BRIEFING NOTE

Lipson Vale Phase 1 Trefusis Pk Flood Defence (Trefusis Park Flood Relief Scheme)

Following the recent approval of the Capital Investment Business Case (see attached) by CPOG and CPB, it is now recommended that the Leader:

- Approves the Trefusis Park Flood Relief Scheme Capital Business Case
- Approves the allocation of £3,784,658 within the Capital Programme for the Trefusis Park Flood Relief Scheme
- Authorises the procurement process
- Delegates the award of contracts and any minor variations, plus the approval of the project programme, to the Service Director for Strategic Planning and Infrastructure where they do not already have authority to do so

The main scheme costs are projected to be in the region of £3.7m, which are fully grant funded by the Environment Agency (EA) and the Devon Resilience Innovation Project (DRIP). These costs include a contingency of approximately £500k (approx 13%).

Partnership funding contributions of £574k have been secured from South West Water (SWW) in respect of planned upstream surface water separation works.

SCHEME SUMMARY

The attached Capital Investment Business Case sets out the following in detail:

- Background of flooding in the Lipson Vale and Bernice Terrace area
- Details of the proposed scheme
- How the Scheme will address the current situation
- What will happen if the Scheme doesn't proceed
- Details of the preferred design option
- Why the Scheme is a good capital investment and advantageous to PCC
- Why the preferred option is the right balance between risks and benefits
- Other discounted options
- Project risks
- Outcomes and benefits
- Climate Impact Assessment

In summary, the Scheme is the first phase of a wider flood risk management project in the Lipson / Laira area, designed to provide storage for surface water during storm events, to reduce flood risk and storm overflow spills, and to create environmental enhancement. The surface water storage within the Park will also allow SWW to separate surface water out of the combined system upstream, thereby increasing capacity in the combined sewerage system and further reducing flood and sewerage spill risk.

Once construction of the Scheme completes, 21 properties will be better protected from surface water flooding. This number will increase to 147 once SWW have completed their upstream works, with an estimated reduction in flood damages over the design life of the scheme (estimated by the EA) of £12.4M.

The Scheme and further phases of work should avoid properties within the Lipson Vale / Bernice Terrace area becoming unviable and, therefore, abandoned, with the associated blight on the wider area's economic activity.

The Scheme and combined works will also:

- reduce the frequent disruption of the movement of traffic along the B3214 (Lipson Vale) between eastern suburbs and Plymouth city centre, including five bus routes
- reduce the ongoing disruption to the education of 1,400 children attending Lipson Vale Primary School and Lipson Co-operative Academy
- reduce the risk of Combined Sewer Overflow (CSO) spills, with associated bathing water quality improvement in the River Plym
- reduce the risk of sewerage pollution in the River Plym
- provide habitat improvement, including improvements to 0.1Ha of grassland and a biodiversity net gain of at least 10%
- provide significant amenity improvements, including improved cycling and walking provision
- provide additional capacity in the combined drainage and sewage network for new development

As far as impact upon the climate is concerned, most of the outputs of the Scheme have been assessed as positive with long-term benefits. Where there is no or neutral impact, there is mitigation.

The key identified risks are:

- unauthorised occupation of the site or the compound
- ineffective temporary surface water management works
- UXO unearthed on site
- public or political pressure requiring the number of tipper lorries to be restricted per day
- contaminated land and materials being identified as more hazardous than anticipated
- unavailability of materials
- the Royal Society for the Prevention of Accidents requiring additional safety measures

STRATEGIC CASE

Which Corporate Plan priorities does this project deliver?

- Keeping children, young people and families safe,
- Green investment, jobs, skills, and better education
- Spending money wisely
- Focussing on prevention and early intervention

How does the project deliver or support delivery of the Plymouth Plan / Joint Local Plan Policies?

Plymouth Plan

- Plymouth as a healthy city:
  - Assisting good health and wellbeing within the Lipson Vale area, where people feel safe in their homes
  - The wellbeing of children, young people and their families is protected and promoted
  - Everyone has a decent home that suits their needs
  - Good access to high quality open space
  - Improved local environment, leading to improved public health and wellbeing
  - Built natural environment to support health and wellbeing
- Plymouth as a growing city:
  - Infrastructure project delivered to enable economic growth within the Lipson Vale area
  - Lipson Vale area is more resilient to the social, economic and environmental impacts of climate change
- Plymouth as an international city:
  - Seasonal wetland basins and SuDS scheme support Plymouth as a leading sustainable clean, green city, addressing its climate emergency

Joint Local Plan

- SO12 (Delivering infrastructure and investment):
  - Assessing infrastructure and investment needs to enable growth, remove barriers to investment and deliver sustainable communities
  - Creating supportive conditions that enable and encourage private, public and community sector investment in new jobs and infrastructure
- SPT1 (Delivering sustainable development):
  - Opportunities for business growth
  - Accessible green space that meets the needs of local people
  - Resilient community and development, able to accommodate the impacts of climate change without causing detrimental impacts to other communities and developments, e.g. by increasing flood risk
  - Gain in biodiversity
  - Minimisation of pollution and adverse environmental impacts
  - Local distinctiveness and sense of place is respected, maintained and strengthened through high design standards
- SPT2 (Sustainable linked neighbourhoods and sustainable rural communities):
  - Promote resilience to future change
  - Well served by walking and cycling opportunities
  - Safe, accessible, healthy and wildlife-rich local environment, with well-designed public and natural space that is family friendly and welcoming to all
  - Provide a positive sense of place and identity
- SPT10 (Balanced transport strategy for growth and healthy and sustainable communities):
  - Improved walking and cycling provision through Trefusis Park
- SPT12 (Strategic approach to the natural environment):
  - Enhancing green space that meets the needs of communities and wildlife
  - Improved cycling provision
- SPT13 (Strategic infrastructure measures to deliver the spatial strategy):
  - Strategic green infrastructure site
  - Strategic drainage and flood defence

- DEV1 (Protecting health and amenity):
  - Ensuring public space is designed to be accessible to all people, including people with disabilities or for those whose mobility is impaired by other circumstances
- DEV2 (Air, water, soil, noise, land and light):
  - Avoid harmful environmental impacts and health risks arising from soil, water or land pollution
  - Protect, enhance and restore water quality in the watercourse within Trefusis Park and the River Plym
- DEV20 (Place shaping and the quality of the built environment):
  - Using resilient materials and design solutions
  - Achieving a good quality sense of place and character
  - Delivering locally distinctive design
  - Delivering landscape design that is appropriate to the location, with full consideration given to its future management and maintenance and the need for landscape measures that are resilient
  - Ensuring that the design layout adequately contributes towards high standards of community safety
  - Repairing a damaged environment
- DEV23 (Landscape character):
  - Designed to respect scenic quality and maintain the area's distinctive sense of place and reinforce local distinctiveness
  - Conserve and enhance the characteristics and views of the area along with valued attributes and existing site features such as trees, hedgerows and watercourses that contribute to the character and quality of the area
  - High quality landscape design appropriate to its landscape context
  - Restore positive landscape characteristics and features (naturalised watercourse) that reinforce local landscape quality and distinctiveness
- DEV26 (Protecting and enhancing biodiversity and geological conservation):
  - BNG of at least 10%
  - Long term management of biodiversity features retained and enhanced within the site
- DEV27 (Green and play spaces):
  - Improving quality of accessible green space
- DEV28 (Trees, woodlands and hedgerows):
  - Design minimises the number of trees to be felled (limited to 5 low quality trees)
  - Net gain on the number of trees within the park because of new planting
  - New hedgerow to be planted onsite
- DEV32 (Delivering low carbon development):
  - Design includes a 40% climate change allowance
  - Carbon footprint of the preferred option is the lowest of the options that satisfactorily achieves the Environment Agency's Critical Success Factors. The net carbon outcome of the project has been assessed by the Environment Agency as "Moderate sink" due to the creation of wetland and riparian planting
- DEV 35 (Managing flood risk and water quality impacts):
  - SuDS project that will reduce the risk of flooding in the Lipson Vale and Bernice Terrace area
  - Development within the City's Critical Drainage Area to reduce the risk of surface water flooding

How does the project support other strategies and plans?

Local Flood Risk Management Strategy

- Key issue: Tidally influenced surface water flooding around Lipson and Laira
- Objectives:
    - Reduce risk of surface water flooding in Lipson and Laira
    - Remove pollution discharge into the River Plym
- Delivery: Lipson Vale Trefusis Park and Bernice Terrace Integrated Urban Drainage Modelling

PCC's Green Minds Model

The scheme aligns with the objectives of PCC's Green Minds model, which seeks to re-wild urban parks, gardens and verges, introduce a new system of working with partners and crucially, encourage more people from all walks of life to enjoy the health benefits that green spaces provide.

SWW's Plans

The separation of surface water drainage from the combined network aligns with SWW's "Downstream Thinking" initiative and SWW's AMP7 ODI drive to reduce the number of properties with internal flooding. It assists with lowering loading on the combined network helping to reduce CSO spill volumes and frees capacity for development.

OUTCOMES AND BENEFITS

Financial outcomes and benefits:	Non-financial outcomes and benefits:

• Direct benefits to PCC:
  ○ Reduced costs for Street Services having to clear flooding
  ○ B3214 (Lipson Vale) not regularly being damaged by flooding
  ○ Economic growth possible in the Lipson Vale area because the barrier of the overloaded combined drainage network will be significantly reduced
• Reduction in flood damages:
  ○ Homes (direct, indirect, vehicles)
  ○ Non-residential properties
  ○ Public services:
  ▪ Schools (above floor flooding at one primary school and loss of access to one secondary school)
  ▪ Clearance of flood debris from public spaces
• Reduction in volume of water entering the combined sewer network:
  ○ Reduced volume treated by SWW, therefore reduced energy and infrastructure required, leading to lower costs
	• Reduction in flood damages:
	  ○ Homes (intangible, mental health and risk to life)
	  ○ Disruption of road traffic including bus services
	• Improvement of public amenity spaces within Trefusis Park (interesting green space, new tree planting and hedgerow, new seating and paths, new half-size basketball court)
	• Habitat improvement within Trefusis Park due to the naturalisation of a 250m section of concrete channel and 0.1ha concrete amenity pond
	• Reduction in volume of water entering the combined sewer network:
	  ○ Reduced volume treated by SWW, therefore reduced energy and infrastructure required, leading to less carbon emissions
	  ○ Freed foul water capacity within the combined drainage network
	• Reduction in the volume of water spilled via CSOs to the water environment, therefore improving water quality

○ Freed foul water capacity within the combined drainage network opening opportunities for development	• Enhanced quality of surface water entering the Plym through passive water polishing measures

KEY RISKS

Strategic risks have been identified as:

- Reliance on partner organisations working together, which requires alignment of funding streams and priorities
- Flood event prior to the completion of construction
- Inflation, recession or other economic pressures altering the Partners' priorities or their capacity to deliver projects
- The project being disrupted, delayed or stopped due to:
  - Adverse public opinion
  - Change in local, regional or national priorities with regards to flooding

Main risks/issues and assumptions have been identified as:

Risk/issue	Impact	Post mitigation		Assumption	Management
		Probability	Severity		
Site occupied by travellers, homeless or itinerant group	Delay in works. Cost to clear site and keep people safe.	L	M	Until the site is fenced there is the potential for it to be occupied	Contractor is required to fence the site during the construction phase
Embankment design needs to change due to material quality or constraints on site	Increase in cost to import additional material and rework design.	L	L	Surveys are accurate. High probability that fill material will match specification	Surveys have been undertaken and design developed based on the anticipated fill material.
Temporary over pumping/fluming works ineffective and change to methodology required	Delay in works increasing costs and additional temporary works required	L	M	The estimated over pumping capacity is reliable.	Storm over pumping capacity has been estimated based on output from the SWW model
Maintenance considerations require the revision of the design	Additional cost to rework design, additional time to secure funding and agree revised maintenance schedules	L	M	The council's Green Spaces and Highways maintenance will continue to undertake their current maintenance activities	Teams maintaining the works have been consulted throughout the development of the design. The design has sought to reduce existing maintenance commitments
Cost of SWW's element of the works greater than currently forecast – e.g. incorrectly chartered sewers	Redesign, cost engineering and delay. Additional input to secure funding.	L	H		SWW has utilised an experienced team to develop the sewer separation proposals - "routine" business activity for SWW. SWW has access to a large funding allocation to undertake this and hopefully other works, with this project being their priority.

MILESTONES AND DATES

- Award of contract and any minor variations, plus approval of the project programme –April 2025
- Start of construction – May 2025
- Completion of construction – January 2026

FUNDING

The attached Capital Investment Business Case has recently been approved by CPOG and CPB.

We now wish to bring the main scheme funding into the capital programme. The main scheme costs are projected to be in the region of £3.7m, which are fully grant funded by the EA and DRIP. These costs include a contingency of approximately £500k (approx 13%).

REVENUE & VAT IMPLICATIONS

Tax and VAT implications:

The project will not directly generate any VAT-exempt income for PCC. Flood risk management works are a statutory, non-business activity of the local authority and so any VAT incurred by PCC on costs relating to this flood defence project will be fully recoverable and there will be no adverse impact on PCC's partial exemption position.

Revenue implications:

Revenue costs are not expected to be incurred until after year 5. Maintenance of the basketball hoops and lifebuoys are not expected to result in a pressure on BAU maintenance costs ongoing.

RECOMMENDATION

It is recommended that the Leader:

- Approves the Trefusis Park Flood Relief Scheme Capital Business Case
- Approves the allocation of £3,784,658 within the Capital Programme for the Trefusis Park Flood Relief Scheme
- Authorises the procurement process
- Delegates the award of contracts and any minor variations, plus the approval of the project programme, to the Service Director for Strategic Planning and Infrastructure where they do not already have authority to do so