## Introduction

The Council receive many enquiries regarding flooding on the South Inch and in particular the footpath adjacent to the railway that allows access to/from Glenearn Road. Many residents also request that the Craigie Burn is dredged to solve the problem.

This newsletter aims to provide you with information on why the South Inch is allowed to flood; the reasons why the Council does not dredge the Craigie Burn and the other measures we are taking to reduce flood risk.

## Why Does the South Inch Flood?

Flooding is a natural phenomenon that can never be entirely prevented. The South Inch has always flooded as it forms part of the flood plain for the River Tay and the Craigie Burn.

In January 1993, Perth was severely affected by flooding from the River Tay and the Craigie Burn with a resulting damage of around £26M. After the flood event a detailed investigation was carried out and the Perth Flood Prevention Scheme was completed in 2002. The scheme involved the construction of a series of flood walls and embankments to contain flood water from the River Tay and the Craigie Burn.

The scheme also included other flood protection measures such as flood storage reservoirs, flood gates and pumping stations. A flood storage reservoir is an area of land that is allowed to flood in order to reduce the volume of water in the river channel and therefore help to lower flood levels.

Flood defences were raised around the South Inch some time ago to form a flood storage reservoir as part of the works for the Perth Flood Prevention Scheme. This area is therefore designed to flood as illustrated below.

The South Inch flood storage reservoir can potentially store up to 122,000m³ of flood water. During times of flooding and/or high tide on the River Tay, the Craigie Burn can be prevented from flowing away and can back up. As part of the Perth Flood Prevention scheme, a tide (sluice) gate has been installed which prevents this and flood water is allowed to overflow onto the South Inch (the extent of the flood storage reservoir is shown in blue below). The flood water gradually fills up the reservoir and if it reaches its capacity the water will flow into an 'overflow chamber'. This overflow chamber is connected by a culvert to a pumping station which pumps the water back into the River Tay.

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The flood water is contained by the walls, embankments and flood gates around the South Inch. These flood gates were installed to maintain public access to the South Inch in dry conditions and are assessed then shut if required by the Council during flood conditions. The Council monitors any flood warnings issued by SEPA and has a remote monitoring system for the River Tay and the Craigie Burn which informs the decision to close the flood gates. When this happens, 'Footway Closed Signs' are erected at Kings Place, Edinburgh Road (where Craigie Burn flows under the road), Edinburgh Road (at the junction of Marshall Place) and Glenearn Road (at access path to the South Inch).

The South Inch storage reservoir incorporates a number of drains that allow the storage area to drain back to the Craigie Burn when the level of the burn recedes. Depending on the duration of the flood event it can take up to several hours or days for the water in the reservoir to dissipate.

## "The South Inch floods regularly. Why don't you dredge the Craigie Burn? This would solve the problem."

After a flood event, dredging is frequently requested by members of the public as a means to solve the flooding problem.

Dredging of watercourses is an engineering activity which is regulated by SEPA and it is not something which is carried out as a matter of routine by either local authorities or

landowners. Indeed there is evidence that indiscriminate dredging and other hard engineering works can cause environmental damage, de-stabilise river environments and actually increase flood risk.

A significant amount of material would also have to be removed from the burn to try to contain a flood event and deliver any significant reduction in flood risk. Localised dredging simply creates a sump which fills instantly providing no additional flow capacity or conveyance and hence no benefit. It is likely that the burn would simply replace any sediment removed and therefore dredging would have to be repeated at regular intervals with a consequent ongoing high cost. In addition, increasing the flow capacity of the burn could actually pass a greater flow downstream hence increasing the risk of flooding in other areas. The culvert further downstream, which runs from the prison to the River Tay, has a limited capacity and would also have to be enlarged at significant cost to accommodate the increased volume of water.

However, the Council carries out inspections of the Craigie Burn every 6 months and will clear any significant accumulations of sediment or vegetation that have built-up. This has been carried out on a number of occasions in the past; most recently in June 2017, when sediment was cleared from the burn along South Inch Terrace.

The Perth Flood Prevention Scheme is also in place and offers a significant degree of protection to properties in the area.



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