Drummond Natural Diversity Recovery Catchment

Proceedings of the DNDRC Steering Committee Meeting

June 4th 2003
(Meeting 2)

DNDRC Steering Committee meeting June 2003. Bolgart Hotel

Prepared by Bob Huston and Kel Baldock

GOVERNMENT OF WESTERN AUSTRALIA

DEPARTMENT OF Conservation AND LAND MANAGEMENT
Conserving the nature of WA

DNDRC Steering Committee Notes

Meeting 2: June 4th 2003 at Bolgart

- Meeting opened: ~ 10:00 a.m.

- Present: Mike Meinema (Chairman DCLM),
  Bob Huston (Exec. Officer, Recovery Catchment Officer DCLM),
  David Cale (DCLM – proxy for Greg Keighery),
  Matt Edmonds (Solomon Yulgan Catchment Group),
  Sally Craddock (Toodyay Shire)
  Brendan Oversby (WRC / Dept of Environment – proxy for Martin Revell),
  Elizabeth Tierney (Community Landcare Coordinator – Observer)
  Ted Griffin (Research Officer, Department of Agriculture)
  Darren Farmer (Engineering Water Management Group, Department of Agriculture)
  Kel Baldock (Facilitator).

- Apologies:
  Geoff Erickson (Shire of Victoria Plains),
  Stephanie Clarke (Solomon Yulgan Catchment Group)

1.0 Review of past Meeting Proceedings:

Members reviewed the document summarising the meeting on 20th February and endorsed it (and attachments) as an accurate reflection of proceedings. It was acknowledged that review and finalisation of the Vision Statement for the Steering Committee was an agenda item for this meeting.

Matt Edmonds pointed out that one of the key issues for landowners, within the Drummond Catchment [or close vicinity] was an apparent lack of short-term incentives that could be used to attract landowners to the medium and longer-term planning requirements. In particular Matt mentioned labour was an issue in regards to erecting fences around revegetation areas or around remnant bushland. Mike Meinema mentioned that it would be possible for DCLM staff to assist farmers erect fences however it would depend on the priority of the conservation issues at risk. It should be noted, even for landowners committed to 'conservation works', that these works were usually small scale and 'squeezed' into limited gaps in the farm operation timetable.
It was agreed that this, and related issues, should be further expanded in the session on 'Identifying catchment issues' [See item 4]

2.0 Recovery Catchment Officer – Report

Bob Huston [Recovery Catchment Officer] provided a report of activities completed since the previous meeting and those planned for 2003-2004. Activities completed, or nearing completion, included:

- Revegetation project planning and management - ripping / mounding and fencing at Dunn property [4 Ha]; Pither Rd & Bulligan Rd [roadside verge] sites; herbicide weed control at Dunn property and Bulligan Rd sites

- DNDRC Remnant Vegetation Protection Scheme - finalise fencing agreements and Voluntary Management /guidelines with - George Murray [20 to 30 ha including joining to Drummond NR]; and Dan Kennedy [20ha high value remnant].
- Community Development Program - environmental Education: Wildlife talk at Bolgart PS school nursery development at Bolgart & Calingiri PS; wildlife carer visit at Bolgart PS and Brian Bush reptile education visits and Arbor Day tree planting activities at both Bolgart Calingiri P.S.
- Capital Equipment purchases - included purchase of Chatfield Eze 200 tree planter; seedling trailer with 10,000 seedling capacity and ripper / mounder TPL single tyre.
- Dieback Survey - project area survey completed by DCLM interpreter - report in progress;
- Presentations - included talk to ANCAC reps and presentations to DCLM Regional Manager and Director of Regional Services;
- Signage & Interpretation Project - production completed of 10 'Project site' signs; 3 DNDRC Entry Statement signs are in the production phase [both acknowledge Fiona Boultbee assistance].

Activities planned for 2003-2004 include:

- Projects at the following properties - Geoff Erickson / Neville Clarke; Julian McGill; John Piggott; Dan Kennedy and John Martin
- Soils Mapping / Studies / Management - limited funds had been obtained to develop a soils / landform definition / mapping and 'best management practice' project for the DNDRC. Based on experiences from other recovery catchments, Ted Griffin and Darren Farmer [DAWA] had been invited for a session later in the day to outline critical aspects of approach and contribute their thoughts to the definition of a project. [See Item 5];

3.0 Confirming Final DNDRC Vision Statement

An outcome of the previous meeting was two slightly different versions of a vision statement framed for the Committee's consideration. A session at this meeting considered the appropriateness of either version and suggestions for improvement were focussed on making the statement more efficient [less wordy] but maintaining the core themes of the vision. These are:
What are the outcomes required
Who is going to achieve the outcomes and how

Debate, redrafting and review resulted in simplification, amendment and final agreement by the Committee on the following vision statement:

TO PRESERVE AND ENHANCE BIODIVERSITY WITHIN THE DRUMMOND RECOVERY CATCHMENT BY COMBINING NATURE CONSERVATION WITH SUSTAINABLE FARMING SYSTEMS.THIS WILL BE ACHIEVED THROUGH WIDE STAKEHOLDER PARTICIPATION, DEVELOPING PARTNERSHIPS AND A COMMUNITY THAT LEADS BY EXAMPLE.

4.0 Define Key Recovery Catchment Outcomes - Environmental, Economic and Social

This session followed the clarification of the Vision Statement and sought 'whole of Committee' (and guests) input to identifying / defining key outcomes sought for the recovery catchment. As outcomes were suggested and debated, members were asked to 'classify' these as environmental, economic or social. The Committee was also conscious of the need to define 'Outcomes' rather than 'outputs.

Outcome	**Classification - Environmental, Social Economic**
Ecologically sustainable waterways in the Drummond Recovery Catchment area.	Environmental
Contain, recover and utilise degradation processes.	Environmental & Economic
Greater ownership and participation required	Environmental & Economic & Social
Preservation of local rare species and habitats and eco-systems.	Environmental
Recover indigenous species diversity.	Environmental
Maintain and develop appropriate vegetative corridors.	Environmental
An aware and contributory community.	Social
Ownership by the 'Catchment Community' of catchment recovery [Cultural Change]	Social
Cultural change to implement environmentally sustainable farming practices	Social
Demonstrated integration of environmental, economical and social factors.	Environmental & Economic & Social

5.0 Scanning the Catchment Environment - Identifying Catchment Issues

In recognition of the previous session that identified key outcomes sought, this session concentrated on identifying issues that prevailed in the catchment area or with 'stakeholders' that were associated with the Recovery Catchment. The issues below were not classified in terms of environmental, social or economic (as were outcomes previously), but there was general agreement that 'issues' were strongly related to outcomes. Issues were identified in the following order and have been numbered primarily to allow cross-referencing (as most were clearly related to others).

1. There is a significant need for cultural change;
2. Lack of ownership, recognition and responsibility that action is required at grass roots level Related to 1.
3. Lack of access to appropriate knowledge (on how best to approach some of the problems and progress towards desired outcomes). Note - 'knowledge' is further clarified as - problem identification, analysis (of causes of the problem) and implementation (taking action to in progress towards managing / resolving the problem). Related to 1 & 2 above.
4. Identifying / determining priorities (was difficult, especially recognising the issue above).

5. Finding and applying sustainable farming systems (that are relevant to the area). It is a challenge to identify methods and approaches that are both economically viable and will provide progress towards environmental outcomes.
6. There is concern about establishing and then maintaining -momentum and continuity.
7. Remnant vegetation - was recognised as a key 'asset' in the catchment, both in terms of its significance as a biodiversity resource and, depending on size, location in landscape and condition, as a component that minimised further degradation of other 'assets' (e.g. if well placed, significant remnants are lost, then the cycle of groundwater recharge - saline seepage - impact on streams, wetlands and adjacent vegetation is increased)
8. Degradation (symptoms) - issues needing attention are:
   Fragmentation (of remnants and habitats to maintain biodiversity)
   Species loss
   Salinity (via excess water, rising water tables & degrading water quality)
   Weed and pests
   Soil erosion and sedimentation
   Declining soil condition
9. Potential Local Government involvement - as the system of government closest to community, it is recognised that Local Government can play a significant part in aspects of management. Some aspects of this involvement that were discussed included:

- Communication of issues, initiatives and information to the 'catchment' populace and to interest groups outside the catchment;
- Development of 'Statement of Planning policies', that could assist to define land use arrangements complementary to both biodiversity and sustainable farming systems;
- Assist to identify and define economic, social and environmental factors & indicators that can assist to track the success of management efforts in the catchment.

6.0 Soils Studies and Management – Project Development

An item on soils definition and appropriate management practices was introduced with the following background:

- Funding for a small project had been obtained from State Government resources;
- Identification [or improved definition] of soils / landscape characteristics in the Drummond catchment is a key factor to guide planning and implementation of 'on-ground' work;
- Maps and basic data available at present such as – soils, geology and landform –are at a scale too large to be of specific use for planning (at the desired level of detail);
- Landscape interactions [how characteristics such as soils, topography, current land use may impact on features such as water movement, vegetation health and placement, future land use capability] are an aspect that needs better understanding so that planning initiatives have a sound scientific foundation;
- The catchment area/vicinity was however not without significant information. For example, previous reports such as those from M. Deshon, T. Kay [2001] and PPK [2002] had identified catchment characteristics and issues and suggested generic solutions and options.
- Further information such as – geology, information from drilling at bore installation, groundwater levels and water quality data (recently commenced), biophysical data, farm-scale observations [Kay] and signs / symptoms of visible degradation – are available to assist planning and guidance for initiatives;

Given this background, it was expected that an outcome of this session would be to outline a project (including a project brief) that identifies key soils / landform / physical information at scale appropriate to use in the catchment.

Because of their involvement in projects / areas that had sought outcomes similar to those for Drummond, Ted Griffin and Darren Farmer from Dept. of Agriculture were invited to present to the Committee their considerations of critical aspects of identifying key elements of a project suited to the needs for Drummond Recovery Catchment.

DCLM staff completing fencing work on "Emu Farm" paddock revegetation site.

6.1 Scoping a Project on Soils / Landforms in Drummond Recovery Catchment

Discussion points on key factors to be considered by the Committee resulting from presentations by Ted Griffin and Darren Farmer are summarised below. Notes from the presentation by Darren Farmer are included as Attachment A.

- Management issues and measures need to consider the 'whole of catchment scale';
- The geology of the area will be the basic determinant of soils and landform variation. Geological features can have a significant impact on water regimes (both surface and groundwater);
- Major features (geology, soils, landforms, landuse, vegetation) have the dominant effect on overall catchment water balance and the greatest impact on changes in flow regimes and quality;
- Information available (re the above) may be at a scale & level of detail different to the requirements for this project. Most commonly, soils information is available at a scale and intensity too broad for a project such as intended at this catchment. [Verified in the case of Drummond by the Committee];

- Reasonably detailed soils / landform information was a critical requirement for understanding and modelling surface water and groundwater regimes and predicting the impact of landuse initiatives on ground water and surface water;
- Efforts to provide better definition of soils / landforms in the area must involve landowners / land mangers in the project;
- Best approach, as demonstrated in other catchment studies, could be to divide the Drummond Catchment into 'management areas' or 'management neighbourhoods';
- Areas or neighbourhoods could be determined by factors such as:
    - Common physical / landscape features (e.g. areas of higher relief, slopes / mid-slope areas / lower slope areas; vegetation characteristics)
    - Degradation issues / symptoms are common to an area;
    - Changes in land use approach (better economic and environmental alternatives), when demonstrated, have a good likelihood of wide adoption;
- It was likely that there was insufficient resources to obtain better definition of soils / landforms across the whole catchment. Therefore the focus of a project should be to obtain improved soils data in one or two of the 'management neighbourhoods' as a trial. Depending on success, this approach could then be extended to subsequent neighbourhoods;
- Groups within Dept of Agriculture (such as those containing Ted Griffin & Darren Farmer) had significant commitments and could not contribute anything greater than a 'mentor role' to the development or implementation of the project;
- It was considered highly desirable that a 'local operator' (well known to the catchment community) would be involved in the collection and documentation of more detailed soils / landform information;
- The pros & cons of additional resources (e.g. consultant, CLCs), to assist project definition, could be considered;
- It was noted that a sub-catchment approach may work best to engage existing Landcare groups and also to attract more involvement in these groups from individuals;
- Depending on the detail of soils information required, the optimum group size for involvement is probably between four and six individual landowners / managers;

7.0 Next Meeting

Bob Huston reported that arrangements for the Minister, Environment and Heritage to launch the Drummond Natural Diversity Recovery Catchment were tentatively set for September / October 2003. The date could not yet be established until the Minister's availability was determined. Making such arrangements required considerable lead-time in booking and providing suitable background.

The next meeting of the Steering Committee is scheduled roughly for November. The exact date will be set depending on members' availability and ensuring that there is no clash with peak period activities such as preparation for harvest etc.

Attachment A

Management project development

Darren Farmer
Engineering Water Management Group
Department of Agriculture

reports…

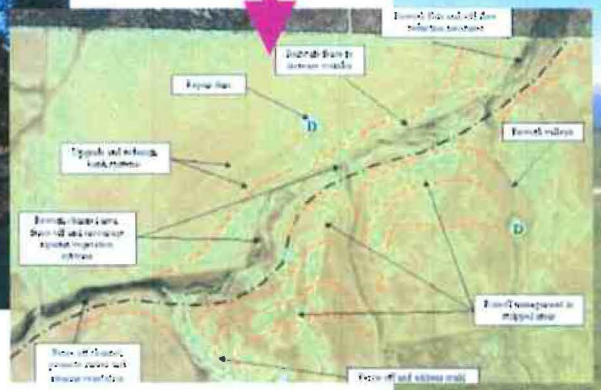
M. Deshon
T. Kay 2001
PPK 2002

data and evidence …

Bore geology & heads
Farm Observations (Kay)
Bio-physical data
Visible degradation

generic 'solutions' & 'options'

Easy to get distracted from real issues



No single fix or solution, many permutations, many

The recovery / focus catchment issue……

1. Appropriate catchment work focused to an outcome
2. Getting the data and information that is really needed
3. Breaking the project into understandable, manageable, achievable and fundable chunks
4. Recognized benefits from systematic expenditure of funds
5. Getting catchment stakeholders motivated……

…… ***and keeping them that way***

Bringing individual project parts into a common comparative framework …….

Fundamental issue:

* **change occurs due to landscape**
* **impact and extent depends upon landscape**

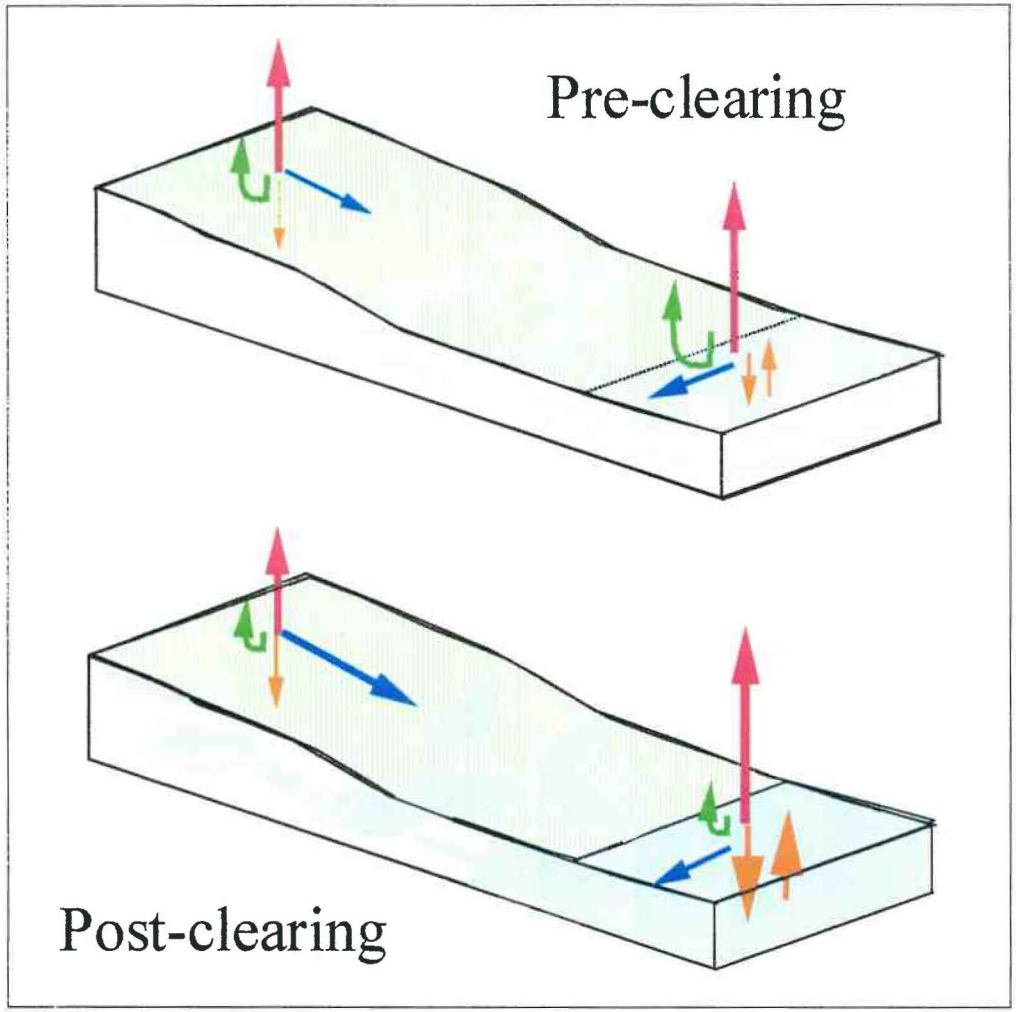
clearing etc. simply catalyst for imbalance

Landscape extremely variable…..

- cause and effect variable
- impacts variable
- issues and objectives variable
- solutions and options are necessarily variable

EVEN WITHIN SAME FARM

Understand → landscape change = change in redistribution



Much about veg water use, recharge and watertables.

***also* reflected in changes in runoff and surface redistribution**

* **flow rates**
* **net volumes**
* **hydroperiod**

Change has had impact…

AT LOCAL SCALES:
Definitely FLOWS, maybe recharge

AT CATCHMENT SCALES:
MAJOR CHANGES IN STORAGE, PARTICULARLY FROM SMALL EVENTS

THIS CHANGE IS DIFFERENT FOR EACH AREA

USUALLY DISCONTINUOUS WITHIN LANDSCAPE

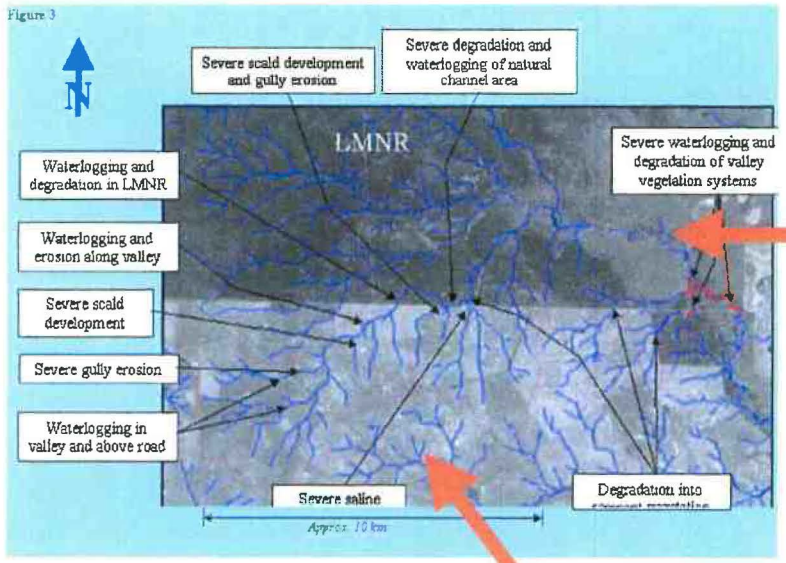
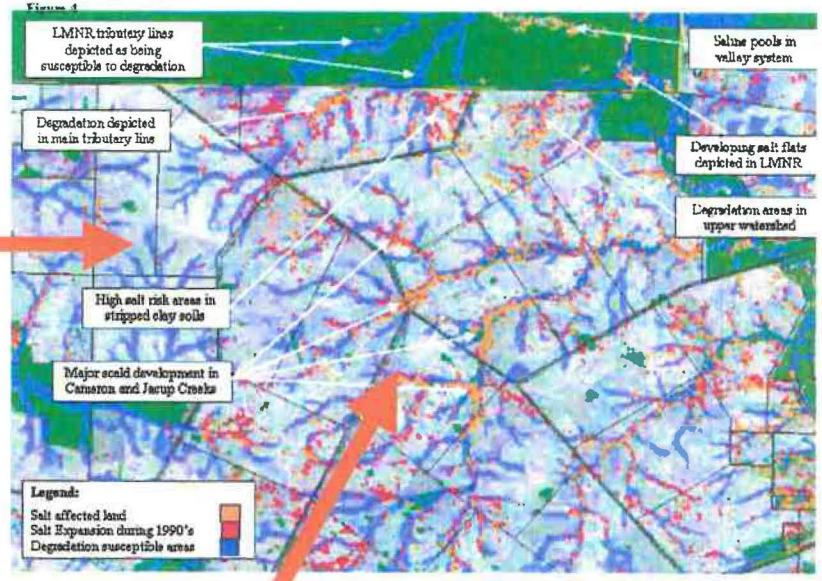
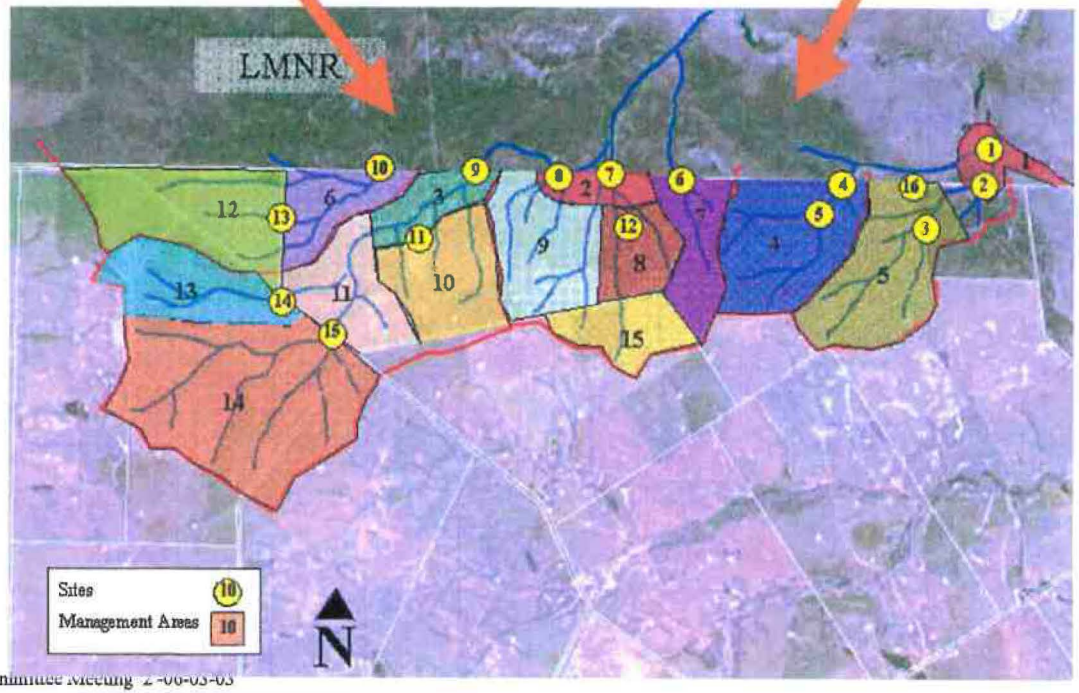


Figure 3
N
Severe scald development and gully erosion
Severe degradation and waterlogging of natural channel area
LMNR
Severe waterlogging and degradation of valley vegetation systems
Waterlogging and degradation in LMNR
Waterlogging and erosion along valley
Severe scald development
Severe gully erosion
Waterlogging in valley and above road
Severe saline
Degradation into
Approx. 10 km


LMNR tributary lines depicted as being susceptible to degradation
Saline pools in valley system
Degradation depicted in main tributary line
Developing salt flats depicted in LMNR
Degradation areas in upper watershed
High salt risk areas in stripped clay soils
Major scald development in Cameron and Jarrup Creeks
Legend:
Salt affected land
Salt Expansion during 1990's
Degradation susceptible areas


LMNR
Sites
Management Areas
N

Too many projects "get on with it" with few objectives and preconceptions of what might or might not happen.

Avoid making a quick solution the cause of another problem

- *what are the issues and where should we start*
- *what should farmers, scientists, NRM people be looking for ?*
- *what facets, features, relationships or associations are important*
- *to what level are internal landscapes similar or different (how does this impact on goals and objectives) ?*
- *how do you decide what farms and activities require the greatest assistance, funding or intervention*

Discretisation provides local relevance to otherwise generic rhetoric

manage LOCAL water , manage LOCAL issues

understand the interactions

Appendix 1: Drummond NDRC Steering Committee Members:

Name	Position	Organization	Role	Contact details
Mike Meinema	District Manager	DCLM	Chairperson	Perth Hills District Office Mundaring Weir Rd, Mundaring WA 6073 Ph: 9295 1955
John Carter	Nature Conservation Coordinator	DCLM	Deputy Chair *Proxy* for Chairman	Perth Hills District Office Mundaring Weir Rd, Mundaring WA 6073 Ph: 9295 1955
Bob Huston	Conservation Officer	DCLM	Executive Officer Recovery Catchment Officer	Perth Hills District Office Mundaring Weir Rd, Mundaring WA 6073 Ph: 9295 1955
David Cale	Technical Officer	DCLM	Technical/advisory *Proxy* for Greg Keighery	Woodvale Research PO Box 51 Wanneroo WA 6946 Ph: 9405 5181
Greg Keighery	Principal Research Scientist	DCLM	Technical/advisory Scientific	Woodvale Research PO Box 51, Wanneroo WA 6946 Ph: 9405 5100
Owen Donavon	Manager, Mid West Share Farms	FPC	Technical/advisory Farm forestry	Lot 1 260 Kalamunda Road South Guildford WA 6055 Ph: 9279 4088
Don Telfer	Moora District Manager	AgWA	Technical/advisory Agriculture	Agriculture Department Moora District Office PO Box 16 Moora WA 6510 Ph: 9651 0553
Brendan Oversby	Natural Resource Management Officer	Department of the Environment	Technical/advisory Waterways	DEWCP PO Box 497 Northam WA 6401 Ph: 9622 7055
Cr. Sally Craddock	Councillor	Toodyay Shire	Technical/advisory Councillor and Toodyay Naturalist	Toodyay Shire PO Box 96 Toodyay WA 6566 Ph: 9574 4184
Cr. Geoff Erikson	Councillor	Victoria Plains Shire	Technical/advisory Councillor and farmer	Victoria Plains Shire PO Box 21 Calingiri WA 6569 Ph: 9628 7004
Matt Edmonds	Farmer	Solomon Yulgan C.G.	Farming/catchment Technical/advisory	PO Box 14 Bolgart 6568 Ph: 9627 5128
Stephanie Clarke	Farmer	Solomon Yulgan C.G.	Farming/catchment Technical/advisory	PO Box 83 Bolgart WA 6568 Ph: 9627 5283
Warren Howlett	Farmer	Mt. Anvil Gully Catchment	Farming/catchment Technical/advisory	PO Box 405 Northam WA 6401 Ph: 9622 7264