# Points from the CALEY GREEN PROPOSAL – PARISH COUNCIL'S WORKING DOCUMENT

Draft 4 (8 July 2021)

| No. | Objective | Desired Outcome | Options | Source | Possible Issues | Comments in Response |
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| **1.1** | To provide a launching area for river craft | Allocated launching area enables river to be accessed without undue erosion of riverbank | To replace existing wooden revetment, approx. 10m | | Revetment will be short lived and will be damaged by river users coming out of river.<br><br>Possibly increase influx of visitors, increasing likelihood of damage to river | • Green oak revetment is NOT short lived and is very tough. It WILL prevent erosion of the bank.<br>• The PC has been awarded a grant towards replacing the wooden revetment if they do it this year. There's no reason not to go ahead with that.<br>• Oak revetment will NOT increase visitors. And planted coir will not reduce the number of visitors. Visitor numbers have reduced vastly and will do further once Covid is over. |
| **1.2** | To prevent erosion points at extents of revetment | To prevent erosion points at extents of revetment | Planting either side revetment with small, limited area of ? water iris | | Restricted access to riverside and clear view of river | • This will interrupt the view.<br>• It may need maintenance to keep vegetation under control; that means expenditure.<br>• Yellow Flag water iris, *Iris pseudacorus,* is a rhizomatous perennial forming extensive colonies growing to 100–150cm (39–59 ins). |
| **2.1** | To restore riverbank to its previous alignment | Reinstate silt to eroded area of riverbank | To transport approx. 20 tons of silt to build up lost area of Erosion. Silt may introduce unwanted contamination. Transport will cause damage to Green | SCC Senior Ecologist site mtg 22.6.21 | Silt may introduce unwanted contamination.<br>Transport will cause damage to Green | • Soil was eroded, not silt.<br>• If silt is needed why not take some of the excess from the river. The middle of the bay is very silted up, as are other nearby stretches.<br>• There would be no contamination or transport across the Green.<br>• Silt is very fine and easily washed away, unless very well protected from river flow. Won't topsoil also be needed to make up the grassed area? |
| **2.2** | 2.2 To protect curved area of riverbank from further erosion and long term flood risk – area previously protected by reed bed | Riverbank is protected from further erosion but with attention to maintaining as clear a view of the river as posible | 2.2.1 Pre-seeded coir rolls to provide a base for riparian growth. Low native non invasive plants<br><br>2.2.2 Re-introduction of reeds along riverbank<br><br>2.2.3 Plant small pocket of reeds on green side of stream/culvert | Salix.com<br><br>SCC Senior Ecologist and EA – reeds would be the preferred option encouraging wildlife and providing habitat for fish fry | Coir rolls may include species that grow taller than desired<br><br>Reeds will grow higher than 1m and obscure view | • There will be no flood risk – that's what the sluice gate and flood relief channel are for.<br>• Most species included in pre-seeded or pre-planted coir rolls grow taller than desired!<br>• Coir roll introduces non-local material (like your comment on Aqualog). The y are made from coconuts and imported from Sri Lanka. The coir is netted with synthetic multi strand fibre.<br>• Clear a view as possible is not much of a guarantee!!!<br>• In the SCC & PC joint statement (June CT) it said: *"... have **NO** plans to block out the view of the river at Caley Green for visitors or the properties of residents at the southern end of Bear Street."* Already you have changed your tune.<br>• Reeds, sedges, rushes and grasses grow to over 1½ meters high and have creeping rhizomes forming spreading dense clumps, Water Iris and Purple Loosestrife also grow to 4ft plus.<br>• There are already reeds at the end of the culvert protecting the fish fry and blocking the view; they have extended rapidly. More would block the view further. |

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| | | | 2.2.4 Plant 4 willow trees along whole stretch of open riverbank.<br>2.2.5 Plant willow on green side of stream /culvert to protect corner from erosion | SCC Ecologist Roots will provide stability for riverbank and canopy will cool water and attract fish breeding | Willows along the riverbank will obscure view of river<br><br>Willow will need to be maintained to agreed size. Consultation with Householder. | • A Willow on that location will obscure the view from Bear Street.<br><br>• Why not replace the Willows that were lost in recent storms<br><br>• Caution is needed when planting Willows near properties, future owners may object. |
| | | | 2.2.6 Insert gabion cages to line the river curve from the revetment to the stream | Cllr Dawn Harris PC | Not recommended by EA: introduction of materials not natural to environment.<br>Last 40-60 years | • They usually last 60 years with galvanised steel wire.<br>• The stone/rock is a natural material.<br>• They give shelter for fish spawn and provide habitat for invertebrates. Small plants will naturalise in them |
| | | | 2.2.7 Insert Aqualogs to line the river curve | Sally Dalton Zoom meeting 8.7.21 | Is non-biodegradable and introduces nonlocal material. Expensive, unwieldy. Is not a 'soft' revetment and would provide a harder protection than needed. Would be left with a stony edge | • Aqualog is are an organic long term revetment made from a very durable and naturally occurring German coal industry by-product. Xylit is a tough, woody fibre made into Aqualog biochar fibre rolls which is exceptionally long lasting and flexible, and can provide an alternative habitat for wild flora and fauna.<br>• It is considered a 'soft' revetment.<br>• It is not unwieldy; to quote James Carr, it's heavier to work with than coir.<br>• It may be more expensive than planted coir but would not require the ongoing regular maintenance costs for years to come.<br>• Has the price actually been established?<br>• Surely the stronger the protection the better.<br>• Suppliers do not agree there would be a 'stony edge'. The initial surface roughness encourages silt accretion and naturalisation. |
| **2.3** | To protect from erosion the section of riverbank between stream and revetment (left hand side) | Riverbank is protected from any future erosion | Pre-seeded coir rolls to provide a base for native, low level riparian growth | SCC Senior Ecologist site mtg 22.6.21 | Coir rolls may include species that grow taller than desired | • There's no 'may' about it – plants suitable for coir rolls DO include species that grow taller than desired – 4 feet plus.<br>• Other solutions will protect the riverbank from future erosion |
| **2.4** | To protect section of riverbank between revetment and existing reed bed (right hand side) | Riverbank is protected from any future erosion | 2.4.1 Pre-seeded coir rolls to provide a base for native low-level riparian growth<br>2.4.2 Plant willow tree next to existing reed bed<br>2.4.3 This stretch of riverbank is not currently vulnerable to erosion – to leave clear | SCC Senior Ecologist<br><br>*2.4.3. James Carr to advise on whether this area is vulnerable to erosion* | Who will carry out maintenance, and how will it be monitored? | • Riparian growth will not be low level<br>• And who will be paying for all the ongoing maintenance? Other options wouldn't incur such maintenance.<br>• The PC does not have a good reputation for maintenance to some open spaces; i.e. the Horsewatering, the overgrown hedge at Pop's Piece has obscured the view, a wild flower patch at the allotment field was a flop.<br><br>• A Willow tree may block the view |

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| **3.1** | To ensure bench(es) are suitably located | Bench(es) are situated to allow clear access along footpath/allow river users to enter river, whilst having a clear view of river | 3.1.2 Existing bench to be relocated further away from revetment | | Current position of bench hinders entry to river by river users<br>Lack of funding to pay for relocating existing bench and path, and for any new benches | • Current position of bench would NOT hinder launching of river craft if the revetment was extended round the bay or a solution other than coir planting is used.<br>• The existing bench should not be relocated; it is ideal; on flat ground for those less mobile and in wheelchairs. |

**<u>My Other points</u>:**

This document fails to mention **Rock Roll** as a solution which I have mentioned several times at meetings with the PC. Similar to gabions, using natural materials but without the metal cage. Pre-filled Rock Rolls are a robust and permanent revetment. They provide an instant flexible solution to many scour problems and are capable of resisting high velocities and shear stress in rivers. Rock Rolls provide a solution which can support healthy invertebrate and even native crayfish populations. They also accrete silt and can be fully vegetated. Grass can grow right up to and on top of them. The cost may be a bit more expensive than Coir Roll but Rock Roll will not need ongoing annual maintenance.

Coir rolls can be applied to a water depth: 0.1m to 0.5m, <u>or up to 1 metre if raised on rock rolls or faggots</u>. As the Green is being claimed back and the coir roll positioned further into the river this will be deeper than the maximum diameter of coir rolls, the thickest available being 400mm (16inches). What provision is being made for this?

There is no mention of a **fence/barrier to protect the coir roll**. It has been mentioned at meetings. Is this an omission or has it been eliminated from the proposals? If so, might it be brought back into play?

In point 2.2.7 it states **Aqualog "would provide a harder protection than needed."** How can this be a bad thing? This part of the river is low flowing unless river levels are very high and the flood channel in full use. A strong revetment caters for both situations. The same goes for other revetment choices: gabions, rock roll and green oak.

It is likely that a number of **local residents would contribute to the cost** and/or fundraise towards the cost of a revetment solution they were happy with, i.e. green oak revetment being extended round the bay was to be installed. *(Some residents offered to pay for this a few years ago)*

<u>In the PC's Caley Green update in the Community Times</u>:

It says "the rate of flow of the river has increased", This is not the case and at the recent Zoom meeting James Carr said there was: "slow flow on this part of the river".

It says *"a cliff edge will form and there will be a risk of flooding".* There is no flood risk – that's what the sluice gate and flood relief channel are for, when the river is high the water is diverted away from the village. 'Cliff edge' type erosion occurs in faster flowing water, where the toe of the bank (bottom of the bank) erodes and the top then may collapse. At Caley Green the top of the bank has eroded, not the toe. If the toe was in danger of eroding additional measures may be needed, i.e. additional erosion control beneath the coir roll.

It says "A hard edge such as concrete or wood would result in the water bouncing off rather than being absorbed and lead to erosion problems elsewhere." The riverbank next door and further downstream is very adequately protected by residents' revetments or by thick overgrown reeds on the Meadow side.

It seems the PC's experts all have interests in biodiversity and ecology. The experts the PC need to take notice of are professionals in river engineering.