

All tied together from a catchment perspective

Evaluation Report



HUNTER'S HILL COUNCIL

About the title of this report – *All tied together from a catchment perspective* was a quote from a key stakeholder for the program and in a few words describes the intent of the Catchment Connections program. While there is still a long way to go in continuing to engage and educate the community, this quote describes the overall outcome of the program.

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Grahame Collier

 **T Issues Consultancy**
July 2011

Note: All quotes in this report and the Supplementary Report are shown in italics and are not sourced to individuals in order to maintain the confidentiality of all respondents.



1. Key Findings

Section 7 of this report contains comprehensive detail about twenty eight findings for the Catchment Connections Program related to the program outcomes. The material below provides only a brief snapshot of the most important of these findings organised into twelve key findings statements. They serve as the Executive Summary of this report.



Catchment Connections Key Findings Statements

The *All tied together from a catchment perspective* report identifies that:

The program worked - Catchment Connections was an effective sustainability engagement, education and on-ground works program.

Catchment Connections has connected with people at home and in businesses - most especially with people in the City of Ryde and to some extent with people in Hornsby and Hunters Hill LGAs.

Catchment Connections grew people's understanding about 'what is a catchment' and to some extent it also grew their awareness about catchment health and their potential impacts and connections to it.

People not previously engaged with environmental issues and groups did become involved with Catchment Connections events and projects. Engagement with new people is a major feature of the success of this program.

All schools across the target area have been drawn into the Catchment Connections program in a way that has effectively delivered programs for students, trained and supported teachers and impacted upon School Environmental Management Plans. Over ten thousand school students have been involved in the program.

A series of quality products have been developed by Catchment Connections – most particularly the Water Sensitive Urban Design Guidelines and Toolkit and the material for the Guided Walks and Festivals programs.



Business was connected by this program, well over 500 businesses were engaged directly or indirectly and some useful business partnerships were forged.

An on-ground WSUD Demonstration Site was established at Strangers Creek and WSUD principles were integrated within the Development Control Plans established by the City of Ryde. The WSUD Guidelines and Toolkit was used for demonstration projects throughout Ryde and made available to other Councils in both the Lane Cove and Parramatta catchments.



Bush regeneration has occurred across the three Council areas and over 7 hectares of bushland have been regenerated.

Increased knowledge and awareness has occurred as a result of the program. However, little behaviour change has been identified to date that can be directly attributed to the Catchment Connections program.

Evaluation happens best throughout the life of a program, not just in its final flurry; it is likely that even better results would have been identified for Catchment Connections if a more strategised and ongoing evaluation process had been in place for the life of the project process.



It has been determined that future programs will use feedback from the Catchment Connection Project and that data and findings from this project will act as baseline to enable future program development, enhancements and reporting. Also, efforts are being made to extend existing Catchment Connections programs.

2. Recommendations

This Section contains the formative component of the evaluation. These are expressed by way of Recommendations, related in part to the Findings. It is noted that in some instances Catchment Connections was delivered in a way that reflects some/part of these recommendations. They are offered to assist future activity; to ensure that it approaches leading practice. The recommendations are not a commentary on the manner in which Catchment Connections has been conducted.

It is recommended that:

- i. All of the products of the Catchment Connections Project are made available, in easily accessible form on the websites of the three partner Councils, or by link to the appropriate page on the Catchment Connections site. It is important that the useful products of this project are made widely available. This includes the Train the Trainer material for community outreach, the WSUD Guidelines and Tools and perhaps even logistic/organisational material used in the planning of the Festivals and/or the Catchment Walks. It also includes this Evaluation Report.
- ii. For any multifaceted project of this size, clear project outcomes are developed in the early stages of the project. These should then be used to frame the evaluation plan and all data collection instruments. Data should be collected along the way about all elements of the program.
- iii. A range of regular communication mechanisms are put in place to keep stakeholders, community groups, the community, elected officials and interested others in touch with and informed about progress. These might include electronic newsletters on a three monthly basis, press releases, a constantly updated website. No matter how comprehensive the marketing of specific components and/or the formal reporting processes are, if the key stakeholders and the target population don't know about what progress is occurring a program is missing vital opportunities for connection and support.
- iv. Effective and consistent program management is important in partnership projects, and this needs to involve key stakeholders and partners throughout the life of the project in a way that grows ownership and commitment. For future projects it is essential that sufficient staffing resources are allocated and funded to enable this to occur. A lesson from Catchment Connections is that the intense project management time required by Council management staff needs to be accounted for and costed into the project at a sufficient level.
- v. In the future a program of this sort needs to work more overtly in partnership with, and grow the capacity of local community groups. Community champions need to be identified, trained, nurtured and supported and this would extend the reach of the project and its outcomes. Highly effective engagement programs build stronger local groups and networks and individuals across the community who are trained and supported to deliver parts of the overall project.
- vi. If the intent of a project is to engage with those not yet involved in environmental/sustainability programs then it is important to:
 - Market directly to people through broad affiliations, sporting clubs, parents groups in schools etc and through the media. If marketing is to occur through environment groups, focus on 'bring a friend' messages.
 - Offer small incentives, lucky door prizes etc, just for attendance – plants [make indoor and outdoor available] and movie tickets work for many people
 - Collect data about who attends all events and workshops to identify if the desired population is being reached
- vii. If the intent of the program is to spark behaviour change, then this must be carefully planned and reflect best practice and relevant contemporary theory right from the outset. For each

behavioural outcome identified, at least one intervention must be implemented to address this outcome. The broader the behaviour change, the more comprehensive the intervention must be. Further, behaviour change must be measured in the evaluation of any program that intends to motivate it, Measurement might be about behavioural intent, self reported actual changes that are made and/or observable behaviour [for example, reduced energy use on energy bill]. It is not appropriate to identify behaviour change as an outcome and then not measure it, even though it is acknowledged that measuring of change is challenging.

- viii. If at all possible work is undertaken to extend some Catchment Connections elements as ongoing projects in the three Councils. It is understood that Future Focus is being scoped for on-going delivery for all households across Ryde and it is also being considered by Hornsby Shire Council and other catchment Councils. The Workshops program is another element where ongoing delivery would be of high value. These programs have been successful in the roll out that has occurred to date and the community would benefit from their extension.
- ix. If bush regeneration activity is a part of any future funded project or multifaceted project, it is essential that a rigorous reporting schedule and an evaluation framework is developed at the outset and adhered to throughout the project.
- x. In order to meet OH&S and duty of care requirements, it is important that for future programs the City of Ryde ensures that as appropriate:
- Facilitators/contractors have:
 - Police check (if working with children under 18) –or families with young children
 - First aid certificate / officer on site to administer
 - First aid kit on them
 - Public liability insurance
 - The Guided Walks program has:
 - More than one guide if there are over 15 people on the walk [and more than 6 if it is a twilight walk] due to risks
 - A risk assessment process for the site
 - A sign on register
 - Survey forms that are completed by all participants
 - An incident report sheet. All facilitators must carry and complete these on-site, when an incident occurs requiring first aid. These forms must be sent into Council as soon as possible after the event of the incident for assessment.
 - Emergency contact details (other than walker) for major injuries/ incidents requiring further medical or emergency assistance

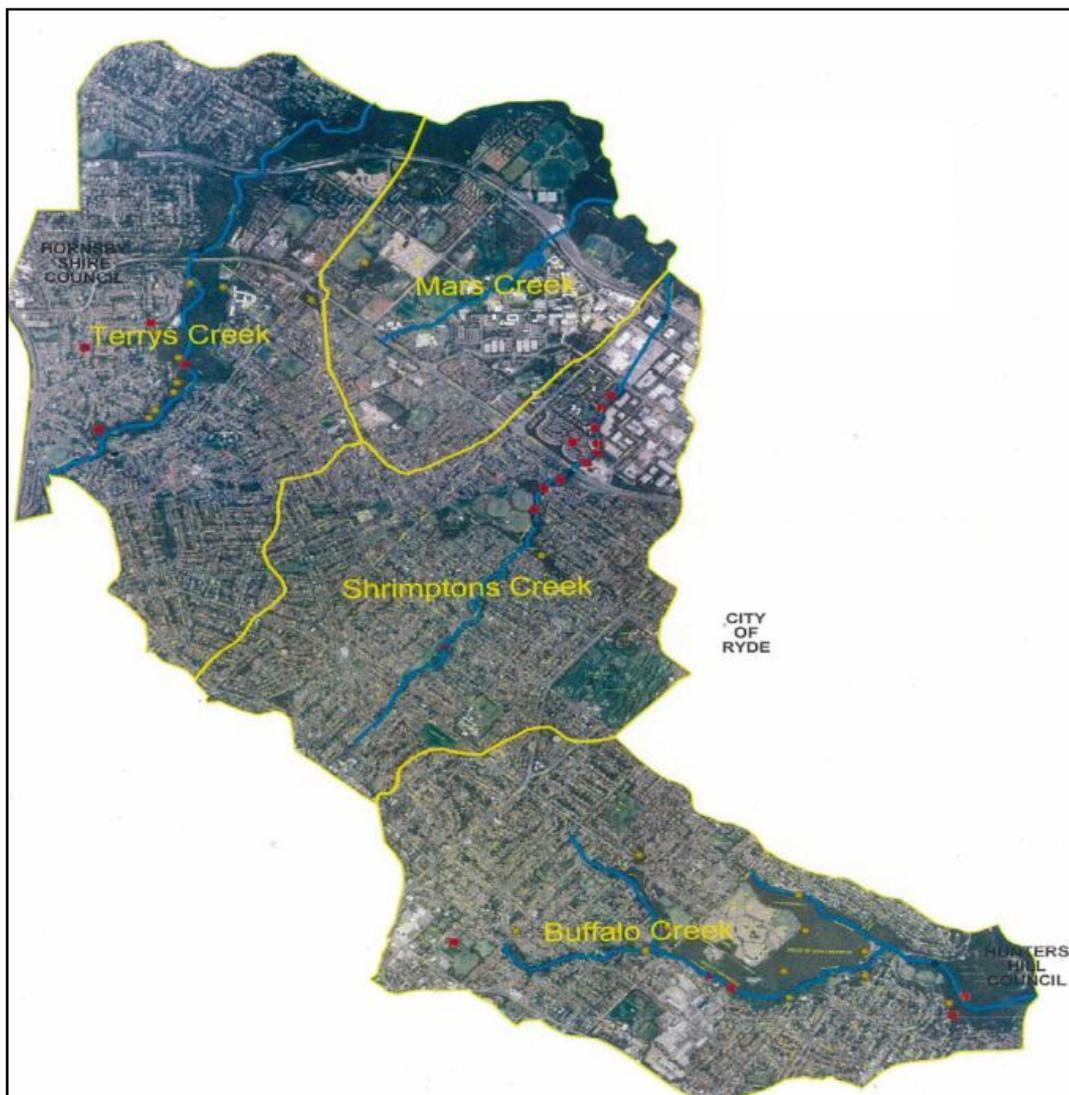
3. Introduction

Evaluation of a major program is an essential aspect of a professionally developed and delivered intervention. The more complex the program, the more important and multilateral the evaluative process needs to be. Evaluation involves the judgement of the worth or value of something. In a sustainability programs sense' it involves judging the effectiveness and efficiency of the project. Evaluation is the systematic process of collecting credible data and using it to make judgments about the worth of a product, service or process at any point in the program's life cycle.

Catchment Connections is a three year grant-funded project that covers 2,000 hectares (20 km²) of land within the Terrys Creek, Mars Creek, Shrimptons Creek and Buffalo Creek catchments – all tributaries of the Lane Cove River. This partnership project is jointly funded by the NSW Environmental Trust and three local Councils; City of Ryde, Hornsby Shire and Hunters Hill, with City of Ryde as the lead Council.

The primary objective of the project is to reconnect the community with their catchment through establishing, firstly, an identification with the catchment within each project participants lives and secondly, a commitment on the part of project participants to restore and maintain catchment environmental health through their own individual behaviour.

Figure 1: Catchment Connections Area



The project's aims are supported by the three council's management plans, environmental and sustainability strategies, stormwater management plans, the Lane Cove River Estuary Management Plan, the Northern Sydney Regional Organisation of Councils (NSROC), environmental studies, strategies and SOE reports and the Sydney Metropolitan Catchment Action Plan.

Those Councils involved in the project formed a Project Team Steering Group [hereafter called the Steering Group] to progress project management and communication. In the early days of the project's delivery, a Community Reference group was also established.

A large amount of the work of the project was undertaken by contractors, who won the right to deliver aspects of the project, under contract to the City of Ryde. This evaluation report was drafted by one of these. The project was delivered by a part time Project Officer, appointed on a fixed term contract by the City of Ryde. Over the life of the project there have been five different people in this position. In addition, significant work has been delivered by the Project Manager, part of the City of Ryde in-kind contribution to the project. There have been also changes to personnel in this position. It is noted that much of the strategic workload for the program was carried by the Project Manager. The entire project was overseen by what the City of Ryde project management system (used in internal status reporting), terms, a 'Business Owner'. This role was held by the Environment Unit Manager. The term 'Project Manager' was used in Council status reporting on the project and this was held by three Sustainability Programs Coordinators over the project life.

It is also important to note that all the Bush Regeneration work at City of Ryde was independently managed by the Natural Areas Coordinator and work in other Councils by their respective bushland managers. Likewise some WSUD work was overseen by managers in Public Works.

This independent evaluation report - *All tied together from a catchment perspective* - has been drafted in the last six weeks of the life of the Catchment Connections project. It contains some data obtained over the life of the project and reported to the funding body and the stakeholders while the project was proceeding. It also contains some new data that was sourced at the end of the project.

Given that the intent of the report is both summative – in that it evaluates achievements over the life of the project – and formative – in that it makes recommendations concerning the delivery of future programs of this type, by the partner Councils, the report should have value now and into the future.

It should be noted that while this report contains some descriptive information about the projects, on-ground works and events that formed a part of Catchment Connections, its role is not descriptive, it is evaluative. Readers less informed about what was actually done in specific projects will need to consult the Councils involved or the Catchment Connections Website at:

<http://www.ryde.nsw.gov.au/WEB/SITE/me.get?site.home&PAGE1727>

This report is augmented by a Supplementary Report containing evaluative data about all of the activities of the program. Section A of this document contains the funding profile for Catchment Connections.

4. The Project Objectives, Outcomes and Description

Catchment Connections is a multifaceted project focusing on community engagement and education as well as infrastructure and on-the-ground works. It is intricately linked to the general community challenges and needs as identified individually in City of Ryde, Hornsby Shire and Hunters Hill Councils' Management Plans. The project addresses the sustainability challenges and the environmental needs of the project area by:

- improving water quality through education to reduce stormwater pollution into local creeks and catchments
- improving and increasing biodiversity through bush regeneration restoration activities
- reducing mains water usage via stormwater harvesting and rainwater tanks
- improving resource conservation through improving recycling and energy usage
- scoping water sensitive urban design (WSUD) options for Macquarie Park and the Eastwood Town Centre
- designing and constructing an educational artwork fence along Eastwood Canal
- connecting with and engaging the community and business groups so they can better understand how to improve the sustainability of their local area
- empowering the local community to take ownership of their local catchment and become environmentally aware.

The Catchment Connections Business Plan indicates that:

The primary objective of the project is to reconnect the community with their catchment through establishing:

- *firstly, an identification with, and emotional attachment to, the catchment within which each project participant lives*
- *secondly, a commitment on the part of project participants to restore and maintain catchment environmental health through their own individual behaviour.*

The Plan then goes on to say that:

'The project provides the opportunity to deal with issues affecting the four catchments over the three council areas in an holistic sustainable way and potentially influence the uptake of sustainability into Council practices.

For example, improvements in illegal dumping in the upper catchment of Buffalo Creek (COR) as an outcome of the project, will impact positively on the health of the lower catchment (Hunters Hill Council). The artwork mural alongside Eastwood Canal will impact on the water quality at the top of Terrys Creek catchment thus providing benefits such as reduced cleanup costs for both COR and Hornsby Council. Hunters Hill Council will copy the mural concept at Buffalo Creek. In addition, the City of Ryde is funding a water sensitive urban design (WSUD) scoping study for Eastwood Town Centre and Macquarie Park. The implementation of suggested actions at the top of Terrys Creek catchment in Eastwood Town Centre will improve water quality downstream as the water flows through both City of Ryde and Hornsby Council local government areas on its way to the Lane Cove River. The guidelines developed as a result of the study will be available for implementation in each of the three Councils.'

It is surprising that the Catchment Connections Business Plan does not include any specific outcomes for this project and it is unclear about the specific project objectives. Although there are objectives listed in the Plan, these are not Catchment Connections specific. They include the objectives of the NSW Government [through the NSW State Plan], objectives of the funding body, the NSW Environmental Trust and broad Council objectives relating to the project, as follows.

City of Ryde, Hornsby Shire and Hunters Hill Councils' Environment and Sustainability Objectives relating to the project include:

- Provide improved management needs in relation to water quality, water reuse, potential for flooding and existing infrastructure
- Encourage water reuse and water quality measures in all stormwater upgrades where appropriate
- Increase community awareness and understanding of key sustainability issues
- Optimise utilisation of lands under the control of Council for active and passive public uses
- Place a high priority on conservation and recovery of threatened species, populations and ecological communities through biodiversity planning and management in natural areas
- Improve stream health of local waterways through control of local pollution, increased monitoring and improvements to habitat and water quality to sustain and enhance aquatic life
- Empower the local community to take ownership of their local catchment by raising awareness of relevant sustainability issues and promoting best practice in urban water management, waste management and chemical usage
- Landfill waste generation is minimised and rate of recycling is increased.

During the last phase of the project, the objectives of the Catchment Connections programs as broadly alluded to throughout the Business Plan and in feedback from (the former) Department of Environment Climate Change and Water [DECCW, now Office of Environment and Heritage OEH], have been interpreted, as requested by the program evaluator, into concise and encompassing objectives statements), as follows:

To plan and complete extensive bush regeneration works and strategic WSUD initiatives. The restoration work would span across the four focus Catchment areas**. Improving biodiversity and catchment eco system health is the key aim of bush regeneration and restoration, and improving water quality and reducing stormwater pollution is the key aim for WSUD.*

*To engage multiple stakeholders relevant to protecting the health and natural ecosystems of those catchments and the river systems they drain to, within the jurisdiction of the partner Councils***. It is implemented with the aim of educating stakeholders**** on understanding and valuing those systems and encouraging behaviours that minimise negative impacts.*

In clarifying these statements of objectives, Catchment Connections staff note that there are also other lower level objectives that have been referred to in the Business Plan and DECCW [now OE&H] feedback has been considered in project development. In considering these objectives, the following important notes should be considered:

*Around 50% of Trust funds and Council contributions had been allocated to bush regeneration and WSUD. About 80% of those funds were for bush regeneration activities [see Supplementary Report].

**The geographical scope of the project extends across the four catchment areas of Terrys, Mars, Shrimptons and Buffalo Creek Catchments (see catchment map in Introduction – Section 3).

*** The partner Councils are Ryde, Hornsby and Hunters Hills Councils.

****Engaging with demographic groups with traditionally low levels of participation in Council run environmental programs and empowering stakeholders to take more responsibility for catchment health was also emphasised.

It is noted by the evaluator that the efforts to firm up the objectives took the wording from the Business Plan and restated them as objectives, rather than adding anything new or different. To this extent it can be argued that the objectives were clear enough from the beginning of the program. The same cannot be said for project outcomes.

It is unclear why the project was approved and funded, and how it could be delivered without establishing firm outcomes. In evaluating the project this was a major limiting factor. Apart from other issues, any data collected in the absence of an outcomes hierarchy, or other similar organising outcomes focused framework, is inconsistent and difficult to analyse. This is the case with Catchment Connections.

Prior to commencing the evaluation report, the evaluator worked with City of Ryde staff to determine an agreed set of project outcomes, against which the program’s achievements could be measured. This occurred within two weeks of the completion of the project, in the second half of June 2011 – therefore about three years too overdue. Clearly it would have been beneficial for outcomes to be clear right from the start and measured through the life of the project. The current circumstance is the second best option, but it is still highly useful to know outcomes that Catchment Connections intended to meet.

Even though the outcomes were developed late in the program, they represent all the key concepts and intentions that the project has been addressing throughout its lifetime. There is no ‘cooking of the books’. Outcomes have not been omitted because sufficient supporting data could not be obtained. The City of Ryde staff have been highly ethical and professional in the way that have developed these outcomes and assisted in sourcing data to enable evaluation of them to occur.

The outcomes are listed below and shape the remainder of this report. Specifically, they have not shaped the program planning, and neither have they shaped many of the data collection approaches and surveys designed through the life of the project. It should be noted however, that in broad terms the outcomes are in line with the Business Plan and the conceptual directions of the program from its commencement.

The Catchment Connections Outcomes

Outcomes - Water	Outcomes - Community	Outcomes - Bush Regeneration	Governance Sustainability Catchment Health
Ultimate outcomes			
1. Improved stormwater quality and biological health of tributaries relevant to focus catchment areas - Terrys Creek, Mars	3. Improved connection with catchment and concern for/valuing of catchment health, among multiple relevant	4. Increased native animal habitat, biodiversity, vegetation cover and riparian buffer zones through bush regeneration and	5. Improved awareness of catchment issues and improved catchment health as a result of the changes in behaviour motivated through the

Outcomes - Water	Outcomes - Community	Outcomes - Bush Regeneration	Governance Sustainability Catchment Health
Creek, Shrimptons Creek and Buffalo Creek.	stakeholders.	restoration efforts.	program.
2. Improved water conservation in the three partner Councils – City of Ryde, Hunters Hill and Hornsby.			6. Program sustainability – on-going positive effects of Catchment Connections projects to be maximised into the future.
Intermediate Outcomes			
7. Improved practice in stormwater management and water sensitive design by industry, including builders, developers and Council staff.	10. Improved community knowledge and awareness of catchment mechanisms and issues and the impacts of individual and group actions on catchment ecosystems.	13. Best practice bush regeneration plans, methods and processes used by the three Councils that consider and improve biodiversity and catchment health.	14. An integrated, effectively managed program across all three Councils.
8. Increased holistic consideration of catchment health and water quality by all three partner Councils and Council staff, with regard to catchment based management concerns. This should be integrated across various relevant departments (e.g. planning, parks and bushland, engineering).	11. Improved awareness and practices among the general community and among local business, corporations and commercial organisations.	.	15. Improved awareness of specific sustainability issues and improved sustainability behaviours and capacity to make changes, among the community.
9. Increased connection with the catchment by developers, builders, council officers and local businesses.	12. Engagement with stakeholders that have traditionally low participation levels in Council environmental programs, in particular, engagement of NESB		

Outcomes - Water	Outcomes - Community	Outcomes - Bush Regeneration	Governance Sustainability Catchment Health
	groups.		
Immediate Outcomes			
16. Builders, developers and local businesses demonstrate improved knowledge, implementation and maintenance of best practice WSUD and stormwater management.	19. Local school community (teachers, students, parents etc) have an increased connection to catchments and awareness of catchment health and sustainability related concerns and are taking steps towards improving their own actions.	23. Increased regenerated area - biodiversity, habitat, vegetation cover and riparian zones across all three Councils.	25. Greater connections between partner Councils and between Council and community/industry stakeholders on catchment management issues.
17. Strengthened DCP policies and compliance procedures within each Council in reference to WSUD and stormwater management issues and WSUD related community education e.g. WSUD signage project.	20. Increased capacity building of local environmental groups to protect catchment ecosystems.	24. Improved methodologies and strategic approaches that consider waterway impacts and catchment frameworks.	26. Multiple relevant stakeholders educated on the connections between various sustainability concerns, catchment health and their own actions and impacts. This includes greater awareness of the ways that people are in turn affected by the health of their catchment.
18. Improved understanding and practice by key relevant decision-makers across Council departments with regard to incorporating catchment health concerns and WSUD.	21. Engagement on catchment management issues with local tertiary and other adult education organisations (for example, Macquarie University and TAFEs).		
	22. Increased engagement with the general community/ the local business sector		

Outcomes - Water	Outcomes - Community	Outcomes - Bush Regeneration	Governance Sustainability Catchment Health
	about the catchment.		

Note these outcomes are expressed hierarchically under three categories: Immediate; Intermediate; and Ultimate. Because of the time available to the evaluator, there has been no real attempt to form these into a hierarchy where one outcome flows to/underpins the next. Best practice as identified by the OE&H and its previous iterations in the publications below^{1 2} has not been followed here.

The four columns represent the four program elements

- Water Management and Water Sensitive Urban Design
- Community Engagement and Education
- Bush Regeneration – On-ground works
- Governance and Broader Sustainability and Catchment Health Issues

Catchment Connections Funding Profile

The following data provides the funding profile for the Catchment Connections Project. This is intended to provide information about the relative weighting given to each program element by funding component; grant funding and Council funding. It sheds light on the emphases within the project delivery and in part upon the evaluation data available. For example, 51.7% of grant funds are expended on community engagement/education activities and there is significant delivery and evaluation of this component. Also, substantial Council funding was directed towards the bush regeneration aspect of the program and Catchment Connections built on existing efforts in this area. The WSUD/ Water Management element of the program was quite minor by comparison with only 8.3% of Environmental trust funding being allocated to this element. The findings and outcomes for the program need to be viewed in the light of the proportional weighting of each element.

Overall funding profile

Source of Funding	Amount of Funding \$
NSW Environmental Trust	482,530
Council Support - in-kind and actual	550,000

Funding by component – Percentage of total overall (Divided by Trust Funds and Council Contributions)

Community engagement/education %	On-ground works – bush regeneration %	WSUD/Water Management %	Other (Water Quality Monitoring and Pool Car)

¹ Department of Environment and Conservation (2004) *Does Your Project Make a Difference?*

² Department of Environment, Climate Change and Water.(2009) *Guide to Using Social Research in Sustainability Programs (2009).*

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(Includes Project Assistant salary) Trust – 51.7%	Trust – 40%	Trust – 8.3%	Trust – 0%,
Councils- 16.2%	Councils – 70.7%	Councils – 9.1%	Councils – 4%

Funding by Council – percentage of expenditure per lga

Council	Community engagement/education %	On-ground works – bush regeneration %	WSUD/Water Management %
City of Ryde	These were managed by COR staff and were promoted and offered to stakeholders across all three Councils in the relevant catchment areas. Most of the catchment areas are in Ryde.	Trust – 64% Council- 85%	(WSUD initiatives were managed by COR but created transferable/shared models and other resources)
Hunters Hill		Trust- 17% Council- 8%	
Hornsby		Trust – 19% Council – 7%	

In conclusion, the findings of this evaluation report - *All tied together from a catchment perspective* - and the data that it bases these findings upon are structured as far as is possible; retrospectively against these outcomes and program elements, and in the light of the funding profile.

5. About the Methodology

The Absence of an Evaluation Framework

It is essential to be clear about the concepts involved in effective evaluation at the outset of the evaluation process and it is best if this occurs at the commencement of a project. Evaluation involves judgement and the most meaningful evaluations base judgements on a range of objective data gleaned from a variety of sources and structured under a number of evaluation questions.³ Many practitioners in sustainability education across Australia use the program logic model and its outcomes hierarchy approach to structure their evaluation processes (Funnell (1997)⁴ and Zammit, Cockfield and Funnell (2000)⁵. This model involves the identification and organisation of outcomes in a hierarchy and the development of key evaluation questions for each outcome. Evidence is collected about the extent to which each question has been answered and hence: has the outcome been achieved (Department of Environment, Climate Change and Water. 2009).

The evaluation process engages people in a teaching/learning process and improved project planning, whereby evaluators, clients, sponsors, and stakeholders both teach and learn from one another through improved project planning. At its best, this is a continuous process, because its 'findings' are continuously recycled and updated. Evaluation as an emergent process; and while it cannot be fully designed in advance of project delivery, to be most useful it must begin early and an evaluation framework is essential. Actual evaluation methodologies depend on inputs from stakeholders and target audiences and its activities may need to vary through the process. This is reasonable and appropriate. Commencing an evaluation late in the project however, especially in the absence of a framework, is ultimately less beneficial, at least because ongoing learning is minimised.

The *Guide to Using Social Research in Sustainability Programs (2009)* confirms that evaluation is useful, even in time constrained situations. This guide states that evaluation achieves a number of real benefits. It: starts discussions; creates a strong evidence base; improves programs and their outcomes; contributes to a body of knowledge, informs policy development to drive behaviour change; and involves practitioners in all steps of the process and in modifying their own practice.

Evaluating the worth of Catchment Connections has been difficult in the absence of a project-long evaluation framework. A framework that clearly identifies: outcomes: evaluation questions relevant to each outcome; what data is needed to provide evidence of each outcome; what data is to be collected from whom; and, what methodology will be used to collect that data.

In the absence of the framework data has been collected in a somewhat ad hoc and inconsistent manner; particularly about the Community Engagement/Education element of the program. As can be seen in the Supplementary Report, there is a significant amount of evaluative data within this element and real use can be made of this to provide evidence about the worth of the program. There is much less evaluative data about effective and efficient program activity in the Bush Regeneration and Water Management/WSUD elements of the program. On-Ground works are challenging to evaluate, but an

³ *Guide to Using Social Research in Sustainability Programs (2009)* Department of Environment, Climate Change and Water.

⁴ Funnell S. (1997): *Program Logic: An Adaptable Tool for Designing and Evaluating Programs* in Evaluation News and Comment, Vol 6, number 1, July 1997, Australasian Evaluation Society, ACT

⁵ Zammit C. Cockfield G. and Funnell S. (2000) *An outcomes-based framework for evaluating natural resources management, policies and programs*, Published by Land and Water Australia Social & Institutional Research Program

evaluation framework may have ensured that appropriate data was generated about these program elements as they were rolled out.

Continuing evaluation/data collection processes

As indicated, there has been evaluative data collected about Catchment Connections activities throughout the life of the project. Often this has been collected by contractors, as a part of their delivery of aspects of a specific project. The methodology has varied depending on the nature of the activity that was being delivered. In the absence of project outcomes, at times this data is somewhat limited in the substantive evidence that it now provides. The Supplementary Report contains data collected along the way and it describes briefly how this data was obtained. In this regard, information is contained within the Supplementary Report about the following aspects of the program, substantially delivered prior to the end of 2010.

- Bush Regeneration – On-Ground Works
- Water Sensitive Urban Design – On-ground activity, staff development and the WSUD Guidelines and toolkit.
- Community engagement/education
 - Program Launch
 - The Mural
 - The 2010 Festival
 - The Place-based Community Education Project - Workshops and Train the Trainer Materials
 - The Macquarie University partnership

Apart from this, two other bundles of data are available and are discussed in more detail below

1. Data about activities conducted primarily over the last six months of the project
2. Data sought and collected by the program evaluator at the end of the project. End-stage data collection was undertaken with key informants and contractors and this is reported upon in Section 6, below.

All of this data informs the Findings that are found in Section 7. It is noted that some parts of this data have been made public prior to its inclusion in this report, but that it has not been drawn together previously. Often this data was provided to the funding body as a part of regular project reports to the NSW Environmental Trust and parts of it are reported on the Catchment Connections website. This data includes information about the on-ground works aspects of the program; Water Management/ WSUD and Bush Regeneration.

Project Evaluation Data Collected in the Final Six Months of the Project

A significant amount of community engagement and education activity was held in the final six months of the program and this was more fully evaluated than those held in the earlier part of Catchment Connections/ But there are still some notable gaps; for example, there is little data about actual behaviour shift or even intentions to change behaviour. Some comprehensive data is available in the Supplementary Report about the following activities:

- The One Drop Festival 2011 and related lecture series and workshops
- The Next Generation Catchment Connections Schools Program
- The Guided Walks series
- The Staff Catchment Management Seminar
- The Outreach Program

Some data, not so comprehensive, is available about other aspects of the community engagement/education program:

- The Future Focus Program
- Community Groups Capacity Building

It should be noted that evaluation methodologies and questionnaire had been devised for most activities prior to the appointment of the evaluator and prior to the identification of program outcomes. The evaluator did have input into the data collection methodologies for two of the later activities, the Staff Seminar and the Community Groups Capacity Building Workshop [part of the One Drop Festival]. This was too late and too little.

New Data Collected by the Project Evaluator

Once the program evaluator was appointed, additional end project data was collected using the methodologies outlined below. It should be noted that there were very significant time limitations in this process, for example, invitations to the focus groups were only sent out a week before the proposed focus group meetings.

- One focus group. Note that two were intended but the short lead time made this impossible. One focus group was held with key stakeholders. Two were intended but due to lack of notice the second did not eventuate [see one-on-one interviews below]
- Eleven one-on-one phone interviews where key informants were unable to attend the focus groups. These interviews used the same discussion guide as was used with the focus group and all were written up and are reported upon.
- All key stakeholders who attended the focus group or were interviewed on the telephone were asked to provide written feedback on their overall views on the worth and limitations of the program.
- Development of written surveys and collation/analysis of results for two groups of contractors, Schools program, and Guided Walks contractors and a written survey of those involved in managing the Bush Regeneration.

See Appendix 1 for a list of key informants interviewed.

The extent to which additional end program data could be collected was affected by the lack of time and a lack of resources. The evaluator was not appointed until May 2011 and there were limited resources available for additional data collection.

In Conclusion and Most Important

There are two important points to be made with regard to the overall report and evaluation methodologies used.

The first is that despite all of the limitations discussed above in data collection and outcomes development, there is still sufficient data available to evaluate the program and hence the findings have inbuilt rigor.

The second is that there is a determination to learn and grow from this experience and the Recommendations in Section 2 above have been actively sought and will be considered deeply with reference to future projects by the City of Ryde.

6. Overall Program Data

6.1 Introduction

There is a significant amount of data to report upon. Initially though, it is important to point out that the project has been the subject of extensive review, through its reports to the funding body, through its visibility in the community across the three LGAs and because the City of Ryde has subjected it to professional scrutiny. This has reaped some rewards. As quoted in the 2011 Project Report to the NSW Environmental Trust:

The City of Ryde won the NSW Local Government Managers Association Sustainability award for the 'Our Waters' multidisciplinary water management initiative. The Catchment Connections community engagement program was amongst a number of initiatives that contributed to this achievement including WSUD projects, savings of 42% on water consumption across Council-owned buildings and the removal of 209 tonnes of litter and other pollutants from local waterways via gross pollutant traps.

In order to organise this report in a reader friendly manner, end-stage data from key stakeholders, about the Catchment Connections program is primarily reported upon below. Where specific information is available from any source, about elements and activities of the program, it is contained within the Supplementary Report. In summary then, specific project relevant data is not provided below, but more generic program wide information is.

6.2 Overall comments of note

An abundance of information was obtained from key informants and the quotes below highlight their important overall impressions about the Catchment Connections program. These have been organised under a number of headings that relate to the findings of the program.

High Level of Community Engagement

I feel that the program has been valuable and as is often the case additional strategic opportunities for advancement of catchment concern and engagement should now be able to be identified and pursued. All of the organisations I interacted with (EcoKids for Schools and general workshops program for businesses and community groups) expressed a strong desire to continue to receive support of this nature. I would be very happy to support the three Councils to do so. I am being contacted now on a daily basis by people who attended CATCHMENT CONNECTIONS workshops in businesses and from community groups who have now heard of the workshops program through word of mouth and through the press. They would like to book me in to provide workshops & support for them – that has to be a good sign for the Councils as to the success of the program – the community are happy and want more.

[Catchment Connections] allowed positive interaction to occur between the City of Ryde and the community. But an ongoing communication mechanism was not established (for example: a Newsletter) and interest waned over time.

Public awareness activities definitely bring the community along the journey – and anything that gets people to have a greater awareness of the environment around them and the impact (both positive and negative) they have on that environment is fantastic.

Increased understanding of catchment and what it is. – Awareness of word "catchment". Keen to promote the concept of a "catchment". The notion of catchment is a fairly new concept. Useful getting people together to consider concept of "catchment". Found that most people engaged with notion of a catchment & this was useful.

Stakeholder Engagement Issues

Catchment Connections has resulted in a well engaged campus at Macquarie University.... [It is a] great program – lots of energy and connection.

As a pioneering partnership project across three very different Councils and council areas, the project developed into a fantastic opportunity to work toward integrated program delivery. Although the project lead Council (Ryde) did the majority of the project management, successful delivery of the program in the other two Councils did occur in the end.

[Councils] need a program like Catchment Connections to begin to build momentum for change. The important thing is what three Councils do now. Once Catchment Connections is wrapped up the connections between Council and the community must continue.

Reaching the unconnected

Feedback from people involved in aspects of the program was very positive....Getting to the unconnected was a feature of this program. [This program was] remarkably effective getting to the “unconnected”, [because] Going into schools/businesses/partnering with community groups (CALD) led to connections being made.

Connection with the environment

One respondent indicated that:

A concern was that apart from the guided walk series, the project lacked the opportunity for people to really connect with the environment.

A contrary view however is that:

Much of what was offered was about people connecting to environment in different ways. The guided walks were more direct and experiential in some respects, however, entertaining school presentations, business workshops, engaging festival features etc were about facilitating people’s connection to the environment in ways that engaged those target audiences.

Behaviour change

But are they doing anything different, anything that improves the catchment?

6.3 End stage program evaluation – focus groups and telephone interviews

This section contains a summary of the written feedback from the key informants interviewed for this evaluation.

6.3.1 Key informants said the best thing about Catchments Connections was....

The project conceptually

- *The scope for addressing local environmental issues from a broader, catchment-based perspective. The message that actions taken in one part of a catchment can affect ecosystems in other parts was fundamental to all CATCHMENT CONNECTIONS community engagement initiatives. This is one of the most important concepts for people to grasp when addressing the effects of environmental damage.*

Establishing connections with the community and across Councils

- *The variety of people/community groups that were engaged throughout the project.*

- *Establishing connections between the community, community groups, business & council to educate, inform and bridge previous negative perceptions on how they viewed Councils' interaction.*
- *Multiple stakeholders engaged in a range of quality programs*
- *The networks created and opportunities to build ongoing activities*
- *Having a better connection with staff from Hunters Hill and Hornsby Councils*
- *Grass roots approach – the best for creating sustainable behaviour change.*
- *Synergistic partnerships created – for example between Councils, between the City of Ryde and Macquarie University, the Ethnic Communities Council, Eden Gardens, Eden Gardens and Macquarie University. In addition, Councils improved connections with community groups, schools and businesses in their LGAs ,*
- *A project where neighbouring Councils are working together on a shared project within common catchment boundaries.*
- *The ability of the program to raise awareness of catchment issues to a broad spectrum of the community across the 3 Council areas.*

Establishing connections with people not involved previously

- *Engagement with people not normally involved in environmental activities.*

Providing effective programs and events

- *An active program of environmental walks, talks and events.*
- *Well regarded projects with positive general stakeholder feedback.*
- *Breadth of programs/projects covered throughout 3 years.*

Work with environmental groups

- *Re-enforced environmental efforts of local environment groups.*
- *The ability to get out and provide support to those who wanted it and where it was needed.*

Methods of engagement used

- *Engaging methods used e.g. workshops, school projects etc.*
- *Connecting stakeholders with each other and Councils around catchment/environmental issues.*
- *The opportunities that the project presented for engaging with stakeholders to increase their awareness of catchment issues such as the importance of natural habitats etc.*

Specific events and activities

- *The launch*
- *Mural*
- *Activity walks*
- *School programs*
- *Funding for our Streamwatch kit.*
- *Starting school gardens as a new venture. Introducing children (6 –12 yrs) to the soil, its needs and its produce. Making healthy soil – growing healthy food.*

Bush regeneration work

- *\$30,000 for bush regeneration works in Buffalo Creek catchment.*

The Quality of the people - Building personal skills

- *Capacity building – train-the-trainer workshops helped me in my role as a sustainability educator, and the joint-run guided walks built my capacity to run the walks on my own. The biodiversity guided walks program will continue to run at Macquarie University – driven by Institutional Advancement and Sustainability – and open for all community.*
- *The team participated at all Macquarie University's Sustainability fairs – educating our community about Catchments.*

- *Kristin's drive and passion.*

6.3.2 Key Informants shared their best memory of Catchment Connections

The following summarises the responses that were provided:

- *The mural - I also enjoyed seeing all of the students at the launch of the Eastwood canal mural.*
- *Community groups engagement sessions/planning.*
- *On site delivery of schools programs – seeing outcomes and engagement.*
- *Taking a lovely group of people from mixed cultural backgrounds for a dusk/night walk to look at birds and other animals in the Field of Mars Reserve.*
- *The happiness and satisfaction on people's faces as I left the workshop venues.*
- *The festivals.*
- *Future focus –the strong take up at the future focus initiative.*
- *Seeing Kristin at the Annual Spring Garden Gala at Eden Gardens giving out plants donated by Eden – the event summed up the collaborative nature of the CATCHMENT CONNECTIONS program – business, LGAs and community members all working together to create positive interactions with each other and our local environment.*
- *The children and their gardens.*
- *Working with TAFE students to develop logo.*
- *The One Drop festival – as the facilitator it was great to see it be so successful.*
- *Seeing photos and hearing about the positive feedback of community members from CALD backgrounds who never felt safe to walk in the bush.*
- *The work that was done directly with the community – both through Future Focus and through partnership projects with community groups such as the Ryde Hunters Hill F&F Society.*
- *Meeting many people committed to preserving our creeks and natural habitats.*
- *The guided bushwalks that the ethnic participants really enjoyed.*

6.3.3 The program limitations

Like every program Catchment Connections was not without limitations. Sometimes these are real limitations. At other times however they are differences in perceptions. The key informants identified these as follows:

Budget and Staffing Issues

These are discussed further in the Supplementary Report but the following comments from key informants sum up the extensive input received on these issues

- *Budget – the amount of money set aside to pay the project officer – this may have resulted in the high turnover in the role.*
- *Timing*
- *Lack of previous knowledge of program outcomes.*

Project management

Again these issues are discussed in the Supplementary Report but the perceived: *Lack of Reference Group meetings in 2nd half of project which lost connections with the group; and: I don't really know what the outcomes were;* was raised by a number of key informants is discussed in some depth.

Other issues raised included:

- *Initial data collection/establishment of evaluative framework was limited.*
- *Strategic planning limited.* Note another key informant however said that: *strategic planning was strongly considered in how funds were allocated to community engagement in the final phase. The aim of engaging with multiple stakeholders, value-adding to existing programs, consultation outcomes etc were carefully considered at that stage.*
- *Bush regeneration limited.*
- *Our aspects started too late in the piece – very positive but more lead time (would have been) better.*

- *Time to deliver limited, resources allocated to deliver such a big scope of work.*
- *Lack of communication from Ryde regarding programs and activities. Needed more time for promotion.*
- *Lack of a strong dialogue between Project Manager of Catchment Connections and the Council group in control of Bush Regeneration. One respondent noted that : It was very difficult to ensure that the Catchment Connections scope of works was undertaken within timeframes and gathering evidence of quality of work – photos etc. Another said that. Perhaps a clearer written agreement should have been made at the start and passed on to any new project manager.*
- *All stakeholders need copies of all resources produced by the project in usable form.*

It is important to note the City of Ryde indicated that the project management system that was used to deliver the project was in fact very comprehensive. A Project Steering Group was formed to steer the project and regular project status reports were prepared monthly. This is a sophisticated project management system and it may be that some of those key informants commenting on this aspect of the project were ill informed that this system was in place.

Timing was also an issue and the respondents indicated that:

- *More project management time was required than was initially planned or budgeted for.*
- *Timeframes were often limited – a longer lead in time for each project would have made for an easier delivery.*

Reporting and planning requirements

- *Reporting requirements could have been better incorporated to some aspects*
- *The necessity for strategic planning at the point of inception should be one of the most important lessons learned here. In fact, better planning when designing the grant proposal itself would have resulted in far smoother implementation.*
- *Consideration should have been given to the benefits of constraining the scope of objectives and initiatives – in effect doing less, in the hope of achieving a smaller range of objectives would have proven more effective. It would certainly have been far easier to deliver. This could also be said for the final ‘leg’ of the project where the sheer volume of initiatives created increased the workload of key staff members to unmanageable proportions.*
- *Too much of the funding spent on bush regeneration.*

6.3.4 Key informants were asked if they were doing Catchment Connections over again what would they do.

The data provided below contains all responses given. It is organised only, but not reduced or edited. This data underpins many of the recommendations that form the formative aspects of this report.

Managing the project

- *Want to be managing the project for the full three years! Divert more money to paying the project officer. Be a bit more creative with the Steering Group, work closer with engaged community members/groups for capacity building (rather than trying to engaged the whole community in a blanket way).*
- *Review procedures for reviewing/evaluating to incorporate more stringent monitoring of facilitators, budgets and other controls for running the programs.*
- *Plan timelines further ahead of time to ensure seasonal, timely fits e.g. with schools programs being held in winter when the earth is freezing, seeds won't grow etc and schools not interested in engaging in programs due to reporting times occurring in the schools.*
- *Better handovers when there are staff changes.*

- *Have started sooner and perhaps run a pilot phase before adapting for the remainder It was successful but I would be a bit more realistic in project deliverables and initial start timetable trialling.*
- *Allow more time to deliver projects but keep the content the same*
- *Start planning and project works from the beginning (i.e. avoid delays in project implementation).*
- *Spend more on staffing. Resource project officer to a higher level (possibly even another part-time officer to share time at the other two Councils as dedicated staff time is imperative to ensure works progress.*

Improved liaison

- *Liaise more with other sections of Council and other Councils involved in programs*
- *Liaise with community groups, schools and businesses to best fit out how they can benefit (time restraints, possibilities, impossibilities within organisations).*

Feedback and reporting.

- *Insist on regular feedback to the Reference Group.*
- *More initial research in relevant community consultation and data for program planning.*
- *Firmer evaluation framework and data collection plans.*
- *Reporting agreements for aspects managed by public works.*

Strategic approach

- *Strategic bush regeneration planning in line with project objectives and greater integration among facets of the project.*
- *Increased incorporation of project management requirements e.g. lengthy procurement processes etc not accounted for.*
- *Some improvements in financial accountability across departments/Councils etc.*
- *Ensure it truly is sustainable - Build in a follow-up program.*
- *Include all catchments, not just half.*
- *Get involved earlier in the program.*
- *Run the workshops with staff and students.*
- *Start the guided walks program earlier.*
- *Continue resource funding to each school (some had no tools).*
- *Include such necessary things as on-site visits, pre-workshop surveys as to needs, resources, ages, numbers etc, in presenter's time and costs.*
- *Prepare earlier so dates can be ordered ahead of time and (my) life doesn't have to be pushed aside.*
- *Scale it down.*
- *The necessity of building in an effective process for evaluating any future projects. This should occur at the inception phase and should enable an ongoing process of monitoring and evaluation that feeds back into strategic planning throughout the life of the project. This would allow for greater consideration of the efficacy of initiatives in addressing project objectives, as well as enabling a flexible approach to project management. If something was not 'working', project managers would know earlier and be able to look sooner for alternative approaches.*
- *Change the business plan to reduce the bush regeneration funding and increase funding for more community engagement activities.*
- *Capitalise on the work put into the mural by visiting nearby schools to promote it as a valuable resource for teaching.*

6.4 End stage program evaluation – contractor key staff informant surveys

In addition to the evaluation of specific aspects of the program, which are reported upon in the Supplementary Report, key contractors were surveyed and provided the following overall data about various elements of the Program

6.4.1 The Schools Program

Five contractors from the Next Generation school engagement program returned the evaluation forms to the evaluator. Key overall findings were:

The program was extensive: In all, over 25 schools were provided with workshops for students and over 11,000 students attended through the life of the Catchment Connections program. In addition one teacher workshop was held. A significant number of teachers were engaged in the process of providing workshops to students. Teachers were strongly encouraged to follow-up the workshop program in their classrooms.

The program was valuable: There is ample evidence from this survey and the teacher feedback reported in the Supplementary report of the value of the program. The following quotes from two of the contractors illustrate this point:

A valuable program that could have been further enhanced by commencing the activities that I delivered significantly earlier in the program lifespan.

It is a really important program. Teachers commented on the day that they were very impressed with the program. They felt that the show was of a very high standard, indeed much better than performances that had to pay for in the past.

The program was well organised. There was generally positive feedback about the organisation of the program. For example: *I thought the program was very well organised and designed. It linked together a range of different programs to create a comprehensive package of educational activities for schools*

The program can continue to grow: There is some evidence that teachers will continue to build on the program. The quotes below from the respondents illustrate this:

Some [evidence], but I personally initiated a personalised follow-up with each school which I am still in contact with the teachers.

Review visits, Facilitated a Data Collection & Planning day with staff, delivered an educational workshop to P&C / parents on Sustainability at Home, delivered an educational workshop to staff on Waste Reduction & Management at Work, prepared SEMS & SEMP for School, conducted Landscaping Masterplan & Hydrological Map visits, presented overall findings to key REPS staff.

Many teachers told me that they would continue to develop and build on the water education at the school as a result of this program.

Yes – they are very keen and I hope to be able to provide them further assistance if required however they now have a much better framework within which to progress their objectives.

We will follow-up with the school next term to see if the messages of the play were taken on and if this had any noticeable change in the children's behaviour and attitudes to the environment. I did notice a few teachers taking their class back to school - observing the health of the storm water drains and the general litter in the play ground. We were able to pick up all our examples of litter for a creek pollution demonstration within the play from this play ground. We let the teachers know this, so that they could discuss it with their students.

6.4.2 The Walks Program

Two contractors on the Guided Walks program provided specific input as part of the end stage evaluation. Data is included in detail in Section B4 of the Supplementary Report, but highlights are contained below.

The early walks were successful and the program grew and grew: As a key informant indicated: *These [2009 program] walks were so successful that they were repeated again later in 2009. In 2010 I conducted five more walks and in 2011 there was a flurry of activity and a further seven walks were held in two months.*

The walks built knowledge and awareness. *Whilst many of the people who came on the walks were there to just enjoy a walk in the bush, I was amazed at the level of knowledge of many of the participants. This was more so in the early walks which I think attracted bush care volunteers and other community minded people. I also found people from NESBs very keen to learn about the local environment.*

I believe the program is worthwhile. It appears to be effective in getting community involved in participating in environmental activities. The majority of participants of ethnic background (and some Australian born individuals) appear to learn a lot from participating in these guided walks. Many components of what they learn are commonly considered to be general knowledge, however leading these walks has brought me to realise that this is not the case. Basic environmental knowledge and understanding has never been previously conveyed taught to many of these people, especially those from overseas. Upon participating in walks and learning about the environment and wildlife, a very large percentage of participants are interested in attending more walks, getting out into the bush, and most importantly protecting what we have left

The walks have reached the previously unconnected: *There is evidence of increased connection with and valuing of the Catchment by the community especially among the oriental Australian community. I have seen an increase in interest in bushwalking and the local environment among oriental Australians (mostly Chinese and Taiwanese and to a lesser extent Koreans).*

7. Findings Related to Intended Program Outcomes

This Section contains detailed findings of the evaluation of Catchment Connections. These are divided into four sections and are based on the data above and that contained in the Supplementary Report. Some overall findings are reported and then findings against each program outcomes – immediate, intermediate and ultimate are identified. A synopsis of the key findings is provided in Section 1 above.

7.1 Findings - Overall

7.1.1 The program worked - Catchment Connections was an effective sustainability engagement, education and on-ground works program

There is clear evidence, which is outlined in depth in the findings below, that the program was effective. In fact, almost certainly the results of the Catchment Connections Program are better than this report indicates. This is because some elements have not been evaluated fully through the life of the project, and others that have been evaluated are sometimes subject to data gaps and inconsistencies – see 7.1.2 below..

Notwithstanding this, there is certainly sufficient data available to indicate the program connected with people and demonstrated some major benefits in so doing. In challenging circumstances, with high staff turnover and limited people resources, the program was overall effective. The reason for this is due in large measure to the commitment and work of officers of the City of Ryde, who worked in the Project Manager/Project Officer roles and to the quality of the contractors employed to take on various elements of the program.

7.1.2 While this evaluation is broad and the report substantial, there are some limitations in this evaluation of the Catchment Connections Project

As indicated in discussion about the methodology above, there were limitations in the design of Catchment Connections relating to outcomes and data collection. In a sense Catchment Connections lacked a culture of evaluation from the beginning of the project, resulting in a disconnected, un-strategised evaluation process. This was an ambitious project and it required evaluation from the beginning, not from May 2011, when the evaluator was appointed.

7.2 Findings against outcomes at the lower level - Immediate

7.2.1 [Related to Outcome 16] There is very limited evidence to indicate whether builders, developers and local businesses demonstrated improved knowledge, implementation and maintenance of best practice WSUD and stormwater management.

There is no data to indicate whether builders, developers and local businesses have improved their understanding about WSUD and stormwater management. A workshop has been held for developers but not evaluated and no information about content or attendance has been provided to the evaluator.

For businesses, while there has been a substantial education effort made see Section B3 in the Supplementary Report, it would seem that this has not focused particularly on stormwater management or WSUD.

Future programs may need to further focus on Outcome 16 in order to extend the connection of relevant members of the community with water quality and stormwater management issues.

7.2.2 [Related to Outcome 17] Strengthened DCP policies and compliance procedures exist within [each] Council in reference to WSUD and stormwater management issues and WSUD related community education in place

Strengthened policy has resulted from the Catchment Connections Program. The most obvious example of this is in the WSUD area where the WSUD Guidelines and Tools are a bonus for those in local government who are working in WSUD. Perhaps more importantly for this project, they are significantly beneficial for the City of Ryde. The City of Ryde's DCPs and the LEP have been impacted upon by the work undertaken through the Catchment Connections Program. Two community information nights have also been held to explain WSUD among other other sustainability issues.

The program has also impacted upon the policy and planning documents in schools [the School Environmental Management Plan] in the area, and on Macquarie University.

The impact of the Catchment Connections on the policies of Hornsby Shire and Hunters Hill Councils is more difficult to determine. It is unknown if policy has been strengthened.

Apart from signage around the WSUD Demonstration site at Strangers Creek, a project was undertaken to engage local schools with Council's WSUD features. The schools were taken on a bus tour of the WSUD sites (including bioretention systems and a constructed wetlands) and workshops were held with students to include their learnings into artwork for inclusion in WSUD signage. Presentations were made by several Council staff including environmental staff and the engineers who managed the construction of the WSUD works. An additional teacher professional development workshop provided a similar tour for teachers and this included presentations by Council's water quality monitoring program contractors. The permanent signage has extensive information on water catchments and WSUD targeted at the general public.

7.2.3 [Related to Outcome 18] There is some evidence of improved understanding and practice by key relevant decision-makers across Council departments with regard to incorporating catchment health concerns and WSUD

While it is reasonable to assume that there is an improved understanding across Council staff/decision makers relating to the incorporation of catchment health concerns and WSUD, this is inferred rather than being the subject of direct evidence. Some staff training has been provided, although not evaluated. WSUD infrastructure has been installed, maintenance and monitoring is being undertaken, WSUD Guidelines have been developed. None of these outputs would be possible without staff who understand and support WSUD and have the capacity to manage water quality effectively, including WSUD. As one key informant indicated: *the WSUD program has been a learning curve for staff.*

It is of note that within the City of Ryde there is now the capacity to design and build WSUD in-house and this increase in Council capability has arisen directly from the Catchment Connections Program.

7.2.4 [Related to Outcome 19] Local school communities (teachers, students, parents etc) have an increased connection to catchments and awareness of catchment health

and sustainability related concerns and are taking steps towards improving their own actions

There is ample and compelling evidence that teachers and students especially have an increased connection with the catchments; both the notion of a catchment and catchment health generally and to the four catchments that form the focus of the Catchment Connections program, in particular. There is less evidence that parents have been engaged.

The schools component of the program has been extensive and effective, especially in the ways that it has drawn teachers into the program and offered them effective training through professional development workshops and School Action Planning and SEMP planning.

All schools across the target area have been drawn into the program in a way that has worked while the activity is taking place and will have long term outcomes. In all over ten thousand school students have been engaged by the Catchment Connection Program.

In saying this however, there is very little evidence that teachers, students and parents are ‘taking steps towards improving their own actions’.

7.2.5 [Related to Outcome 20] There is not a lot of evidence to support the view that there is increased capacity building of local environmental groups to protect catchment ecosystems

This is a laudable intended outcome, and it may be that this outcome has been met reasonably well. But based on the data available, it is just not possible to identify much capacity within environmental groups. Perhaps:

- there was some growth in capacity of groups involved in the Reference Group, but there is no evidence to indicate this.
- there was growth in capacity from involvement in the two festivals, but there is no evidence to show this.
- the groups drew increased capacity from the outreach series or the train the trainer program, but evidence here is insubstantial. It is noted that the outreach program was intended to target community organisation as well as businesses and that it did so. But whether it improved their capacity is not demonstrable from the data available.

A limitation of the program is that it has not had in-depth connection with the local community organisations consistent through the life of the program, which may have resulted in building capacity over time. In terms of this however, there is intent within the City of Ryde to use the findings and Recommendations from this evaluation to inform future practice in this area.

7.2.6 [Related to Outcome 21] Catchment Connections has engaged on catchment management issues with local tertiary and other adult education organisations (for example, Macquarie University and TAFEs)

There is substantial evidence that Macquarie University and the City of Ryde have forged a strong bond through Catchment Connections. There are a range of activities that have been built up, and continue to occur within the University that commenced as part of Catchment Connections. A continuing Streamwatch program and the Guided Walks program are two of these.

In identifying a strong relationship between the program and Macquarie, it should be noted that no formal partnership was established and arrangements seemed to be made in an ad hoc manner. The same is true of connection with TAFE. Catchment Connections did engage but only on an ad hoc basis. TAFE was heavily engaged in designing the mural and providing training for bushcare staff. In addition, TAFE has also been engaged for the YEP (youth environment prize) program. This is now embedded in Council as an on-going initiative and the final exhibition of the new YEP competition for 2011 will be held at a TAFE Art Gallery and was organised in conjunction with a local TAFE institute.

Apart from the interviews with key informants there is no way that further evaluative data about the extent and quality of the partnership with tertiary institutions can be gathered under the current evaluative processes.

7.2.6 [Related to Outcome 22] There is increased engagement with the general community and the local business sector about the catchment

As indicated elsewhere in these findings there is increased engagement between the City of Ryde and the general community about catchment and about catchment health. There is some evidence that this has occurred in Hornsby Sire and Hunters Hill LGAs as well.

Substantial evidence is cited in the Supplementary Report relating to activities within:

- The Festivals – engagement with the community and with Eden Gardens - an example of a major Business/Council partnership relevant to this project.
- Schools – all schools in the catchment area and a depth of relationship with a number of these. Over 10,000 students directly involved in workshops.
- Businesses through the Outreach program. Over 500 businesses connected.
- Households through Future Focus and the Community Workshops
- Individuals involved in the Guided Walks program or who access and learn from bushcare, the WSUD signage etc.

7.2.7 [Related to Outcome 23] There is increased regenerated area - biodiversity, habitat, vegetation cover and riparian zones across all three Councils

Bush regeneration was a substantial part of the Catchment Connections project. In all more than seven hectares of land were regenerated because of the Catchment Connections project. This led to improvements in biodiversity, vegetation cover and vegetation cover across selected sites within the three LGAs. It is noted that there is limited ongoing data about what was actually done on what site through the life of the project. There seems not to have been reports of activity from those managing Bush Regeneration at various milestone points in the program.

7.2.8 [Related to Outcome 24] There is some evidence that improved methodologies and strategic approaches that consider waterway impacts and catchment frameworks are in place

There is some direct evidence that there are improved methodologies and strategic approaches in place that consider waterway impacts and catchment frameworks with the integration of the WSUD guidelines into the DCP process.

It is of note that the current Water Quality Monitoring Program has been aligned to inform the project and future spin-offs from the project. Public Works Dept are using data to help conceive and design

capital works that may impact water quality for all works in the City of Ryde and it is possible that Hornsby Shire and Hunters Hill Councils may follow suit.

Beyond that however, this evaluation has not identified any more far reaching integration that has occurred. Clearly the availability of the WSUD Guidelines and Toolkit makes the integration of improved methodologies possible for the future, in the City of Ryde, the two partner Councils and beyond.

7.2.9 [Related to Outcome 25] There is some evidence of improved connection occurring between partner Councils and between Council and community/industry stakeholders on catchment management issues

Clearly the Catchment Connections Project has had an impact on the relationships between the City of Ryde Council, the Hornsby Shire Council and Hunters Hill Council. For a project where partnership was essential, it progressed effectively and met its outcomes well.

Looking below the surface though, showed this occurred. The City of Ryde Council was both the lead Council and the LGA in which the bulk of the project occurred and funding was directed. It also contributed the bulk of in-kind funds and support for the project. On-ground bush regeneration works were undertaken in Hornsby and Hunters Hill and there was some impact in these two LGAs from the community education component, but this was reasonably minimal.

The activity of the Steering Group demonstrated connection, but it is noted that as the project progressed it seemed to have less engagement. See below. At an officer level there has been contact between staff undertaking various components of the program – for example those delivering bush regeneration.

The level of connection was proportional in relation to relative areas of the LGAs that were covered by the catchments referred to in the business plan. All major community engagement projects in the final phase targeted all three Councils to some extent.

Improved relationships between Council and the community and industry are reported elsewhere, particularly in Section B3 of the Supplementary Report.

7.2.10 [Related to Outcome 26] Multiple relevant stakeholders are educated on the connections between various sustainability concerns, catchment health and their own actions and impacts. This includes greater awareness of the ways that people are in turn affected by the health of their catchment

There is evidence that multiple stakeholders are educated on the connections between sustainability, catchment health and their own actions. There is evidence that awareness has increased about these issues because of the Catchment Connections Program. A substantial amount of the evidence in terms of this finding is included in Section B of the Supplementary Report.

7.3 Findings against outcomes at the medium level – Intermediate

7.3.1 [Related to Outcome 7] There is only limited evidence of improved practice in stormwater management and water sensitive design by industry, including builders, developers and Council staff

While it may be the case that improved practice is occurring in stormwater management, the evaluation of this project was not able to discern this among builders, developers or Council staff. The data was just not available upon which to make any judgement, however it is noted that WUSD and Water Management formed a small part only of the Catchment Connections program. Hence Outcome 7 is not a major desired outcome of the project

As indicated elsewhere, with regard to WSUD, there is evidence of improved understanding and practice among Council staff at the City of Ryde about WSUD. There is evidence that improved practice might occur elsewhere because of the availability of the WSUD Guidelines and Tools – but they have to be used. There is no evidence of uptake by the private sector, builders and developers.

It is noted that Stormwater management was a major focus of the school programs e.g. *Clean up your Act a water-bug adventure* and especially, the Leapfish *Last Drop* program. This was tailored to local stormwater issues and was an adaptation of the earlier program and festival workshops (e.g. chemical free cleaning, flooding etc). The WSUD signage and workshops were primarily stormwater focused. Stormwater management was also a feature of the early stage outreach workshops – Place Based Community Education project [See B3 of the Supplementary Report.

Reports of the extensive water quality monitoring program are also sent to local educational institutions and libraries and are placed on the Council website for public access.

7.3.2 [Related to Outcome 8] There is no evidence of increased holistic consideration of catchment health and water quality by all three partner Councils and Council staff, with regard to catchment based management concerns. This should be integrated across various relevant departments (e.g. planning, parks and bushland, engineering etc)

The outcome underpinning this finding is an important one, but unfortunately no direct evidence can be found to support it as a finding from the Catchment Connections Program.

In saying this however, there is evidence that a deal of sharing of information has occurred and this may underpin increased consideration of catchment health. For example, sharing through NSROC and sharing of local water quality monitoring with Hornsby - Terry's Creek and Hunters Hill - Buffalo Creek are examples where the project has worked across Councils. Also the collaboration with the partner Councils in preparation of the Regional State of Environment Reporting is another of cross Council collaboration.

While a Catchment Management Seminar was held for staff from the three Councils and it evaluated very positively [see Supplementary Report Section D3] it can be argued that it was too little and too late to impact upon the outcome related to integration of a catchment perspective across Council/s. It provided information of a high quality, but this outcome relates to integration across departments and Councils.

This workshop was held on the very last day of the project at a particularly bad time of the year. [30 June 2011]. It was attended by thirty five and evaluated by less; although it did attract a range of disciplines from across the Councils. Had it occurred earlier there might have been the opportunity for more integration and in-depth consideration to occur during the life of the project. Perhaps Catchment Connections did not engage with staff hard enough or early enough to achieve this outcome. It remains work for the future.

7.3.3 [Related to Outcome 10] There is evidence of improved community knowledge and awareness of catchment mechanisms and issues and the impacts of individual and group actions on catchment ecosystems

When taking the data all together, there is sufficient evidence of that community knowledge and awareness has been enhanced. A whole raft of projects and some evaluation material about some of them, indicate that catchment awareness has grown - WSUD initiatives (Stranger's Creek bio-retention system, designs, draft DCP, vegetation guide, technical guidelines, MUSIC modelling etc); education through signage at three sites, school and community workshops, community workshops and business workshops, walks and tours, the Eastwood canal mural and through other projects. As indicated below though [7.3.4], there is insufficient behaviour change or even behaviour intent evidence, to be certain that the second part of this outcome has been achieved. Some projects, for example the community workshops, do contain data from participants indicating that they intend change behaviour in general terms, just not what behaviours, when. This demonstrates that the respondents are willing to change in general terms rather than that they will actually change something tomorrow.

7.3.4 [Related to Outcome 11] There is very little evidence of improved awareness and practices among the general community and among local business, corporations and commercial organisations

This finding is of concern. A growth in knowledge is fine, raising awareness is important, engagement is essential; but if this does not lead to, and influence behaviour, then one must ask 'what is the point?'

As reflected upon by a key informant there is evidence of a growth in awareness

Public awareness activities definitely bring the community along the journey – and anything that gets people to have a greater awareness of the environment around them and the impact (both positive and negative) they have on that environment is fantastic.

There is essentially no evidence however, that people in the community are doing anything different as a result of their awareness. As one key respondent said:

But are they doing anything different, anything that improves the catchment?

While it is clear that knowledge and awareness are important precursors to behaviour shift, it would be beneficial if some change could be discerned. Perhaps this finding has arisen as much through limited evaluation processes as anything else. It is possible, indeed even likely that behaviours and practices have changed because of Catchment Connections - we just don't know about it.

Some would argue that: *Just because it is difficult to measure and has not been specifically measured it does not mean that behaviour change has not or will take place.* This is true but Outcome 11 indicates that the program was intended to generate actual change in practice.

7.3.5 [Related to Outcome 12] There is some evidence of engagement with stakeholders that have traditionally low participation levels in Council environmental programs, in particular, engagement of CALD groups

There is evidence of connection with broad groups of stakeholders including those who traditionally have low levels of engagement. CALD communities have been engaged in some aspects of the program, Guided Walks and Future focus especially. Thousands of school children have been engaged from a range of cultural, language and family backgrounds. Through this it is likely that their parents have been engaged as well. Diverse participants were involved in the festivals and outreach workshops. The project made conscientious attempts to engage with those who had shown little interest in the environment, previously.

Unfortunately though, it is not possible to provide quantitative data about the level of involvement of the previously unengaged. This information was not collected across the life of the project, because of the lack of an evaluation framework.

As an aside, a somewhat unexpected outcome is that there has been growth: *in the communities' connection with Council. The public have a greater knowledge of Council role in sustainability. School/Council connections have grown as well* [key informant]. Those previously unconnected are more connected.

7.3.6 [Related to Outcome 13] Best practice bush regeneration plans, methods and processes are used by the three Councils that consider and improve biodiversity and catchment health

Feedback by Council staff responsible for bush regeneration across all three Councils indicates that best practice has been used to manage all bush regeneration activity funded by the Catchment Connections project. Bush regeneration work was either audited externally by independent report or internally by professional staff. There was no further requirement to have work independently checked and verified.

7.3.8 [Related to Outcome 14] Catchment Connections was an integrated, relatively effectively managed program across all three Councils

Catchment Connections was an ambitious project. At the outset the three Councils involved probably did not realise how ambitious it was.

It was ambitious because it required different levels of work from three Councils within three areas of program, funded from a mix of external grant funds and Council funds and in-kind support. The Council where most work was to occur [City of Ryde] was also the lead Council administratively. The Business Plan did not mandate a Steering Group process which gave formal leadership equitably across the three Councils.

Some, including the evaluator, might see this as a recipe of some concern. Notwithstanding this there is evidence of a successful program management outcome. For example:

- There has been a high level of interaction between Council staff involved in specific program elements – e.g. bush regeneration staff.
- There has been ongoing good will between Council members of the Reference Group and a high degree of trust is evident.

7.3.9 [Related to Outcome 15] There is some limited evidence of improved awareness of specific sustainability issues and improved sustainability behaviours and capacity to make changes, among the community

Identifying what behaviour change has occurred as a result of any intervention is notoriously difficult and requires extensive follow-up over time. Catchment Connections has not been designed to allow follow-up. And the emphasis of the program has been on connection, not change in practice. In saying this though, there is some self reported behaviour shift [or in the intention to change] in some elements of the program. In summary, these include:

- The schools component. The Gardening Teacher Development workshop evaluation showed that 100% of teachers were going to change teaching and school management practices as a result of this workshop.
- The Future Focus Project. There is a small amount of evidence from the few people [six] who evaluated the project, that behaviour has changed.
- The Business Program 2011 and connection with over 500 businesses in the four catchments.

7.4 Findings against outcomes at the highest level – Ultimate

7.4.1 [Related to Outcome 1] Evidence of improved stormwater quality and biological health of tributaries relevant to focus catchment areas - Terrys Creek, Mars Creek, Shrimptons Creek and Buffalo Creek is difficult to locate

Specific monitoring data to provide evidence that water quality has improved, in particular because of activity under Catchment Connections has not been identified. If this outcome had related to maintenance of water quality at 2004 levels, then the Outcome related to this finding might have been achieved, although whether activity under Catchment Connections has been causative, is doubtful.

It is noted that one key informant stated at the very end of the evaluation process that it was: *never proposed to use water quality as an indicator of success for this project. Too many variables and little direct control makes it almost impossible to use water quality as an indicator. It may take years to see improvement to water quality and it would be difficult to link activities conducted through Catchment Connections to changes in water quality.* The evaluator is in absolute agreement with this view and notes though that this issue has been identified as an Outcome of the project by the City of Ryde and that reports to the NSW Environmental Trust have included water quality data from the inception of the project.

7.4.2 [Related to Outcome 2] There is no evidence is of improved water conservation in the three partner Councils – City of Ryde, Hunters Hill and Hornsby

It is somewhat disturbing that this result has to be reported. Reduction in water consumption is an ultimate outcome of the project and Sydney Water data -see Supplementary Report. Section D5 - indicates that if anything consumption might be trending slightly up. A review of the program indicates some reasons for this poor result.

- Most importantly, the evaluator is unable to see that reducing water use is a message of sufficient depth, intensity and reach in the program to achieve the intended result. While there

are messages about consumption within the education programs these are often mixed with a range of other messages and both the reach and the weighting is somewhat limited. For example, expecting significant consumption reduction from messages given to 130 households engaged in Future Focus or 1,000 people at a festival, or even to 10,000 school children seems overly optimistic. If there is not a substantial and targeted intervention in the program about this issue, how can change be expected?

- The water use data is drawn from householders and businesses LGA wide, across the three Councils. This is broader in scope than the four catchments targeted for this project. For example, it is possible but unlikely, that there might have been some reduction in water use in the Terrys Creek catchment but data provided is too imprecise to pick this up, because it relates to the entire City of Ryde LGA.

7.4.3 [Related to Outcome 3] There is evidence of improved connection with catchment and concern for/valuing of catchment health, among multiple relevant stakeholders

This ultimate level outcome has been achieved by this program and there is direct evidence to substantiate this finding. In summary: schools, teachers, students and some parents have been engaged; people from a CALD background have been engaged especially through the Guided Walks program, the outreach workshops and the schools program. For example one CALD community member said after an Outreach Workshop: *Generally encouraging and educating the Chinese community on sustainable lifestyle, backyard gardening is an essential...*

Residents have been involved in Future Focus, they have attended the festivals, workshops and other events; they have walked on the Guided Walks and been involved in bushcare. They have read material in the press and seen flyers brochures and reports. They will continue to support programs of this sort into the future.

People in business across the LGAs have also been engaged particularly through the workshop program. There is connection and commitment as illustrated by the following quotes Those involved in business said the Outreach workshops were useful

[As a leader of the Chamber of Commerce] to arouse awareness to small business owners of the need for sustainability awareness, understanding and action.

To create some ideas that could help our business improve it's understanding of waste and sustainability

Participants left the session with a far greater understanding of the topic. One would look forward to a repeat and further development of this approach in future sessions if available.

The information was mainly based on policy and setting up of a office policy which was further ahead than we are at this point in time. However I believe that the other business professionals who attended the session in our office found it informative and beneficial.

We wanted to offer our staff the opportunity to develop their personal interests, and be educated on what options were out there. Also we want them to think sustainably, as it supports our organizations values.

Extending our corporate sustainability commitment to our employees and their lives outside of work.

In the experience of the evaluator, it is unusual to obtain so much supportive data about an ultimate outcome. Catchment Connections can be commended for the amount of 'connection' it has driven.

7.4.4 [Related to Outcome 4] There is increased native animal habitat, biodiversity, vegetation cover and riparian buffer zones through bush regeneration and restoration efforts

The outcome that sparks this finding has been met. There is certainly increased habitat, vegetation cover and buffer zones. Flora biodiversity has been enhanced through planting of indigenous species. It is unknown though if there is increased biodiversity among the fauna. It is noted however that biodiversity studies completed over past five years of over 54 bushland reserves across Ryde and surveys conducted across Hornsby LGA. These studies are designed to determine a baseline and it is intended that they be repeated periodically to determine changes in biodiversity.

7.4.5 [Related to Outcome 5] There is little or no evidence of actual behaviour change as a result Catchment Connections resulting in improved awareness of catchment issues and improved catchment health

See also 7.3.9. This finding relates to behaviour change, either self reported or observable. There will be no impact on catchment health if people don't change behaviour; so has there been behaviour change measured? No there has not.

In saying this there may have been change; however, the inadequacies of the data collection mechanisms are pivotal here. If people don't report change then we cannot say it has happened. This makes Catchment Connections like a lot of other programs. Behaviour change is desired at the program planning and inception level, but it is not a particular focus of the key messages of a program and it is often not measured.

In this program there is some evidence of behavioural intent in some programs, for example, Future Focus. But there is little hard evidence of actual change.

As indicated by one key informant the Project has undoubtedly: *Planted the seeds of change.*

7.4.6 [Related to Outcome 6] There is some qualified evidence that the Catchment Connections Program is sustainable – on-going positive effects of Catchment Connections projects to be maximised into the future

Clearly some aspects of the program will continue without extensive ongoing activity. On the ground: WSUD sites will continue to function; regenerated sites will flourish if proper maintenance regimens are in place; signage and the mural will continue to play a role in the community education process; Some household school and business behaviours will become normative and will continue; people who have changed their practices because of Catchment Connections are likely to continue these new behaviours- but we don't really know.

It is likely that the improved communication between Council staff will continue at some level.

Volunteers will continue activities commenced in the Catchment Connections program [for example the Macquarie Uni Guided Walks program and the bushcare group].

There is evidence that the community is interested in further activity as summarised by this quote from one of the contractors: *I am being contacted now on a daily basis by people who attended Catchment Connections workshops in businesses and from community groups who have now heard of the workshops program through word of mouth and through the press.*

But without an ongoing commitment of funds, and more particularly of officer time, much of the momentum established by the Future Focus, the schools program, the guided walks, the outreach workshops etc will dissipate. That will be disappointing.

Appendix 1. Key Informants

Focus Group, Phone Interviews and Written Input

The following people attended the Focus Group

Sam Cappelli - Manager The Environment, City of Ryde
Nilushi Disanayake - Sustainability Programs Coordinator City of Ryde [Current CATCHMENT CONNECTIONS Project Manager]
Ben Eadie - October Sun Contractor
Cameron Little - Sustainability Systems and Services. Contractor
Sandra Payne - Bushcare Officer City of Ryde [end of focus group only]
Diane Watkins - Contractor Schools Program
David Bolton - Hornsby Shire Council
Jacqui Vollmer - Hunters Hill Council

Phone interviews held with:

Sandra Nichols - Program Officer early stage of project
Kristin Gabriel - Program Officer latter stage of project
Belinda Bean - Macquarie University Sustainability Officer
Sarah Kinsella - Program Manager early stage
Kylie McMahon.- Program Officer for a brief period at the end of the project. Also October Sun
Jim Fraser - Program Manger middle stage of the project
Liz Pearce -Project Officer early stage o the project. In latter stages was a Hornsby Shire Council – bushland management
Adam Smith. - Coordinator Natural Areas Ryde City
Bev Debrincat - IEWF, Steering group/community member

Written input from...

Jennifer Farrer - Contractor Walks Program
Kurtis Lindsay - Contractor Walks Program
Thor Blomfield.- Contractor Schools Program
Adam Smith - Coordinator Natural Areas Ryde City
Sandra Payne - Bushcare Officer City of Ryde

Note all those interviewed also provided written input.