

IRONPOT CREEK

DRAINAGE AND EROSION MANAGEMENT PLAN

A SUMMARY

In 2012, a report was commissioned by Ipswich City Council with an aim to gain a better understanding of the bank instability and erosion issues along Ironpot Creek between Walter Zimmerman Park and Ironpot Creek Reserve. The report was also prepared to provide a suite of practical management options suitable to be used by landholders wanting to address erosion impacts on their properties, in partnership with their neighbours and Council.

The northern section of Ironpot Creek suffers from significant and active stream erosion that, if left unmanaged or mitigation actions uncoordinated, could pose a threat to public safety, private property, infrastructure and the environmental values of the creek and downstream waterways.

The causes of erosion are a result of a combination of historical land clearing, urban and infrastructure development, changed water flow patterns and natural soil characteristics that have increased and accelerated runoff. This in turn has enlarged (both deepened and widened) the creek channel causing an increase in flow volumes and velocities leading to extensive bank erosion, mobilisation of sediment and risking damage to private property.

The Ironpot Creek Drainage and Erosion Management Plan was produced based on the consultation with local residents, a detailed ecological and geomorphologic assessment of the stream, and modelling simulations of stream flow behaviour.



CONSULTATION

The community living in the vicinity of Ironpot Creek was consulted in order to gather information about the causes and nature of erosion in the catchment, understand community views about what could be done about it, and to help prioritise erosion control works.

Local knowledge has helped in the understanding of the local erosion processes and to identify priority areas for works. Many residents wanted sound advice about what they could do to better manage erosion, and many were already undertaking their own erosion control works.

OVERVIEW OF FINDINGS

All creeks naturally move over time, particularly in response to changing rainfall and land use patterns. This movement helps the creek to find and maintain a dynamic equilibrium between erosion processes, and eventually achieve a greater level of long term stability. It is through this process that the creek will change in form, size and character. Where the creek immediately adjoins private property and public infrastructure this natural adjustment may not be acceptable. For Ironpot Creek, it is recognised that this has occurred in some areas along the northern section and the Plan seeks to present practical management options to:

- Reduce erosion and improve bank stability.
- Improve the visual amenity and functioning of the creek corridor through soft and hard engineered remedial works that can be staged for when budgets and resources are available.
- Reduce the impact of erosion to private and public assets.
- Identify cost effective solutions that fit into the surrounding environment.

THE STUDY AREA

The study area encompasses approximately 4 kilometers of creek line and adjoining reserves.



All sections of Ironpot Creek studied are experiencing some degree of erosion. This may be in the form of bank scour, bed lowering and or head cuts with the most significant erosion sites located within Management Zones 1b, 2a and 3 (see above study area map for zone locations). While some of these erosion sites will stabilise naturally, there are instances where channel adjustments (e.g. stream widening) are not acceptable and therefore coordinated management intervention may be required.

Recommended management intervention and actions fall within five key themes:

- In stream civil works
- Vegetation management
- Community engagement and education – through the production of information sheets
- Introduction of appropriate development controls
- Post construction monitoring

More specific solutions have also been suggested for identified zones. Additional details of these can be found within the full plan available upon request through Council at www.ipswich.qld.gov.au.

IMPORTANT INFORMATION

Any in stream works will need to accommodate the new catchment hydrology, looking at the system as a whole, considering upstream and downstream impacts while protecting property and infrastructure, and undertaking management solutions in a way that is environmentally sensitive. As an example, the armouring (or hardening) of a section of creek without understanding and addressing flow energy will generally deflect problems further downstream, therefore management solutions must protect stream bed and banks while dissipating flow energy locally – that is slowing water down.

In the longer term, a holistic erosion and drainage strategy will involve the community working together throughout the wider catchment and not just in the eroded parts of the stream.

For further information, please contact:
Ipswich City Council on (07) 3810 6666
or visit www.ipswich.qld.gov.au