements. These requirements include the service of notices and the consultation requirements, the management of objections and payments compensation together with the requirement for consents from other bodies (in this instance NRW), that will need to be complied with. Where capital works are to be carried out on land that is not in Cardiff Council's ownership then the consent of third party landowners would need to be secured before any works are commenced. However, where an agreement cannot be reached then section 25 of the CPA contains powers of land entry (although this default entry power is not applicable to Crown land). Any acquisition of land or rights for the purposes of the works will need to comply with the Council's Acquisition and Disposal of Land Procedure Rules with regard to obtaining best value. It is recommended that the award of any contract for works takes into account timescales and possible delays arising from any requirement for access or acquisition of a purchase in land, and for any approval of a scheme works authorised the CPA, planning permission and other statutory authority required, such as marine licences, that may delay works being undertaken.

Grant

68. It is noted that the contract will be partly funded by way of a grant made available through the Welsh Government. Accordingly, the Service Area will need to be satisfied that the Council can comply with any grant conditions attached to the funding.
69. It is recommended that the advert and procurement documents make it clear that the award of contract is subject to grant funding.

Equality Duty

70. The Council has to satisfy its public sector duties under the Equality Act 2010 (including specific Welsh public sector duties) – the Public Sector Equality Duties (PSED). These duties require the Council to have due regard to the need to (1) eliminate unlawful discrimination, (2) advance equality of opportunity and (3) foster good relations on the basis of ‘protected characteristics’. The ‘Protected characteristics’ are: • Age • Gender reassignment • Sex • Race – including ethnic or national origin, colour or nationality • Disability • Pregnancy and maternity • Marriage and civil partnership • Sexual orientation • Religion or belief – including lack of belief.

Well-Being of Future Generations (Wales) Act 2015 - Standard legal imps

71. The Well-Being of Future Generations (Wales) Act 2015 (‘the Act’) places a ‘well-being duty’ on public bodies aimed at achieving 7 national well-being goals for Wales - a Wales that is prosperous, resilient, healthier, more equal, has cohesive communities, a vibrant culture and thriving Welsh language, and is globally responsible.
72. In discharging its duties under the Act, the Council has set and published well being objectives designed to maximise its contribution to achieving the national well being goals. The well being objectives are set out in Cardiff’s Corporate Plan 2022-25. When exercising its functions, the Council is required to take all reasonable steps to meet its well being objectives. This means that the decision makers should consider how the proposed decision will contribute towards meeting the well being objectives and must be satisfied that all reasonable steps have been taken to meet those objectives.
73. The well being duty also requires the Council to act in accordance with a ‘sustainable development principle’. This principle requires the Council to act in a way which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs. Put simply, this means that Council decision makers must take account of the impact of their decisions on people living their lives in Wales in the future. In doing so, the Council must:
- Look to the long term
 - Focus on prevention by understanding the root causes of problems
 - Deliver an integrated approach to achieving the 7 national well-being goals
 - Work in collaboration with others to find shared sustainable solutions
 - Involve people from all sections of the community in the decisions which affect them
74. The decision maker must be satisfied that the proposed decision accords with the principles above; and due regard must be given to the Statutory Guidance issued by the Welsh Ministers, which is accessible using the link below:
<http://gov.wales/topics/people-and-communities/people/future-generations-act/statutory-guidance/?lang=en>

General

75. The decision maker should be satisfied that the procurement is in accordance within the financial and budgetary policy and represents value for money for the council.
76. The decision maker should also have regard to, when making its decision, to the Council's wider obligations under the Welsh Language (Wales) Measure 2011 and the Welsh Language Standards.

Property Implications

77. Strategic Estates have assisted the Coastal Risk Management Team to identify land ownership details relevant to the proposed scheme.
78. A mix of Council and privately owned land is potentially affected, the full impact of which needs to be explored in further detail, particularly in regard to Council managed operational and leased assets. For example it is noted Lamby Way is excluded from the scheme, a key operational asset where it is important to understand short, medium and long-term implications..
79. It is advised the project team engage with strategic estates as part of the governance of the scheme to review all land and property matters and fully understand the strategic and transactional implications.
80. Where there are any property transactions or valuations required to deliver any proposals, they should be done so in accordance with the Council's Asset Management process and in consultation with Strategic Estates and relevant service areas."

HR Implications

81. There are no HR implications to be considered in this report.

RECOMMENDATIONS

Cabinet is recommended to:

1. approve the revised design for the coastal protection scheme and the full business case to be submitted to Welsh Government for the Coastal Risk Management Programme.
2. Approve the commitment of the funding contribution identified within the financial implications in Appendix 1.
3. delegate authority to the Director of Planning, Transport and Environment subject to consultation with the Cabinet Member for Climate Change, s.151 Officer and Director Governance and Legal Services, to deal with all aspects of contract award following the approval of the Full Business Case by Welsh Government.

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| SENIOR RESPONSIBLE OFFICER | ANDREW GREGORY Director Planning, Transport & Environment |
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Appendix A - Full Business Case

Appendix B – Technical Note on revised scheme

Appendix C - Marine License Order

The following background papers have been taken into account:

Cabinet Report 15th March 2018 – Coastal Risk Management Programme

Cabinet Report 17th June 2021 – Coastal Risk Management Programme – Full Business Case and Procurement of Construction Contract

National Strategy for Flood and Coastal Erosion Risk Management in Wales
<https://gov.wales/national-strategy-flood-and-coastal-erosion-risk-management-wales>