

Working with the Community to Revitalise Toowoomba's Urban Creeks - Case Study

Catherine Travers¹ and Chris Egbers²

SUMMARY

The multitude of problems which have plagued Toowoomba's degraded Gowrie Creek for several decades, such as flooding, erosion and pollution, are worsening as the contributing catchment becomes more urbanised and the creek continues to be treated as a drain. Following a significant flow in Gowrie Creek in 1996, a planning process was developed to provide a strategic direction to resolving the various creek problems. This was jointly initiated by the Queensland Department of Natural Resources, Toowoomba City Council and the Toowoomba and Region Environment Council.

Carefully planned community consultation was undertaken which established the concerns and aspirations of interested and affected community groups – adjacent landowners (industry, commerce and residents), environment groups and government agencies. A Community Reference Group representing all interests was established to provide for community input and to give essential direction to the preparation of the Gowrie Creek Catchment Strategy. Community in principal support for the strategy to revitalise Toowoomba's urban creek system was confirmed during the consultation phase.

Specific rehabilitation activities for Gowrie Creek form a key part of the catchment strategy together with an education and awareness extension program to sustain community interest and participation. The strategy was recently endorsed and the next challenge is the provision and cost sharing of \$36 million of improvements.

THE MAIN POINTS OF THIS PAPER

- An integrated and whole of catchment approach supported by the community in planning for the revitalisation of a degraded urban creek is essential
- Establishing a Community Reference Group to enable all interests to input to the planning process is beneficial
- Forming and fostering partnerships between state agencies, local government and the community is essential to ensure a successful outcome.

1. LOCATION

The upper reaches of the Gowrie Creek catchment are located wholly within the boundaries of Toowoomba City (pop. approximately 90 000). Toowoomba is located on a north-eastern headwater of the Murray-Darling Basin, about 130 km west of Brisbane

Four key tributaries – East Creek, West Creek, Black Gully and Gowrie Creek comprise the upper reaches. These tributaries have a combined length of approximately 20 km. The related catchment area is approximately 51.3 km² as illustrated in Figure 1.

East and West creeks are fed by springs and flow through the centre of Toowoomba to combine and form Gowrie Creek. The majority of the city's stormwater discharges into Gowrie Creek.

2. BACKGROUND

2.1 The Problems

Toowoomba's Gowrie Creek has, over time, become increasingly characterised by the problems of bank erosion, flooding in the central business district (CBD), poor water quality and a fragmentation of habitat. The aesthetic appearance of the creek corridor is also poor, high levels of pollution occur on occasions and in areas there is a lack of recreation opportunity.



Figure 1: Gowrie Creek Catchment

¹ Gowrie Creek Project Officer, Toowoomba City Council, PO Box 3021 PO Village Fair Toowoomba QLD 4350

In many areas, Gowrie Creek is inaccessible and highly infested by weeds as shown in Figure 2. These problems are worsening as the contributing catchment becomes more urbanised and the creek continues to be treated as a drain.

Land reclamation activities adjacent to Gowrie Creek have occurred over time and consisted mainly of dumping unstable fill material. These measures by individuals seldom included satisfactory scour protection methods and have not provided a long-term solution. This ad hoc approach has also resulted in the erosion and slumping of creek banks from minor and major creek flows.

Commercial operators located along Gowrie Creek blamed the upstream community for increasing flows, and continued to dump fill on the creek banks to replace that washed away with the more frequent damaging flow events. The Queensland Department of Natural Resources (DNR) has the statutory obligation to control such activities within watercourses (Water Resources Act 1989). However, the department does not have the funding base to undertake planning or remedial works.



Figure 2: Gowrie Creek, Toowoomba

2.2 Previous Initiatives

Over the previous 30 years works proposals have been discussed by the affected parties (Toowoomba City Council, state agencies and landowners), but never progressed due to the complexity of interacting issues and anticipated high costs.

Council undertook several engineering studies in the 1980's and early 1990's to address the CBD flooding and creek erosion problems. A 1988 study involved computer modelling of both the hydrological and hydraulic processes impacting on flooding in West, East and Gowrie Creeks. Mitigation options for Gowrie Creek for up to the 1 in 100 year return flood were developed costing from \$6 to \$11 million (1988 dollars), exclusive of land acquisition costs, for an extensive reconstruction of 5 km of Gowrie Creek proper. Another study suggested under grounding West Creek for 1 km through the CBD in a large concrete culvert at a cost of \$23 million.

These engineering solutions did not fully address the range of environmental problems resulting from decades of steady urbanisation in the catchment. There also existed some confusion of the respective responsibilities at the community (individual) and agency levels. Consequently no action occurred along the downstream reaches of Gowrie Creek. Preference was given to improvement efforts in the upper catchment along East and West Creeks where for a modest public investment a range of environmental and aesthetic improvements was achieved.

3. A NEW APPROACH

In May 1996 major flooding and further creek bank erosion affected several commercial and industrial businesses along Gowrie Creek. DNR in co-operation with Council and the local environment group formed a small project team. After exploring potential ways forward, a planning process was initiated aimed at developing a shared vision for improving the creek and its environs.

This team identified that the activity of prime importance was to identify all the issues and concerns of interested and affected community groups, including – adjacent landowners (industry, commerce and residents), environment groups and government agencies. Thus, a carefully planned community consultation process was undertaken, the results of which would form the basis for an approach to address the problems plaguing the creek. As part of the consultation it was envisaged that a wider group of representative interests would be formed.

4. SURVEY & PUBLIC WORKSHOP

In December 1996, community views and direction were sought via a survey of interested and directly affected people. About 200 surveys were posted or letterbox dropped to business operators and residents living along Gowrie Creek, relevant interest groups and government agencies.

Questions asked included –

- What are your issues and concerns for the creek system that you would like addressed (prioritise if possible)?
- If the wider community is to be involved, how and who should be involved – for example form a stakeholder group that directs the future for the creek?
- What questions do you need answered?

In total, approximately 40 responses were received which indicated many issues of community concern. Rehabilitation initiatives could have been progressed based on this rather limited feedback, however it was recognised that the problems for Gowrie Creek and its tributaries should be considered as a 'community problem' emanating from across the catchment.

A whole of catchment approach would be required to address the range of issues identified. For this to succeed it was acknowledged that the Toowoomba community should be given the opportunity to have further input to the planning process.

Subsequently, the project group extended an invitation to all Toowoomba residents and adjacent landowners to attend a well-planned evening workshop. About 70 people attended, comprising mainly Toowoomba residents, industry/commerce representatives, government agency people and politicians, who together provided positive community input.

To encourage maximum participation, 10 small groups were formed that allowed individuals to discuss the survey questions. Responses were recorded by each group facilitator for feedback to the other groups. The workshop and survey confirmed previous views, identified community aspirations and listed a range of concerns and issues that needed to be addressed for the creek system.

The main issues identified in priority order were –

- | | |
|------------------------------|---------------------------------|
| 1. pollution | 7. planning |
| 2. bank erosion | 8. rehabilitation |
| 3. flooding | 9. communication |
| 4. environment/water quality | 10 open space/aesthetics/safety |
| 5. 'big picture' | 11. funding |
| 6. responsibility | |

Workshop participants also provided a clear indication of support for forming a stakeholder representative group that devoted time and energy towards addressing the key issues.

Results of the information gathering phase were published in a bulletin for feedback to all who had been involved. The bulletin also included an invitation for nominations to form a Community Reference Group (CRG) comprising representatives from the various interest groups - residents, services groups, industries, commerce, environment groups, agencies, education etc. Some 20 nominations representative of interests were received.

5. COMMUNITY REFERENCE GROUP

5.1 Formation

Following the workshop, community and political support for strategic planning began to gather momentum. In April 1997, a meeting of nominees and two City Councillors formed the Gowrie Creek CRG and discussed the potential roles of such a group.

There was enthusiasm for a number of activities. This included immediate action such as a clean up of the creek system to much larger tasks like developing a long term plan to tackle all the problems.

The CRG recognised that -

- the problems are 150 years in the making and are unlikely be resolved in the short term
- the many creek problems are being caused by or are related to activities across the catchment.

It was accepted that the development of a plan with ongoing community involvement should ensure that whatever is done will be acceptable to and supported by the wider community.

The group agreed to provide input into a whole of catchment study that provided a strategic direction for the revitalisation of Toowoomba’s waterways. The group also suggested that Council take a lead role in implementing a practical, affordable long-term integrated strategy to maintain the creek system as a natural asset.

5.2 Initial Activities

The CRG was made up of 20 members from different backgrounds, all seeing the project from different perspectives. To help gain a common understanding the group focussed on progressing a variety of activities. During this process a cohesive network of individuals formed.

The initial activities the group concentrated on were -

- walking reaches of the creeks on weekends, recording what was seen and discussing rehabilitation concepts as shown in Figure 3
- gathering together available information (history, past studies, photos etc.)
- cleaning up of a reach of Gowrie Creek for Clean Up Australia Day
- assisting in the development of a brief for engaging a consultant to prepare a catchment management strategy
- developing a job description for the employment of a project officer to coordinate the CRG efforts.



Figure 3: Reference Group Members on a Creek Walk

6. STRATEGY PREPARATION

6.1 Process

The priority was to develop an overall catchment management strategy that addressed the problems, community aspirations and the multiple uses of the creek system. Council engaged environmental engineering consultants WBM Oceanics Australia and landscape architects Hassell, who in partnership acted as the primary resource to develop the catchment management strategy (WBM Oceanics Australia and Hassell, 1998).

Options would be developed for detailed evaluation of technical, environmental and economic aspects under the guidance of a technical project management group. This group, comprising officers from Council, DNR and the Department of Environment, would liaise closely with the CRG and the wider community.

6.2 Vision and Goals

One of the CRG's primary activities was to formulate a vision and goals for the strategy to address. This evolved from information at hand (from the survey and workshop) which provided a first cast of views.

Vision

- Transformation of the creek system to a natural, sustainable asset that is a source of pride to the local community as illustrated in Figure 4
- The system will support a variety of important functions such as ecological, recreational, drainage, cultural heritage and aesthetic roles
- Community involvement and education will facilitate increased participation and awareness of catchment and waterway issues.



Figure 4: Artists Impression of the Future Gowrie Creek

Goals

- **Flooding/Erosion** - minimise flooding and unnatural erosion in the catchment using a variety of compatible techniques
- **Water Quality** - achieve water quality levels in the catchment that will preserve the natural ecosystem

and allow primary contact recreation (swimming) at most times

- **Ecology/Habitat** - provide a riparian zone, continuous if possible, using appropriate native species and natural materials
- **Open Space, Recreation and Aesthetics** - provide a safe, continuous, multi-use recreation, open space and cycle/pedestrian path along the waterways that has various character attributes. Maximise access, visibility, safety and use for all sectors of the community
- **Land Use** - achieve land uses that are compatible with the creek's ecological, flooding and recreational values
- **Finance and Implementation** - produce a financial plan, which is cost effective with respect to its capital cost and annual maintenance commitment
- **Education and Awareness** - maximise opportunities to foster community education, understanding of heritage issues and water conservation.

6.3 Short-listing of Options

A diverse range of possible responses was identified initially by the consultant. These responses were distilled to the following four broad options for appraisal –

- Do Nothing Option
- Maximum Cost Option
- Minimum Cost Option
- Maximum Community Benefit Option.

Following consultation with the CRG two options that best met the goals were short-listed for further evaluation. These options were then presented to the wider community as concept plans. They were the -

- **Minimum Cost Option** which addressed each of the goals with minimum works, eg. instream detention basins and bank reprofiling
- **Maximum Community Benefit Option** which incorporated additional opportunities for the creek corridor, eg. wetland areas and a wider creek corridor to address the goals of ecology/habitat and open space, recreation and aesthetics.

7. COMMUNITY CONSULTATION

7.1 Process

To ensure the success of the strategy, it was seen as imperative that information on the two strategy options be presented in a variety of forms to stakeholders (landowners and residents adjacent to the creek) and the wider community.

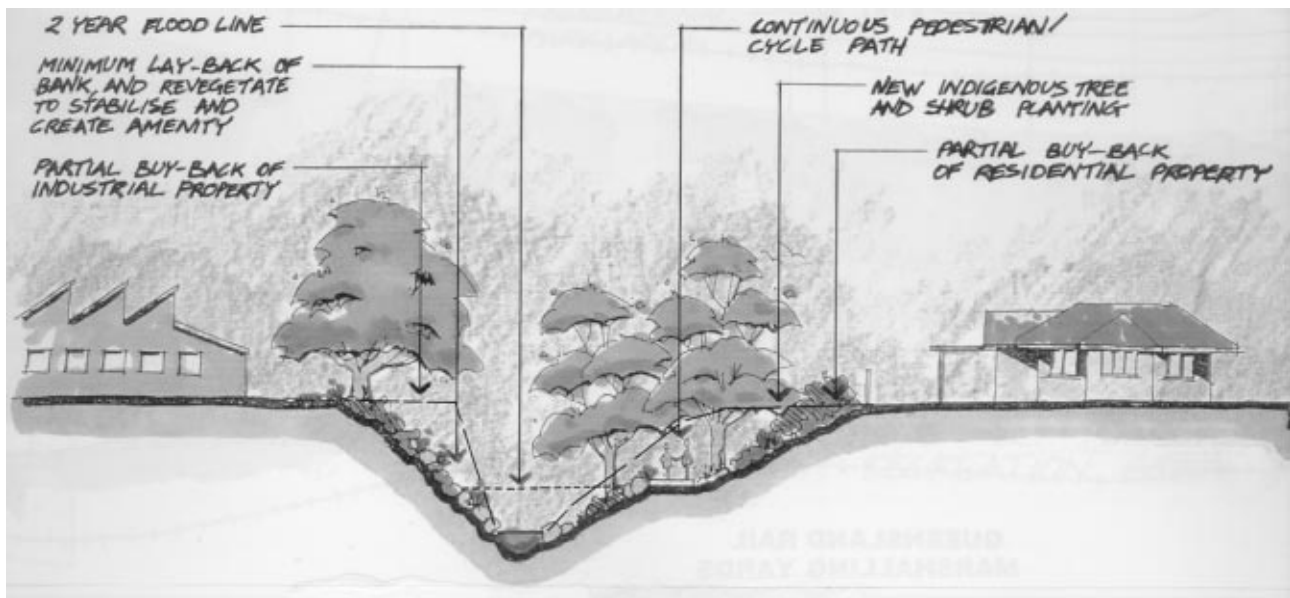
Thus, the following consultation strategies were implemented over a four-week period –

- **Stakeholders** - a personal letter was distributed to every stakeholder informing them of the consultation period. It identified the locations of

the displays, invited them to participate in the planning process and provided a contact person should they require more information.

- **City Residents** - a pamphlet was distributed to every household in the city. It provided details of the project, including the vision and goals, and indicated some of the differences between the two options in various sections of the city.
- **Local Media** - information was listed in Council's regular column in the local newspaper. Radio interviews were held with local stations throughout the consultation period.
- **Two Public Meetings** - the first was for immediate stakeholders to provide information and to seek their input on the options. The second, held in the third week of consultation was of similar format but open to all members of the community.
- **Public Displays** - large landscape concept plans of the creeks (3m x 1.5m) indicating the two options (with overall costs) were displayed and a brochure providing more detailed information was made available. This material was displayed for one week intervals at various shopping centres and the Royal Toowoomba show. This traveling display was manned by CRG members to allow people the opportunity to discuss the work to date, and indicate their support for a preferred option.

This proved to be invaluable in enhancing public awareness of the project. Written input was obtained through responses to a voluntary survey sheet. In addition, displays were located over the four-week period at both the City Library and the Council office.



7.2 Outcomes

Approximately 500 survey responses were received, with 96% of all respondents supporting the progression of the project. The choice between the two options presented was less clear. There was a high level of in principal support received for the more costly maximum community benefit option, with the bias strongest in the

central business district. However, feedback indicated a desire for the project to proceed without increasing rates.

On evaluating all comments received during the consultation, a mixture between the two options was formulated and endorsed by Council in October 1998.

8. STRATEGY IMPLEMENTATION

8.1 On-ground Works

The most significant strategy component is the implementation of on-ground works costing approximately \$36 million. These works are aimed at improving the urban creek system with consequent benefits downstream. This comprises 20 detention basins to reduce flood peaks and thus erosion potential, 9 hectares of wetlands for water quality improvement, and extensive native revegetation and creek clean up. Some 31 rock riffle structures are proposed below the CBD, with substantial bank reprofiling and revegetation works. A continuous cycle/pedestrian path will also form part of the final concept linking the many open space and recreational pockets located along the creek corridor as illustrated in Figure 5.

Along the Gowrie Creek reach substantial voluntary land purchase by Council is proposed for a corridor of sufficient size to enable drainage, recreation and environmental objectives to be met.

Figure 5: Concept Design Showing Potential Changes to the Gowrie Creek Corridor.

8.2 Community Education and Awareness

The long-term time frame proposed for the implementation of the catchment strategy supported the development of a community education and awareness extension program. This would identify goals, objectives and individual activities to progress the education and awareness component of the strategy. To

do this, the project officer coordinated two workshops with members of the CRG. This resulted in a program that was aimed at ensuring that future activities were achievable, practical, targeted and budgeted.

The key areas of information/awareness/education, participation and promotion were seen as essential areas to target. It was envisaged that if a number of different activities were developed it would cater for the different abilities, levels of interest and degrees of active participation. This extension program should enhance the current levels of community participation resulting in a long-term commitment by the community to implement the catchment vision. Key components of the program are illustrated in Figure 6.

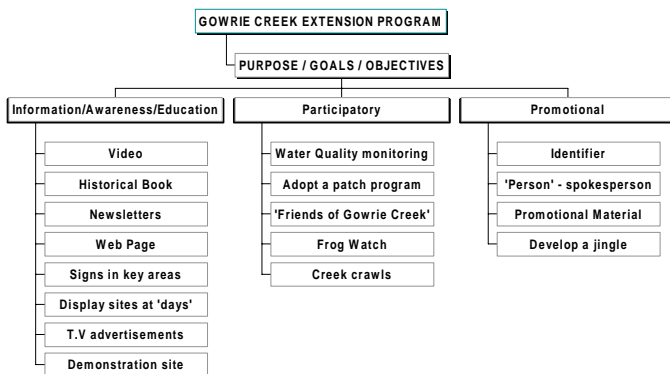


Figure 6: Key Elements of Extension Program

8.3 The Financial Challenge

Whilst there is across the board endorsement of the strategy by ratepayers, Council and other levels of government, the next challenge is the cost sharing and financing of on-ground works.

Council's ability to inject more than \$1 million to \$2 million per year into the project is constrained due to other ongoing financial commitments. State government financial assistance to Council is 20% of the costs for detention basins for flood mitigation and 25% of the costs for reprofiling of creek banks to prevent erosion (including land purchases).

Council has allocated close to \$1 million in 1998/99 for on-ground works. This includes a detention basin in upper West Creek as an initial step towards reducing downstream flooding and erosion. Some of this allocation also supports a Natural Heritage Trust project.

This project (\$137,550 in 1998/99) progresses 3 key activities –

- a wetland and gross pollution trap in conjunction with the detention basin
- extensive revegetation of ten hectares along a reach of railway land adjacent to Gowrie Creek using species indigenous to the local area
- continued employment of the appointed project officer to coordinate the revegetation and CRG activities.

The purchase of an open space corridor along Gowrie Creek costing approximately \$6.5 million, is supported by additional revenue obtained from Council's park and bushland levy. This was increased in 1997/98 from \$20 to \$25 per ratepayer per year.

9. CONCLUSIONS

It has taken two years of planning to establish a strategic direction for the revitalisation of Toowoomba's waterways. Eighteen months of initial scoping of community concerns and direction setting was followed by six months of strategy formulation. The strategy comprises an ambitious host of works estimated to take 15 to 20 years to complete depending on future cost sharing arrangements. Over time it will transform Toowoomba's major creek system from the city's backdoor drain to a waterway system that is a natural asset, and source of pride, to the local community.

An essential ingredient in ensuring the success of a project such as this is the formation and continued fostering of partnerships. A positive element in this instance is that the community approached the planning process with a focus on the long-term vision for the creek system rather than their own interests.

Some lessons learnt include –

- Intensive preliminary planning including a community consultation strategy is essential for ongoing community participation in both the planning and on-ground action phases of the project
- Allocation of sufficient time is required to work through an integrated process that ensures comprehensive planning takes place
- Adopting an approach that involves all interest groups from the beginning results in fewer unforeseen impediments later on. Individuals who have been involved in the process can help progress required action by their organisation
- A whole of catchment approach provides a satisfactory longer-term result rather than a continuation of piecemeal approaches to management. This approach caters for future changes in development rather than needing additional works down the track.

10. REFERENCE

WBM Oceanics Australia and Hassell (1998).
 "Gowrie Creek Catchment Management Strategy"