

CITATION: *Quinn v Development Consent Authority NT LMT 67*

PARTIES: IAN WARREN QUINN
v
DEVELOPMENT CONSENT AUTHORITY

TITLE OF COURT LANDS AND MINING TRIBUNAL

JURISDICTION: LANDS AND MINING TRIBUNAL ACT

FILE NO(s): LMT-67-2003-P

DELIVERED ON: 29 July 2003

DELIVERED AT: DARWIN

HEARING DATE(s): Not applicable

DECISION OF: D LOADMAN, CHAIRPERSON

CATCHWORDS:

LITCHFIELD SHIRE – CLEARANCE OF “OVER 50% FOR HORTICULTURAL PRODUCTION” – OBLIGATION ON APPLICANT TO ESTABLISH “THE AVAILABILITY OF A PROVEN WATER SUPPLY TO SUPPORT THE INTENDED FUTURE USE OF THE LAND (AT MATURITY)” – OTHER ENVIRONMENTAL EFFECTS

Lands and Mining Tribunal Act NT
Planning Act NT

REPRESENTATION:

Appellant: Hunt and Hunt (Ms Howard)

Respondent: self

Judgment ID number: LMT 67

Number of paragraphs: 36

IN THE LANDS AND MINING TRIBUNAL
AT DARWIN IN THE NORTHERN
TERRITORY OF AUSTRALIA

No. LMT-67-2003-P

BETWEEN:

IAN WARREN QUIN

Appellant

AND:

**DEVELOPMENT CONSENT
AUTHORITY**

Respondent

DECISION

(Delivered 29 July 2003)

Mr David LOADMAN, CHAIRPERSON

HISTORY

1. On 30 April 2003 the appellant lodged a Notice of Appeal at the Lands and Mining Tribunal pursuant to section 111 of the Planning Act ("PA").
2. Pursuant to section 121 of the Planning Act, a mediation conference was fixed by this Tribunal to commence on 28 May 2003.
3. Consequent on an unsuccessful mediation, a written report was received from the mediator which contained the following relevant comments:

"Recommendation: towards the completion of the process of the mediation the mediator made a recommendation to the parties of the mediation which in turn requested that the mediation report contain the recommendation, which was as follows:

That the parties to the mediation make the Tribunal aware of the fact the "Report NR2000/04, Groundwater Resources of the Acacia Area" which was prepared in February 2000 has apparently been reviewed and such review is not in accord with the original report. As the review appears to be very informal it is recommended to the parties that application be made to the Tribunal that a formal report upon which the public can now rely should be ordered and placed upon the public record."

4. The Tribunal did nothing about this recommendation because such an application would have been *ultra vires*.
5. On 16 June 2003 a Notice under section 127 PA was received from the appellants advising that a compromise or settlement had not been reached. Further that the appellants wished the matter to be determined by the Tribunal. The parties were accordingly instructed by the Tribunal to provide written submissions as directed.
6. On 16 June 2003 the Tribunal requested the respondent to file a copy of any relevant planning instrument. In response to that request the Respondent filed:
 - A copy of the Litchfield Area Plan 1992 (as amended)
 - A copy of the Litchfield Planning Concepts and Land Use Objectives 2002
 - A copy of the Litchfield Area Plan 1992 Litchfield Planning Concepts & Land Use Objectives 2003 Proposed NT Planning Scheme Amendments 03/0014 and 03/0015; and
 - A copy of Report NR2000/004 Groundwater Resources of the Acacia Area.

THE APPLICATION AND THE REFUSAL

7. On 2 August 2002, the appellant lodged with the Development Consent Authority an Application for Development Permit. The

Description of the proposed Development/Proposal in that document is set out below:

"Clear over 50% for Horticultural Production".

8. The appellant was issued a Notice of Refusal by DCA on 22 April 2003. The Notice of Refusal is in the following terms:-

NOTICE OF REFUSAL
NR/03011

DESCRIPTION OF SUBJECT LAND

Lot No: Section 227
Town/Hundred: Hundred of Colton
Street Address: 315 Acacia Gap Road, Manton

The Development consent Authority, at its meeting of 10th April 2003, resolved, pursuant to section 53(b) of the *Planning Act*, to refuse to consent to the application to remove native vegetation in excess of 50% of the allotment, for the reasons set out in the attached Statement of reasons, given under section 5(1)(a) of the Act.

STATEMENT OF REASONS FOR DETERMINATION
NOTICE OF REFUSAL
NR03/0011

Reasons

1. The Development Consent Authority cannot, pursuant to section 52 of the *Planning Act 1999* consent to the proposal as the *Litchfield Planning Concepts and Land Use Objectives 2002*, being part of the NT Planning Scheme, contains, under 2.3 *Natural Resource Management*, the Key Land use Objective to *'protect resources of importance to the shire and the broader region'*; and, under 3.6 *Environmental Management*, the Land Use Objectives to *'protect the land and water resources of Litchfield Shire'* and to *'prevent inappropriate removal of native vegetation'*:

The Litchfield Planning Concepts and Land Use Objectives state that the objective to 'prevent inappropriate removal of native vegetation' can be achieved by "making approval to clear in excess of 50% of any lot dependant on: the availability of a proven water supply to support the intended future use of the land (at maturity); and the retention of buffers where required to protect the environment or the amenity of the locality" :

The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 and other properties in the locality has an estimated total sustainable yield of 160Ml/year (mega-litres per year). The Department of Business Industry and Resource Development has advised that, a minimum irrigation requirement for the proposed orchard, at maturity, is 2.5Ml/hectare/year which, for the area sought, amounts to approximately 220Ml/year. From this advice it is apparent that a sustainable water supply cannot be demonstrated for the intended use of Section 227.

2. The *Litchfield Planning Concepts and Land Use Objectives*, being part of the NT Planning Scheme, state that the objective to *'protect resources of importance to the shire and the broader region'* can be accomplished by *"maintaining environmental flows of quality surface and ground water to protect wetland and rainforest habitats"*

The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 sustains a spring monsoon forest. This habitat is referred to in the Department's publication - *"Ground Water Resources of the Acacia Area NR2000/04" : Advice* from this agency suggests that over extraction of the aquifer would have adverse impacts on this vegetation, as well as other adverse impacts, and hence an environmental flow must be

maintained in the aquifer. The Department estimates that the total sustainable yield of the aquifer is 160ML/year.

In terms of maintaining an environmental flow in the aquifer, the proposed development of Section 227 is contrary to the Land Use Objective to "protect resources of importance to the shire d the broader region":

3. The Development Consent Authority must, pursuant to section 51(a) of the *Planning Act*, take into account the *Litchfield Area Plan 1992*, being part of the NT Planning Scheme. Clause 22.5 of the *Litchfield Area Plan 1992* states that "Except with the consent of the Authority, the removal of natural vegetation from an area within an allotment exceeding approximately 50% of the area of the allotment is prohibited" and requires that "the vegetation is removed in accordance with environmental guidelines".

The proposal to remove in excess of 50% of natural vegetation from Section 227 is not in accordance with the appropriate environmental guideline, being the availability of a sustainable supply of ground water. The "*Ground Water Resources of the Acacia Area NR2000/04*" and subsequent interpretive advice from the Director Natural Resource Policy demonstrates this.

4. The Development Consent Authority must, pursuant to section 510) of the *Planning Act 1999* take into account the capability of the land. The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 and other properties in the locality has an estimated total sustainable yield of 160ML/year. It is apparent from this advice that Section 227 is incapable of providing a sustainable supply of groundwater to support the removal of native vegetation that, pursuant to clause 22.5 of the *Litchfield Area Plan*, is prohibited without the consent of the Authority.
5. The Development Consent Authority must, pursuant to section 510) of the *Planning Act 1999* take into account the capability of the land. The '*Litchfield Shire Land Capability For Horticulture*' map indicates that the area proposed for clearing has "soils with physical constraints and limited groundwater supply" and may be inappropriate for horticulture expansion. It is apparent that, pursuant to clause 22.5 of the *Litchfield Area Plan*, the removal of native vegetation from an area exceeding 50% of Section 227, which is otherwise prohibited without the consent of the Authority, would not be in accordance with the aforementioned environmental guideline.
6. The Development Consent Authority must, pursuant to section 51(p), take into account the public interest. It is not in the public interest to allow the unsustainable removal of native vegetation from land that may result in adverse impacts on neighbouring properties. From the aforementioned advice from the Department of Infrastructure Planning and Environment and the Department of Business Industry and Resource Development, it is apparent that a sustainable water supply is not available for the intended use of Section 227, even if the sustainable yield of the underlying aquifer were entirely allocated to Section 227. It is in the public interest to consider, for any development application reliant on the supply of ground water, the potential adverse impact on ground water availability for those land owners already reliant on the same aquifer for their water supplies.
7. The Development Consent Authority must, pursuant to section 51(p), take into account the public interest. It is not in the public interest to allow the water supply for Section 227 to be provided from bores on the adjacent, separately titled, Section 226. Although both properties are currently owned by the applicant, there would be nothing to stop Section 227 changing ownership with no legal tenure to a water supply derived from Section 226.

When questioned on this matter, the applicant, Mr Quin, advised the Authority that he had no desire to consolidate the two subject properties in order to resolve this issue.

THE APPEAL

9. The Notice of Appeal lodged at the Lands and Mining Tribunal on 30 April 2003 is in the following terms:-

APPEAL AGAINST REFUSAL OF DEVELOPMENT APPLICATION

I wish to lodge formal appeal against the refusal of our application to the Development Consent Authority (DCA) to clear in excess of 50% of section 227 hundred of Colton on Acacia Gap Road. (NR 03/0011)

Background

We have progressively purchased and developed 3 Sections in the Acacia Gap Region and were recently prosecuted for clearing 57% of the last section of our project being 227 which was considered in excess of approximately 50% as stated in the act. An out of court agreement was reached as attached. Our subsequent application to the DCA was refused on the grounds of a perceived lack of water.

Grounds for appeal

We disagree on the current perception of water availability in the Acacia Gap region and mango tree water requirements.

Specifically

1. We are legally able to plant mango trees at spacings of our choosing on 50% of Section 227 being 65 Ha. For example current practice is 200 per ha. minus an area for infrastructure, would give 60 Ha. @ 200 per ha = 12,000 trees. The water requirement for 12,000 trees would not differ if we spread the plantings over the area requested per our refused application to the DCA. We merely want to plant in a manner consistent with our existing project stages 1 & 2 which is to spread approximately 10,000 trees over a larger area for on going management and better fire control.
2. Acacia Gap is a new development area and Government water tests are non-conclusive due to limited testing because of the budgetary constraints they operate under. By the very nature of the resource in question there is little scope for a second opinion. There is an under lying area of dolomite rock which extends under section 227 and it is in this structure we found good water on our neighbouring property section 226. Print out attached
3. The DCA are basing their water requirements on that recommended by the Department of Business Industry and Development, we have testimonials from both Australia and overseas that mangoes once established, will produce commercial crops in a climate such as Darwin with out irrigation. Discussion with officers of the DBIRD acknowledge the mango watering basis given to the DCA is old, conservative and may be in need of review.
4. The CSIRO in Darwin are currently up dating the water requirements for mango trees which at this stage may be as low as 50% of current DBIRD recommendations; which is in line with the attached International Mango Symposium extract on reduced water. The final CSIRO study is due for release in June or July this year.
5. The area under consideration is cited in the proposed Litchfield Shire Plan as being suitable for Organic / Horticulture and possible rezoning thus giving defacto recognition to the suitability of the area.
6. If we were to reapply to clear for planting dry land rain feed hay cropping water would not be an issue and the vegetation could presumable be removed
7. The DCA refusal is inconsistent with other approvals given for development of our other Sections 225 & 226 which form part of the same staged project.
8. While we have no current intention of selling section 227, the fact it may not have an existing water supply at the time of any sale would seem a matter for the Real Estate market to decide it's value based on the premise land will always fall to it's highest and best use. Nothing precludes a new owner of 227 seeking water and if this was not the case no land should be sold with out water being proven up; which is obviously be impractical.

Conclusion

In order to conserve cash, maintain a business like approach and obtain a viable internal rate of return our project investment is based on phased development and we only wish to expand funds when required.

We have no immediate need to for any extra bores for several years until our trees further mature at which time all future bores will be feed into the existing common main line for future water security.

Attached;

- Extract from International Mango Symposium on lower water requirements es
- Letter from Australian dry land mango farmer
- Letter from Thai Horticultural Association
- Water Resources Geo map

THE LEGISLATION AND THE PLANNING SCHEME

10. The Notice of Refusal refers to section 52 PA and sections 2.3 and 3.6 of the Litchfield Planning Concepts and Land Use Objectives 2002 (“LUOs”). Those sections are set out hereunder:

52. [PA] Consent to be given only if development complies with Scheme

(1) The Development Consent Authority must not consent to a proposed development under section 53 if –

- (a) in its opinion, the proposed development is contrary to a land use objective; or
- (b) the proposed development is contrary to the development provisions or an interim development control order.

(2) The Minister must not consent to a proposed development under section 53 if the proposed development is contrary to the development provisions or an interim development control order.

(3) Despite subsection (1), the Development Consent Authority may consent to a proposed development under section 53 although the proposed development is contrary to a land use objective, if –

- (a) the Authority notifies the Minister in writing; and
- (b) either –
 - (i) the Minister gives written approval to the giving of consent to the proposed development; or
 - (ii) the Minister has not, within 14 days after receipt of the notice under paragraph (a), given written approval to the giving of consent to the proposed development although the amendment is contrary to a land use objective or refused to give such written approval.

2.3. [LUOs] NATURAL RESOURCE MANAGEMENT

To protect resources of importance to the shire and the broader region.

This can be achieved by:

- _ identifying and protecting land, water and other natural resources of significance to the region;
- _ identifying major extractive resources and providing for their long term ecologically sustainable exploitation taking account of potential impacts on amenity and recognising potential constraints on development of land adjoining significant extractive resources; and
- _ identifying and protecting areas with potential for agriculture (including horticulture and aquaculture).

To ensure development achieves ecologically sustainable use of land.

This can be achieved by:

- _ declaring beneficial uses for water resources in the shire in accordance with the provisions of the *Water Act 1992* and ensuring that development does not impact on them;
- _ ensuring that development does not significantly impact on the declared beneficial uses of the harbour;

- _ implementing an Integrated Catchment Management framework for natural resource management in the shire;
- _ declaring a water allocation plan for the shire under the *Water Act* which maintains rights to water for rural residential use, cultural values, public water supply, agriculture and aquaculture and includes appropriate allocations to the environment;
- _ the preparation of management plans for open space areas within the shire especially for drainage lines, lagoons and areas of significant vegetation;
- _ development of an integrated regional strategy for weeds management including recognition of the interaction between fire and the spread of weeds; and
- _ managing development of areas of good horticultural soils, particularly when these coincide with available water.

To minimise detrimental impacts of development on the environment.

This can be achieved by:

- _ ensuring that design of subdivision and development includes consideration of cumulative impacts outside the site, both upstream and downstream;
- _ ensuring that infrastructure and stormwater drainage is designed to minimise adverse impacts on both upstream and downstream river and drainage systems, surface and ground water and the environment;
- _ designing stormwater drains to minimise impacts on adjacent properties and to prevent ponding within the drains in accordance with public health requirements;
- _ developing guidelines for the clearing of vegetation which restricts clearing of areas which may be vulnerable to degradation by virtue of slope or waterlogging or are of natural or recreational significance;
- _ developing guidelines for erosion and sedimentation control to assist in determining the appropriate location of roads, fence lines and firebreaks to minimise the potential for erosion and impacts on the environment;
- _ minimising the impacts of the storage and disposal of sewage and other waste water on the ecology of drainage systems and wetlands; and
- _ developing a practical and environmentally sensitive approach to fire management including the proper construction of fire breaks.

3.6. ENVIRONMENTAL MANAGEMENT

Environmental management throughout Litchfield Shire is important for reasons including the protection of land and water resources, the conservation of significant vegetation communities and wildlife habitats and the maintenance of amenity.

The maintenance of the existing system of parks and reserves will conserve significant occurrences of plants and animals in the long term. The Shoal Bay Coastal Reserve provides a significant increase in the range of habitats, which are protected within Litchfield Shire. Wildlife corridors between natural areas will provide for continued movement of wildlife across the landscape as subdivision and closer settlement occurs. Connectivity between parks and reserves of the Howard and Adelaide Rivers is particularly identified, as are linkages between floodplains and upland ridges along the Adelaide, Blackmore, Darwin and Howard Rivers, and links between mangrove forests and upstream riverine forests across the shire.

The framework for environmental management provides for the flexible, long term conservation management of unique, rare, fragile and representative ecosystems. The framework consists of two interrelated components. The detailed concepts establish principles to be applied to the assessment of development in the shire with reference to the Environmental Values Plan. The second component identifies as Priority Environmental Management those areas where development should give priority to consideration of potential environmental impacts.

As many areas and species of conservation significance also occur outside parks and reserves, effective environmental management within the shire also depends on the cooperative efforts of the community and Government to ensure that conservation is taken into account in the management of private land. Activities such as land subdivision, aquaculture, extractive mining, horticulture and pastoralism must identify management measures as part of the approval process and in strategies for sustainable operation. The preparation and implementation of a Vegetation Management Strategy and the Land for Wildlife Scheme will contribute to the success of the framework for environmental management.

The concepts for environmental management recognise that current controls of vegetation clearing have not been particularly effective in providing protection for natural resources or wildlife habitats. An alternative approach to vegetation protection focuses on the identification and protection of areas with priority for environmental management to be considered at the time of subdivision and the establishment of parameters within which clearing of the initial 50% of a lot can occur.

The close link between areas identified for environmental management and their use for recreation and tourism within Litchfield Shire is recognised and strategies for management will also maintain access and usage for recreation and tourism, particularly at Berry Springs and in the wetlands of the Howard and Adelaide Rivers.

To protect the natural attributes of Litchfield Shire as important contributors to the amenity of the area.

This can be achieved by:

- _ conserving and protecting vegetation by considering (particularly in relation to vegetation clearance) potential impacts on natural values as identified on the Environmental Values Plan (Figure 13). These values have one or more of the following roles:
 - _ **functional** in protection of land and water resources (eg. erodible or wet soils, drainage courses etc);
 - _ **aesthetic** in maintaining rural character or landscape and visual amenity (eg. elevated and steep land); and
 - _ **biological** in protection and conservation of regional diversity including representative ecosystems, wildlife habitat, remnant vegetation, corridors and linkages;
- _ conserving areas of natural significance including parks and reserves, representative and remnant vegetation, vegetation along watercourses and ridges, other corridors that maintain connectivity between natural areas and the foreshores of Darwin Harbour, Gunn Point and Shoal Bay;
- _ protecting aquatic ecosystems;
- _ making approval to subdivide dependant on environmental assessment of the significance of natural vegetation and other landscape features such as rugged terrain, rainforest patches, lagoons, wetlands, rivers and other drainage systems and the transfer to public ownership of significant areas to maintain landscape character, quality and amenity; and
- _ avoiding inappropriate development of significant landscape features such as ridgelines and knolls to protect the scenic values and amenity of the shire; and
- _ preparing a strategy to manage open space, representative and remnant vegetation and other natural landscape features.

To protect the land and water resources of Litchfield Shire.

This can be accomplished by:

- _ minimising the potential for pollution of surface and ground water through appropriate design of stormwater drainage and effluent disposal systems;
- _ regulating development within the recharge area of aquifers to protect water quality;
- _ maintaining environmental flows of quality surface and ground water to protect wetland and rainforest habitats; and
- _ avoiding the subdivision and development of areas adjacent to significant sources of biting insects to reduce future reliance on environmental modification or insect control.

To prevent inappropriate removal of native vegetation.

This can be achieved by:

- _ limiting the right to clear land to a maximum of 50% of the area of the minimum lot size applicable to a locality and to land not being:
 - _ waterlogged, subject to flooding or located within a drainage line or watercourse;
 - _ consisting of soils particularly vulnerable to erosion; or
 - _ elevated or steep as identified on the Environmental Values Plan (Figure 13); and
- _ making approval to clear in excess of 50% of any lot dependant on:
 - _ the availability of a proven water supply to support the intended future use of the land (at maturity); and
- _ the retention of buffers where required to protect the environment or the amenity of the locality.

11. The Tribunal also sets out the undermentioned extracts from the specified planning documents referred to in paragraph 6 of this

decision, to assist with comprehension of the issues and the decision of the Tribunal

Litchfield Area Plan 1992 as at 21 March 2001

1.2.2 Objectives - The objectives of this Plan are -(

- a) to protect and promote the use of land identified as having horticultural potential;
- b) to protect the integrity of areas of environmental and conservation value;
- c) to ensure that developments which are visually intrusive or which generate excessive traffic are prohibited on arterial roads;
- d) to create a flexible plan that can accommodate fluctuations in the growth of the area;
- e) to ensure that development controls reflect the physical and environmental capabilities of land and accessibility to services;
- f) to ensure that non-residential development is sited to avoid or minimise conflict with the residential amenity of adjoining lots;
- g) to ensure that lot sizes reflect the capabilities of land in Litchfield Shire; and
- h) to identify land for residential, business and industrial development in appropriate locations.

8.5 In considering whether to grant consent to a proposed use pursuant to clauses 8.3 and 8.4 and to what conditions (if any) the consent should be subject, the Authority shall have regard to -(

- a) the aim and objectives of the Plan as contained in clause 1.2;
- b) the objective and policy of the relevant zone set out in Division 2 and, as appropriate, the provisions of Part III; and
- c) the merits of the proposal.

22.5 Removal of Vegetation

The purpose of this clause is to ensure that where the removal of native vegetation is proposed for an area exceeding 50% of an allotment, the vegetation is removed in accordance with environmental guidelines.

Except with the consent of the Authority, the removal of natural vegetation from an area within an allotment exceeding approximately 50% of the area of the allotment is prohibited.

Litchfield Planning Concepts 2002

1.1. INTENDED OUTCOMES

The Planning Concepts and Land Use Objectives will enable the Government and the community of the Litchfield Shire to achieve the following outcomes: _ maintenance and enhancement of rural living lifestyles through provision of choice and promotion of confidence concerning the nature, form and intensity of future land use and development;

_ the establishment of estates for major industries associated with Gas at Glyde Point and Middle Arm and the provision of interconnection between these estates and the Darwin Port and the AustralAsian Railway;

_ a coordinated and integrated approach to the protection and management of the natural landscape including parks and reserves, the riparian habitat, rainforest areas, wetlands, marine ecosystems (Darwin Harbour, Shoal Bay and Gunn Point), Eucalypt forests, significant vegetation, wildlife corridors and visually prominent landscape features;

_ sustainable horticulture and aquaculture industries which minimise potential adverse impacts on natural and environmental resources and other land uses; and

_ identification, long term protection and appropriate exploitation of valuable extractive resources in a manner that minimises potential adverse impacts on other land uses.

2.3. NATURAL RESOURCE MANAGEMENT

To protect resources of importance to the shire and the broader region.

This can be achieved by:

- _ identifying and protecting land, water and other natural resources of significance to the region;
- _ identifying major extractive resources and providing for their long term ecologically sustainable exploitation taking account of potential impacts on amenity and recognising potential constraints on development of land adjoining significant extractive resources; and
- _ identifying and protecting areas with potential for agriculture (including horticulture and aquaculture).

To ensure development achieves ecologically sustainable use of land.

This can be achieved by:

- _ declaring beneficial uses for water resources in the shire in accordance with the provisions of the *Water Act 1992* and ensuring that development does not impact on them;
- _ ensuring that development does not significantly impact on the declared beneficial uses of the harbour;
- _ implementing an Integrated Catchment Management framework for natural resource management in the shire;
- _ declaring a water allocation plan for the shire under the *Water Act* which maintains rights to water for rural residential use, cultural values, public water supply, agriculture and aquaculture and includes appropriate allocations to the environment;
- _ the preparation of management plans for open space areas within the shire especially for drainage lines, lagoons and areas of significant vegetation;
- _ development of an integrated regional strategy for weeds management including recognition of the interaction between fire and the spread of weeds; and
- _ managing development of areas of good horticultural soils, particularly when these coincide with available water.

To minimise detrimental impacts of development on the environment.

This can be achieved by:

- _ ensuring that design of subdivision and development includes consideration of cumulative impacts outside the site, both upstream and downstream;
- _ ensuring that infrastructure and stormwater drainage is designed to minimise adverse impacts on both upstream and downstream river and drainage systems, surface and ground water and the environment;
- _ designing stormwater drains to minimise impacts on adjacent properties and to prevent ponding within the drains in accordance with public health requirements;
- _ developing guidelines for the clearing of vegetation which restricts clearing of areas which may be vulnerable to degradation by virtue of slope or waterlogging or are of natural or recreational significance;
- _ developing guidelines for erosion and sedimentation control to assist in determining the appropriate location of roads, fence lines and firebreaks to minimise the potential for erosion and impacts on the environment;
- _ minimising the impacts of the storage and disposal of sewage and other waste water on the ecology of drainage systems and wetlands; and
- _ developing a practical and environmentally sensitive approach to fire management including the proper construction of fire breaks.

3.4. PRIMARY INDUSTRIES

The concepts for future agriculture (including horticulture and aquaculture) recognise the considerable contribution of these activities to the economy of the region. Land at Lambells Lagoon and Berry Springs, where soils identified as having a high capability for horticulture occur in association with available water, is suited to large-scale horticultural development. An area at Acacia has also been identified for horticulture although the intensity of future development will depend on confirmation of water availability. The concentration of horticultural activities in these locations will minimise interference from other activities. Consideration of subdivision for horticultural use or individual lot development will require assessment of the land capability of the site and potential impacts on resources (particularly water).

The concepts also recognise the contribution of small scale and hobby farming, permaculture and organic horticulture to the economy of the region. Potential sites for organic horticulture have been identified. Release and development of these areas will depend on further investigation of the regulations and guidelines required to effectively control subdivision and development.

Although specific sites for the establishment of depot facilities as holding points for live cattle destined for export or for other intensive animal industries have not been identified, parameters to be considered in determining appropriate locations for such facilities are established. These parameters will minimise detrimental impacts on the environment and amenity of surrounding areas.

Significant aquaculture development is possible within the shire. Specific sites identified for aquaculture include Middle Arm Peninsula and land to the east of Blackmore River.

Additional sites which have potential to accommodate saltwater aquaculture, subject to confirmation of availability of resources (particularly water), the necessary support infrastructure and assessment of the potential environmental impacts have been identified around Salt Water Arm on Gunn Point Peninsula.

The suitability of inland sites for freshwater aquaculture will depend on detailed assessment of individual proposals.

3.4.1. Horticulture Industry

To reserve good agricultural and horticultural land for current and future production.

This can be achieved by:

- _ protecting areas suitable for large scale horticulture development (appropriately separated from more intense rural living development) to prevent encroachment of incompatible land uses which may restrict legitimate farming activities;
- _ requiring appropriate buffers around horticultural activities where separation cannot be achieved due to existing development, to address issues of land use conflict, vegetation protection, and protection of water resources;
- _ preventing subdivision of good agricultural and horticultural land into parcels unsuited in size and/or shape for sustainable production;
- _ encouraging horticultural development and practices which minimise conflict with rural living;
- _ monitoring of impacts of horticultural development in the Lambells Lagoon and Berry Springs areas on environmental values including surface and ground water and conservation interests; and
- _ encouraging appropriate and sustainable horticultural practices

To minimise the potential impacts on adjacent land uses of activities involving the packaging or processing of products and vehicle maintenance.

This can be achieved by requiring consent for such activities (other than as ancillary uses to the primary use of the site) in all areas, other than those identified for horticulture, with attention to potential impacts on the amenity of adjoining land uses.

3.4.2. Grazing

To provide for sustainable grazing activities.

This can be achieved by:

- _ encouraging grazing activities within the carrying capacity of land
- _ recognising the need to maintain a balance of upland and floodplain land;
- _ minimising the impact of grazing on sensitive natural communities by encouraging the fencing of riparian areas and implementation of appropriate fire regimes and weed control; and
- _ minimising the environmental impacts of any proposed change in the use of pastoral lands.

3.4.3. Agriculture

To minimise the impacts of depots serving as holding points for cattle destined for the live cattle export trade and intensive animal industries.

This can be achieved by controlling the location of depots for holding live cattle and intensive animal industries and assessing any application having regard to:

- _ potential detrimental impacts on water resources;
- _ provision of appropriate waste disposal facilities;
- _ provision of appropriate buffers and screening to protect visual amenity along roads and the existing and future amenity of adjacent areas (particularly having regard to prevailing winds); and
- _ provision of appropriate access to such facilities from arterial roads.

3.4.4. Aquaculture Industry

To identify sites for future aquaculture.

This can be advanced by investigating sites with potential for aquaculture, (including those sites identified at Figure 10) to establish the availability of the necessary resources recognising the need for Environmental Impact Assessment of individual development proposals.

LOCALITY 16 - ACACIA

Intent

Development for horticulture in association with likely good supplies of water from the Coomalie Aquifer.

Issues

- _ Confirmation of the capacity of the aquifer to support intensive horticulture;
- and
- _ Evaluation of the potential impacts on the water resource.

THE SUBMISSIONS

12. On 30 June 2003 the Tribunal received the appellant's submissions ("appellant's submissions"), set out below:

SUBMISSION PURSUANT TO SECTION 128(2) LMT-67-2003-P

APPLICATION: To clear in excess of 50% - Notice of Refusal issued
APPELLANT: Ian Quin and Hunt and Hunt Lawyers, Ms Danielle Howard
LAND OWNER: Ian Quin
LOCATION: Section 227 (315) Acacia Gap Road, Hundred of Colton
ZONE: RL2 – Rural Living 2
AREA: 130 hectares

BACKGROUND

- On 2 August 2002 the Appellant made an application for development approval to clear in excess of 50% of property owned by him situated at Section 227, Acacia Gap Road, Hundred of Colton. The primary issue seems to be whether the proposed development of the property for mango farming after clearing the site can be sustained through the Coomalie Dolomite Groundwater System. Prior to Mr Quin's application the sustainable yield was significantly higher. However, this was revised after his application was made and was reduced by some 80%.
- The Appellant disputes the water identified as being necessary by the Department of Infrastructure, Planning & Environment (DIPE) being required to sustain the current mango crop.
- Whilst copies of submissions and assessment report was sent to the Applicant before 20 May 2003 it did not in fact attach annexure E.

The Appellant submits that the refusal of the application should be reconsidered on the following grounds:

1. The property is zoned Rural Living 2 (RL2) and therefore the objectives include agriculture and other enterprises.
2. The enterprises proposed by the Appellant are within the objectives and policies of the zoning. Furthermore, horticultural purposes are a permitted use within the zoning and does not require consent, nor is it prohibited.

3. Whilst it is submitted by Natural Resources, in its correspondence dated 23 March 2003, which was before the Authority, that the sustainable yield is now determined to be 160ML/year, the earlier groundwater report, which was in evidence before the Authority and which was relied on by the Appellant when it purchased Section 227, were assessed to be of a much higher yield. In assessing the sustainable yield there was no testing on the Appellant's property, that is on Section 227.
4. The Appellant's application is to allow it to remove 75% of the vegetation within Section 227, which it is submitted is not contrary to the Land Use Objectives to "*protect resources of importance to the shire and the broader region*". Furthermore, the proposed removal of native vegetation will not adversely affect the availability of the water supply.
5. Based on the underlying Dolomite structure which extends under Section 227, it is the Appellant's contention, as outlined in its correspondence to the Tribunal on 28 April 2003, that this is consistent with water being available, as was the case on the neighbouring property, Section 226.
6. The decision to refuse the Appellant's application is contrary to previous similar applications considered and granted with respect to the developments of Sections 225 and 226 which adjoin Section 227.
7. The groundwater report carried out in February 2000 was inconclusive in that it did not carry out any test bores in respect of Section 227. Whilst it is suggested that water to sustain the crop (that water being a figure put forward by the agency) would result in over-extraction of the aquifer. The figure relied upon is a sustainable yield of 160ML/year which is offered by the Department as an estimate and also is a substantially reduced estimate (by some 80%) of the previous sustainable yield. That yield was relied upon at the time of the acquisition of Section 227 and at the time of the Appellant's application.
8. The interpretative advice put forward by the Director of Natural Resource Policy, Mr Ian Smith, is not based on any tests carried out specifically on Section 227.
9. The correspondence of the Director of Natural Resource Policy dated 24 March 2003 refers to the irrigation rate supplied by the Department of Business, Industry and Resource Development (DBIRD) being 220ML/year required to irrigate Section 227 for the proposed clearing and development and planting of 10,000 mango trees. Further, it indicates that irrigation demand at peak would be required for continuous pumping at 23L/second.
10. Correspondence to the Development Consent Authority from the Appellant dated 25 March 2003 to the contrary states that there are two successful bores on adjoining properties. The Appellant is currently pumping water 45 hours per week from April to September (6 months) to maintain 20,000 trees ranging from 18 months old to 3 years old at a rate of 15L/second. This therefore averages out at 7.5L/second on an annual basis. This does not of course accord with the figures put forward by the Director of Natural Resources which assesses continuous pumping would be required at 23L/second.
11. Using the figures with respect to the 20,000 trees, that is 15L/second x 45 hours/week which is the actual usage at peak periods by the Appellant with respect to the 20,000 trees, this would equate to 63.2ML/year. This is substantially less than the amount identified by the Director and 63.2ML/year is in fact the actual figures used by the Appellant for the existing 20,000 trees. This is calculated as follows:

15L/second x 60 seconds x 60 minutes x 45 hours = 63.18ML/year, say 63ML/year
12. Using the same figures for a further 10,000 trees at peak, this would equate to 31.5ML/year. The water usage in this equation has been reduced by half in accordance with there being half the number of trees presently being farmed by the Appellant. Therefore, a total for 30,000 trees is 94.7ML/year.
13. In further support of this proposition is the correspondence from the Deputy President of the Thai Horticultural Association which was before the Tribunal. More particularly, the extract from the 7th International Mango Symposium of Brazil, South America 2002 headed "Optimising Irrigation Management in Mango Orchards" supports an ultimate saving of water in the range of 31 to 56% in four different irrigation treatments compared to farm control. The figures proposed by the Director of Natural Resource Policy are in accordance with farm control which are substantially higher. The figures put forward by the Department are not a true indicator of internationally recognised practices for irrigating mangoes.

13. On 30 June 2003 the Tribunal received the respondent's submissions ("respondent's submission), set out below:

**SUBMISSION PURSUANT TO SECTION 128(2)
LMT-67-2003-P**

APPLICATION: To clear in excess of 50 % - **Notice of Refusal issued**
APPELANT: Ian Quin and Hunt and Hunt Lawyers, Ms Danielle Howard
LAND OWNER: Ian Quin
LOCATION: Section 227 (315) Acacia Gap Road, Hundred of Colton
ZONE: RL2 – Rural Living 2
AREA: 130 hectares

BACKGROUND

- On the 02 August 2003 an application was received from Mr Quin for development approval to clearing excess of 50% of the land on Section 227, Acacia Gap Road, Hundred of Colton.
- The issue is the amount of development that can be sustainably supported by the Coomalie Dolomite groundwater. The advice from the Director Natural Resources, clearly states that the underlying aquifer has a sustainable yield of 160ML/year in the vicinity of Acacia Gap Road, which is (using irrigation figures from DBIRD) unable to support the existing mango orchards of Section 225 and 226 Acacia Gap Road let alone allow for further horticulture development. The application to clear approximately 90 around hectares of native vegetation for mango cropping is demonstrably unsustainable and cannot be supported by the Authority.
- The department recommended that the application be refused as sustainable water to support the horticulture could not be proven.
- On the 10th April 2003 the Authority issued a Notice of Refusal to Mr Quin's proposal to clear in excess of 50%, as the subject land had inadequate ground water available to justify further land clearing and support horticulture expansion (**Attachment A NR03/0011**). The 'Grounds for Appeal' as stated by Mr Quin are "we disagree on the current perception of water availability in the Acacia Gap region and mango tree water requirements".
- Copies of the submissions and the assessment report were sent to the applicant before 20/05/03.
- A compulsory conference was attended on the 28th May 2003, with no compromise being reached between the parties.
- The reasons for refusal are as follows:
 1. The Development Consent Authority cannot, pursuant to section 52 of the *Planning Act 1999* consent to the proposal as the *Litchfield Planning Concepts and Land Use Objectives 2002*, being part of the NT Planning Scheme, contains, under 2.3 *Natural Resource Management*, the Key Land use Objective to "protect resources of importance to the shire and the broader region"; and, under 3.6 *Environmental Management*, the Land Use Objectives to "protect the land and water resources of Litchfield Shire" and to "prevent inappropriate removal of native vegetation".

The *Litchfield Planning Concepts and Land Use Objectives 2002* state that the objective to "prevent inappropriate removal of native vegetation" can be achieved by "making approval to clear in excess of 50% of any lot dependant on: the availability of a proven water supply to support the intended future use of the land (at maturity); and the retention of buffers where required to protect the environment or the amenity of the locality".

The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 and other properties in the locality has an estimated total sustainable yield of 160ML/year. The Department of Business Industry and Resource Development has

advised that, a minimum irrigation requirement for the proposed orchard, at maturity, is 2.5ML/hectare/year which, for the area sought, amounts to approximately 220ML/year. On advice from these agencies it is apparent that a sustainable water supply cannot be proved for the intended use of Section 227, even if the sustainable yield of the aquifer were entirely allocated to one property.

2. The *Litchfield Planning Concepts and Land Use Objectives*, being part of the NT Planning Scheme, state that the objective to “protect resources of importance to the shire and the broader region” can be accomplished by “maintaining environmental flows of quality surface and ground water to protect wetland and rainforest habitats”.

The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 sustains a spring monsoon forest. This habitat is referred to in the Department’s publication - “*Ground Water Resources of the Acacia Area NR2000/04*”. Advice from this agency suggests that over extraction of the aquifer would have adverse impacts on this vegetation, as well as other adverse impacts, and hence an environmental flow must be maintained in the aquifer. The Department estimates that the total sustainable yield of the aquifer is 160ML/year.

In terms of maintaining an environmental flow in the aquifer, the proposed development of Section 227 is contrary to the Land Use Objective to “protect resources of importance to the shire and the broader region”.

3. The Development Consent Authority must, pursuant to section 51(a) of the *Planning Act*, take into account the *Litchfield Area Plan 1992*, being part of the NT Planning Scheme. Clause 22.5 of the *Litchfield Area Plan 1992* states that “Except with the consent of the Authority, the removal of natural vegetation from an area within an allotment exceeding approximately 50% of the area of the allotment is prohibited” and requires that “the vegetation is removed in accordance with environmental guidelines”.

The proposal to remove in excess of 50% of natural vegetation from Section 227 is not in accordance with the appropriate environmental guideline, being the availability of a sustainable supply of ground water. The “*Ground Water Resources of the Acacia Area NR2000/04*” and subsequent interpretive advice from the Director Natural Resource Policy demonstrates this.

4. The Development Consent Authority must, pursuant to section 51(j) of the *Planning Act 1999* take into account the capability of the land. The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 and other properties in the locality has an estimated total sustainable yield of 160ML/year. It is apparent from this advice that Section 227 is incapable of providing a sustainable supply of groundwater to support the clearing of native vegetation that, pursuant to clause 22.5 of the *Litchfield Area Plan*, is otherwise prohibited without the consent of the Authority.

5. The Development Consent Authority must, pursuant to section 51(j) of the *Planning Act 1999* take into account the capability of the land, the ‘*Litchfield Shire –Land Capability For Horticulture*’ map indicates the area proposed for clearing has “soils with physical constraints and limited groundwater supply” and may be inappropriate for horticulture expansion. It is apparent that, pursuant to clause 22.5 of the *Litchfield Area Plan*, the removal of native vegetation from an area exceeding 50% of Section 227, which is otherwise prohibited without the consent of the Authority, would not be in accordance with the aforementioned environmental guideline.

6. The Development Consent Authority must, pursuant to section 51(p), take into account the public interest. It is not in the public interest to allow the unsustainable clearing of native vegetation from land that may result in adverse impacts on neighbouring properties. The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 and other properties in the locality has an estimated total sustainable yield of 160ML/year. The Department of Business Industry and Resource Development has advised that, a minimum irrigation requirement for the proposed orchard, at maturity, is 2.5ML/hectare/year which, for the area sought, amounts to approximately 220ML/year. On advice from these agencies, it is apparent that a sustainable water supply is not available for the intended use of Section 227, even if the sustainable yield of the underlying aquifer were entirely allocated to Section 227. The implication of the above advice is that any further consent for development that relies on the supply of ground water is likely to adversely impact on ground water availability for those land owners already reliant on water supply from the same aquifer.

7. The Development Consent Authority must, pursuant to section 51(p), take into account the public interest. It is not in the public interest to allow the water supply for one property to be derived from another separately titled property. There would be nothing to stop Section 227 changing ownership without any legal tenure to the water supply derived from the existing bores on Section 226.

When questioned on this matter, the applicant, Mr Quin, advised the Authority that he had no desire to consolidate the two subject properties in order to resolve this issue.

- The grounds for appeal are included as **Attachment B**. The arguments presented by Mr Quin are based largely on questioning that the Department of Business, Industry and Resource Development mango irrigation recommendations are out-dated and over-conservative.

RESPONSES TO APPEALANTS CLAIMS

The grounds for appeal are discussed below:

1. **We are legally able to plant mango tress at spacings of our choosing on 50% of Section 227 being 65Ha. For example current practice is 200/ha, minus an area for infrastructure, would give 60 ha with 200/ha = 12,000 trees. The water requirement for 12,000 trees would not differ if we spread the planting's over the area requested per our refused application to the Development Consent Authority. We merely want to plant in a manner consistent with our project stages 1 and 2 which is spread approximately 10,000 trees over a larger for on going management and better fire control.**

RESPONSE The *Planning Act 1999* does not control planting densities or farm management practices. Mr Quin is legally able to heavily plant mangoes on 50% of Section 227. Recent advice suggests that current planting practice is 100 trees/ha. This has no bearing on the appeal.

Mr Quin has planted at approximately 100 trees/ha on the neighbouring Sections which is in line with current industry practice. Mr Quins argument that water requirements do not change with planting density are nonsensical, basic knowledge tells us that trees plated at higher densities require less water as close planting and associated pruning requirements would be expected to limit the development of tree canopies and limit evaporation.

2. **Acacia Gap is a new development area and Government water tests are non-conclusive due to limited testing because of the budgetary constraints they operate under. By the very nature of the resource in question there is little scope for a second opinion. There is an underlying area of dolomite rock which extends under Section 227 and it is this structure we found good water on our neighbouring property Section 226.**

RESPONSE Drilling a successful, high yielding bore on Section 227 may be successful, however, this is not the issue. The Northern Territory Government has produced the report "Groundwater Resources of the Acacia Area NR 2004/04" and recently updated the information in line with water allocation planning commitments. The appellant argues that they may be able to drill a successful bore on Section 227, this is correct but irrelevant. The issue is - the unsustainable water requirements for the proposed orchard. The Controller of Water Resources is confident in the groundwater assessment, being the underlying aquifer can sustain an extraction of 160ML per year only.

3. **The Development Consent Authority are basing their water requirements on that recommended by the Department of Business, Industry and Resource Development, we have testimonials from both Australia and overseas that mangoes once established, will produce commercial crops in a climate such as Darwin without irrigation. Discussion with officers of the DBIRD acknowledge the mango watering basis given to the DCA is old, conservative and may be in need of review.**

RESPONSE The irrigation figures as published by the Department of Business, Industry and Resource Development are to guide farmers in planning for their water requirements based on the size of the proposed orchard and farm management practices. They are designed to be conservative and promote good farming practices. Advice from DBIRD, CSIRO and the Chamber of Commerce 'Northern Territory Mango Environmental Codes of Practices' suggests that dry land mango farming is not economically feasible within the NT. CSIRO has also advised that mango trees with no irrigation at all "may survive but would be unlikely to produce a crop". It is important to note that Mr Quin has irrigation for the 20,000 mango trees he has already planted on the

neighbouring Sections and clearly intends to provide irrigation as part of this development proposal.

4. **The CSIRO in Darwin are currently up dating the water requirements for mango trees which at this stage may be as low as 50% of current DBIRD recommendations; which is in line with the attached International Mango Symposium extract on reduced water. The final CSIRO study is due for release in June or July this year.**

RESPONSE The applicant did not present any information to support these claims. The CSIRO was contacted for comment and mango irrigation advice was supplied, however it is important to note that this information was not before the DCA when the decision was made. Using the CSIRO mango irrigation advice, the Development Consent Authority is still unable to support the proposal, as adequate groundwater is not available to sustain the proposed or existing orchards. CSIRO irrigation requirements for mature mango trees are: **1200L per tree per week for about 26 weeks**. Using the CSIRO rate of irrigation, a total water demand of around **1044ML**, will be required to service Mr Quins properties. The Controller of Water Resources suggests the underlying aquifer can sustain a gross yield of **160ML per year**.

5. **The area under consideration is cited in the proposed Litchfield Shire Plan as being suitable for Organic/Horticulture and possible rezoning thus giving defacto recognition to the suitability of the area.**

RESPONSE The land use concept diagram within the *Litchfield Planning Concepts and Land Use Objectives 2002* has an overlay on the site which indicates 'Possible Organic Horticulture'. It is not zoned for horticulture and the 'defacto recognition' does not override the matter of fact that the water aquifer can only provide for a finite amount of development. The *Litchfield Shire – Land Capability For Horticulture* map indicates the subject sites land above the 50% mark to be "soils with physical constraints and limited groundwater supply". The land is not suitable for horticulture.

6. **If we were to reapply to clear for planting dry land rain feed hay cropping water would not be an issue and the vegetation could presumably be removed.**

RESPONSE Mr Quin is correct in his assertion that dry land cropping is more appropriate on this site. However, if Mr Quin were to receive a development permit to clear in excess of 50% of Section 227, the Authority would condition the permit to restrict water use.

7. **The DCA refusal is inconsistent with other approvals given for development of our Sections 225 and 226 which form part of the same staged project.**

RESPONSE When the clearing applications for Sections 225 and 226 were before the Development Consent Authority there was no mention of extending the orchard into Section 227. In fact, Mr Quin did not purchase the property until 01/11/2002, which was around 4 years after the clearing application was processed for the neighbouring Section 226 and 2 months after the determination was issued for Section 225.

None the less, the mango orchard development on the neighbouring lots draw water from the same underlying aquifer, which cannot support the proposed (and existing) level of development. It is the landowners responsibility to plan for future growth and development in line with available resources. The Development Consent Authority would be derelict in its duty to allow unsustainable land clearing as a result of a landowner failing to consider the capability of the land to support a "staged project".

8. **While we have no current intention of selling section 227, the fact it may not have an existing water supply at the time of any sale would seem a matter for the Real Estate market to decide its value based on the premise land will always fall to it's highest and best use. Nothing precludes a new owner of 227 seeking water and if this was not the case no land should be sold without water proven up; which is obviously be impractical (sic).**

RESPONSE The issue that must be addressed is the current use proposed by the development application. The current intentions of the owner of the land regarding the future sale of the land are irrelevant. Water modelling has shown there is not enough water to sustain Mr Quin's existing mango orchards on Sections 225 and 226. The Development Consent Authority cannot allow land clearing were the proposed end use is demonstrably unsustainable.

DCA RESPONSE TO APPELANTS CONCLUSION - Mr Quin's conclusion fails to consider the reasons of refusal with the statement "we have no immediate need for any extra bores for several years until our trees further mature at which time all future bores will be fed into the existing common main line for

future water security". Mr Quin's arguments appear to be contradictory, at one point arguing that there is no need to irrigate mangos for commercial cropping and then later stating that bores will be drilled in the future. The Tribunal may need to clarify with the appellant why a farmer would go to the expense of constructing and equipping a bore if commercial crops can be achieved without irrigation?

DISCUSSION

The Development Consent Authority cannot, pursuant to section 52 of the *Planning Act 1999* consent to the proposed development if-

- (a) *in its opinion, the proposed development is contrary to a land use objective; or*
- (b) *the proposed development is contrary to the development provisions or an interim development control order.*

The current proposal is demonstrably contrary to the land use objectives being to "*protect resources of importance to the shire and broader region*" and the objective to "*prevent inappropriate removal of native vegetation*". The proposal is also contrary to the development provisions being "*the vegetation is removed in accordance with environmental guidelines*" (water).

The Development Consent Authority must consider the matters specified under section 51 of the *Planning Act 1999* in the determination of development applications. The proposal to clear land in excess of 50% has been assessed under section 51:

(a) the Planning Scheme as it applies to the land to which the application relates; the proposal is demonstrably contrary to the Planning Scheme. The *Litchfield Planning Concepts and Land Use Objectives 2002* land use concept for Section 227 as 'possible organic horticulture'. The objectives of the horticulture area are to encourage appropriate and sustainable horticulture practices. The applicants mango orchard on the neighbouring sections (225 and 226) are identified for horticulture and are proposed to be rezoned to horticulture with the amendments to the Litchfield Area Plan. Section 227 is not to be rezoned for horticulture and will remain zoned Rural Living 2.

The *Litchfield Area Plan 1992* (development provisions) identifies the subject site as Rural Living 2 with the objective of the zone being to provide land for agriculture and other enterprises in conjunction with rural residential activities. The large lot sizes facilitate separation between land uses. The proposal is subject to Clause 22.5 (Removal of Vegetation), which states, "except with the consent of the Authority, the removal of natural vegetation from an area within an allotment exceeding approximately 50% of the area is prohibited". The clause also states that vegetation is to be removed in accordance with environmental guidelines. The proposal is not in accordance with the appropriate environmental guideline, being the availability of a sustainable supply of ground water.

(e) any submissions made under section 49 in relation to the development application; the neighbour Mr Danny Skewes has raised concerns that the increased traffic will contribute to road deterioration and dust nuisance for residents, and argues that the road should be upgraded and sealed to cater for the mango business.

Another public submission from Ms D Rickard and Mr G Chapman raised a number of concerns, which states that the applicant has caused environmental damage by clearing vulnerable habitat including wetlands and then burning it. They comment that the limited groundwater in the region is demonstrated by the need to provide water from the adjoining property.

(h) the merits of the proposed development as demonstrated in the application; the application demonstrates no merit with the application stating "we have enough water for the establishment of this extra area" which suggests that the applicant was aware that insufficient water is available for sustainable horticulture.

(j) the capability of the land to which the proposed development relates to support the proposed development and the effect of the development on the land and on other land, the physical characteristics of which may be affected by the development; the land is not capable of supporting the proposed use. The *Litchfield Shire – Land Capability For Horticulture* map indicates the subject sites land above the northern 50% mark to be 'soils with physical constraints and limited groundwater supply'. The maximum amount of groundwater that can be extracted from the Coomalie Dolomite in the vicinity of Acacia Gap Road is 160ML/year. The proposed mango orchard water requirements are grossly in excess of the available water.

It should also be noted that the development application indicates that there are 20,000 mango trees under irrigation on the neighbouring lots. The available water from the underlying aquifer is not sufficient to sustain the existing 20,000 trees, let alone a further 10,000 (see **water sustainability advice from the Director Natural Resource Policy**).

(n) the potential impact on the existing and future amenity of the area in which the land is situated; the proposal, if approved, will unduly affect the amenity of the area if spray drift is not adequately controlled (no buffers have been provided) and the horticulture is allowed to expand above sustainable water use levels. The proposed orchard will require in excess of the total sustainable water supply available from the underlying aquifer, which provides a water source for neighbouring properties. No reticulated water services are available in the area.

(p) the public interest; land clearing for unsustainable uses is not in the public interest, as the clearing will lead to environmental degradation through soil erosion, loss of biodiversity, and deterioration of surface and groundwater quality. Any further consent for development in this area must consider the surrounding landowners, which are already reliant on water supply from the underlying aquifer.

(r) any potential impact on natural, social, cultural or heritage values; there is a significant potential impact on the natural values and social values as the dolomite aquifer underlying the area feeds a spring monsoon forest and over extraction of the aquifer is likely to impact on the vegetation and neighbouring land users.

SUMMARY

The appellant's proposal to clear in excess of 50% is demonstrably contrary to the land use objectives and the development provisions.

Mr Quin has not addressed the fundamental issue of a lack of ground water for the proposed development, and apparently believes that he does not have to. Mr Quin has not considered that other land use's in the area are entitled to access the same aquifer and that development should achieve ecologically sustainable use of the land. The arguments presented by Mr Quin do not refute the Authority's reasons for refusal and fail to demonstrate reasonable grounds of appeal. Mr Quin's appeal appears to rely strongly on the possible precedent set on his neighbouring properties, where the Authority has allowed him to clear in excess of 50%. The issue of precedent shouldn't carry any weight in this case, as the contentious issue (water), is a finite resource and recent hydrological testing has demonstrated the aquifers maximum sustainable yields.

The proposal is demonstrably unsustainable, the Director of Natural Resources is confident in his advice and the Planning Scheme offers considerable legislative framework to defend the appeal. The Development Consent Authority has a strong case and the defence of the resolution should be undertaken with vigour. The Tribunal has previously advised that *"The ground of refusal must be construed as it is contained in the Notice of Refusal. This Tribunal has said before that a ground of refusal is the sole ground upon which an appeal can be decided"*. The grounds for refusal were carefully worded to be consistent with the Planning Scheme and provide a strong base upon which to protect the Authorities determination.

SUBMISSIONS IN REPLY PURSUANT TO SECTION 128(3)(PA)

14. On 14 July 2003 the respondent filed submissions in reply (DCA submissions in reply) dated 14 July 2003. Those submissions are set out hereunder:-

DEVELOPMENT CONSENT AUTHORITY SUBMISSION PURSUANT TO SECTION 128(3) LMT-67-2003-P

APPLICATION: To clear in excess of 50 % - **Notice of Refusal issued**
APPELLANT: Ian Quin and Hunt and Hunt Lawyers, Ms Danielle Howard
LAND OWNER: Ian Quin
LOCATION: Section 227 (315) Acacia Gap Road, Hundred of Colton
ZONE: RL2 – Rural Living 2
AREA: 130 hectares

BACKGROUND

- On the 02 August 2002 an application was received from Mr Quin for development approval to clearing excess of 50% of the land on Section 227, Acacia Gap Road, Hundred of Colton. The application to clear approximately 90 around hectares of native vegetation for mango cropping is demonstrably unsustainable and cannot be supported by the Authority.
- Copies of the submissions and the assessment report were sent to the applicant before 20/05/03.
- A compulsory conference was attended on the 28th May 2003, with no compromise being reached between the parties.
- The Development Consent Authority made a written submission to the Tribunal in response to the grounds of appeal and served a copy on the other party before 4pm 30 June 2003.

RESPONSES TO APPEALANTS CLAIMS

The appellant has responded to the Development Consent Authority's submission, and the reply is discussed below:

- 1. The property is zoned RL2 and therefore the objectives include agriculture and other enterprises.**

RESPONSE

The zoning of the land provides for horticulture as a permitted use but this is irrelevant to the appeal. The zoning of the land does not override the matter of fact that the water aquifer can only provide for a finite amount of development. The proposed development is clearly unsustainable as there is insufficient water available to support a horticultural development of this size. The proposed clearing cannot be supported by the Authority as it does not comply with the objectives of the *Litchfield Planning Concepts and Land Use Objectives 2002* (LUO's) and the provisions of the *Litchfield Area Plan 1992* (LAP).

- 2. The enterprises proposed by the Appellant are within the objectives and policies of the zoning. Furthermore, horticultural purposes are a permitted use within the zoning and does not require consent, nor is it prohibited.**

RESPONSE

The statement is correct but irrelevant; the Authority is not contesting that the proposed enterprise is, or is not, consistent with the zoning objectives. The Authority is defending its responsible decision to not allow more than 50% of the land to be cleared, which is not permitted without the consent of the Authority.

- 3. Whilst it is submitted by Natural Resources, in its correspondence dated 23 March 2003, which was before the Authority, that the sustainable yield is now determined to be 160ML/year, the earlier ground water report, which was in evidence before the Authority and which was relied on by the Appellant when it purchased Section 227, were assessed to be of a much higher yield. In assessing the sustainable yield there was no testing on the Appellants property, that is on Section 227.**

RESPONSE

The appellant is failing to consider that cadastral land boundaries are not dependent on the underlying strata such as aquifers. During scientific investigations such as hydrologic assessments of water sustainability, transect lines are placed through strategic locations in the aquifer to determine inputs and exports to the system. It is not economically feasible or necessary to drill bores on every Section during groundwater resource studies. The 12 bores that were drilled as part of the study traverse the aquifers and help determine the through flows and potential yields of the aquifers. The results of the investigation are the gross sustainable yields that each aquifer is able to sustain.

The difference in the sustainable yield from that which was suggested in the "Groundwater Resources of the Acacia Area" to the revised figure from the Director of Natural Resource Policy is in line with current water allocation planning in the Northern Territory.

4. **The Appellants application is to allow it to remove 75% of the vegetation within Section 227, which it is submitted is not contrary to the Land Use Objectives to “protect resources of importance to the shire and the broader region”. Furthermore, the proposed removal of native vegetation will not adversely affect the availability of the water supply.**

RESPONSE

The Development Consent Authority strongly refutes this statement. The Appellant has not provided any reasoning or evidence to support these claims.

The application is contrary to the Land Use Objective to “protect resources of importance to the shire and the broader region”. The objectives to encourage appropriate and sustainable horticulture practices cannot be met by the appellant. The *Litchfield Planning Concepts and Land Use Objectives 2002* state that the objective to “prevent inappropriate removal of native vegetation” can be achieved by “making approval to clear in excess of 50% of any lot dependant on: the availability of a proven water supply to support the intended future use of the land (at maturity); and the retention of buffers where required to protect the environment or the amenity of the locality”. The Development Consent Authority would not be functioning properly in its duty if it allowed the clearing on Section 227 where it has been demonstrated that there is unsustainable water resources for the proposed end use. Clause 52 of the *Planning Act* directs that the Authority must not consent to a proposed development if, in its opinion, the proposed development is contrary to a land use objective.

The objective to “protect resources of importance to the shire and the broader region” can be accomplished by “maintaining environmental flows of quality surface and ground water to protect wetland and rainforest habitats”. The Department of Infrastructure Planning and Environment has advised that the local aquifer that underlies Section 227 sustains a spring monsoon forest. This habitat is referred to in the Department’s publication - “*Ground Water Resources of the Acacia Area NR2000/04*”. Advice from this agency suggests that over extraction of the aquifer would have adverse impacts on this vegetation, as well as other adverse impacts, and hence an environmental flow must be maintained in the aquifer. The Department estimates that the total sustainable yield of the aquifer is 160ML/year.

The proposed removal of native vegetation for the purpose of mango cropping will clearly affect the availability of a water supply to the applicant and surrounding landowners. The extraction of groundwater above sustainable levels could seriously impact on the lives of those landowners that are dependent on the groundwater.

5. **Based on the underlying Dolomite structure which extends under Section 227, it is the Appellants contention, as outlined in the correspondence to the Tribunal on 28 April 2003, that this is consistent with water being available, as was the case on the neighbouring property, Section 226.**

RESPONSE

The Authority is not concerned with whether the appellant can or cannot drill a successful bore on Section 227. The issue is: there is not enough water that can be sustainably extracted from the underlying aquifer to support the proposed mango orchard.

6. **The decision to refuse the Appellants application is contrary to previous similar applications considered and granted with respect to the developments of Section 225 and 226, which adjoin Section 227.**

RESPONSE

The fact that the current decision is not aligned with the previous decisions holds no relevance to this appeal. The Development Consent Authority assesses development applications on individual merit, in accordance with section 51 of the *Planning Act 1999* and on the basis of information available and relevant to the application. The issue of precedence does not give defacto recognition that neighbouring properties will be allowed to undertake the same levels of development, in this case it is clear that water is a finite resource. The Authority refused the current application to clear in excess of 50% of the land as further information was sought into water sustainability. The issue of water sustainability was raised with previous applications and the current decision is based on recent water availability information.

7. **The groundwater report carried out in February 2000 was inconclusive in that it did not carry out any test bores in respect of Section 227. Whilst it is suggested that water to sustain the crop (that water being a figure put forward by the agency) would result in over-extraction of the aquifer. The figure relied upon is a sustainable yield of 160ML/year which is offered by the Department as an estimate and also is a substantially reduced estimate (by some 80%) of**

the previous sustainable yield. That yield was relied upon at the time of the acquisition of Section 227 and at the time of the Appellants application.

RESPONSE

The groundwater sustainability advice has been updated in line with current water allocation planning in the Northern Territory. The estimate has not been reduced by 80%, the estimate has been reduced from 450ML to 160ML near the subject area, which is a reduction of around 65%. The argument that the study is inconclusive may be correct (which scientific studies are conclusive?) but the investigations to date on the aquifers dynamics, indicate that the maximum sustainable yield under current water allocation guidelines in 160ML/year.

The appellant purchased Section 227 in full knowledge, from previous dealings with the Authority, that development consent is required to clear in excess of 50% of the land and was fully aware of the water availability constraints relevant to the site before Section 227 was acquired. The application to clear Section 227 was heard at the September Litchfield Development Consent Authority meeting (12/09/02). The formal advice from the Department of Infrastructure, Planning and Environment at that time which was given to the appellant before the meeting stated "the applicant should be required to prove sufficient water for the existing development prior to any further development". The advice to the appellant from the Department was clear in stating that the underlying aquifer was insufficient to support further irrigated horticulture. The appellant's purchased Section 227 on 01/11/02.

- 8. The interpretive advice put forward by the Director of Natural Resource Policy, Mr Ian Smith, is not based on any tests carried out specifically on Section 227.**

RESPONSE

This statement is correct in that no tests were carried out on Section 227. It is not necessary or feasible to conduct tests defined by property boundaries, tests are conducted based on the aquifer's dynamics. It would be poor use of government funding to carry out tests on every property that an individual aquifer traverses. Using strategic sampling points, which are determined from geological mapping, aerial photography, satellite image interpretation, and geophysics, hydrologists can determine an accurate indication on the aquifer characteristics.

- 9. The correspondence of the Director of Natural Resource Policy dated 24 March 2003 refers to the irrigation rate supplied by the Department of Business, Industry and Resource Development (DBIRD) being 220ML/year required to irrigate Section 227 for the proposed clearing and development and planting of 10,000 mango trees. Further, it indicates that irrigation demand at peak would be required for continuous pumping at 23L/second.**

RESPONSE

The sustainable yield of the aquifer is less than is required to irrigate the proposed orchard. In fact, it is now apparent that the appellant's existing mango orchards on the neighbouring properties, once mature, will require a greater irrigation demand than the underlying aquifer can sustain.

- 10. Correspondence to the DCA from the Appellant dated 25 March 2003 to the contrary states that there are two successful bores on adjoining properties. The Appellant is currently pumping water 45 hours per week from April to September (6 months) to maintain 20,000 trees ranging from 18 months old to 3 years old at a rate of 15L/second. This therefore averages out at 7.5L/second on an annual basis. This does not of course accord with the figures put forward by the Director of Natural Resources which assesses continuous pumping would be required at 23L/second.**

RESPONSE

This argument is nonsensical. Existing trees on the appellant's neighbouring sections are juvenile and not at fruiting age and therefore require a substantially reduced watering regime. The appellant has not demonstrated any evidence to support the current watering claims. The appellant is fully aware that as the trees mature more water will be required. In the application to clear Section 227 the appellant states "we will of course seek further water once the trees mature to bearing stage".

- 11. Using the figures with respect to the 20,000 trees, that is 15L/second x 45 hours/week which is the actual usage at peak periods by the Appellant with respect to the 20,000 trees, this would equate to 63.2ML/year. This is substantially less than the amount identified by the Director and 63.2ML/year is in fact the actual figures used by the Appellant for the existing 20,000 trees. This is calculate as follows:
15L/second x 60 seconds x 60 minutes x 45 hours = 63.18ML/year, say 63ML/year.**

RESPONSE

This point is essentially the same argument contained at 10. The same response is offered.

12. **Using the same figures for a further 10,000 trees at peak, this would equate to 31.5ML/year. The water usage in this equation has been reduced by half in accordance with there being half the number of trees presently being farmed by the Appellant. Therefore, a total for 30,000 trees is 94.7ML/year.**

RESPONSE

This point is essentially the same argument contained at 10. The same response is offered.

13. **In further support of this proposition is the correspondence from the Deputy President of the Thai Horticulture Association which was before the Tribunal. More particularly, the extract from the 7th International Mango Symposium of Brazil, South America 2002 headed "Optimising Irrigation Management in Mango Orchards" supports an ultimate saving of water in the range of 31 to 56% in four different irrigation treatments compared to farm control. The figures proposed by the Director of Natural Resource Policy are in accordance with farm control which are substantially higher. The figures put forward by the Department are not a true indicator of internationally recognised practices for irrigating mangoes.**

RESPONSE

The opinion of the Deputy President of the Thai Horticulture Association, which is not based on any research or experience in the Northern Territory, has no weight in the Authority's deliberations. As the Tribunal is likely to be aware, oral presentations to symposiums are generally not published scientific studies. In any case, the presentation was based on experience in South Africa and volumes of water were not given, making the general statement of percentage savings ("31 – 56%") to be baseless.

The appellant is correct in stating that the figures used by the Director of Natural Resource Policy are in accordance with farm controls and these figures were ascertained from studies conducted in the Northern Territory for use in Northern Territory horticultural practices. Whether the figures put forward by the Department are in line with "internationally recognised practices for irrigating mangoes" or not, is irrelevant to the Authority and to this appeal. The statement of "internationally recognised practices for irrigating mangoes" is particularly interesting and suggests the appellant has researched the issue yet has provided no scientific foundation for the claims. The Authority considers that individual countries (and regions within the countries) would have drastically different irrigation requirements based on a variety of abiotic factors.

CONCLUSION

The Development Consent Authority does not support the removal of vegetation exceeding 50% of section 227 Acacia Gap Road as the proposal has the potential for unacceptable environmental damage on the subject site, surrounding residents and groundwater dependent ecosystems. The proposal will result in the over extraction of the underlying aquifer in an attempt to sustain the proposed crop, which will impact on the amenity and natural values of the area.

In addition, the Authority cannot, pursuant to section 52(1) of the *Planning Act 1999*, and the Lands and Mining Tribunal cannot, pursuant to section 130(3) of the *Planning Act 1999* consent to the proposed development if-

- (a) *in its opinion, the proposed development is contrary to a land use objective; or*
- (b) *the proposed development is contrary to the development provisions or an interim development control order.*

The current proposal is demonstrably contrary to the land use objectives being to "protect resources of importance to the shire and broader region" (p. 3 LUO's) and the objective to "prevent inappropriate removal of native vegetation" (p. 16 LUO's). The proposal is also contrary to the development provisions being "the vegetation is removed in accordance with environmental guidelines" (water) (p. 62 LAP).

ORDERS SOUGHT

1. That the Tribunal **refuse** the appeal.

2. Should the Tribunal, in spite of the direction of section 130(3) of the *Planning Act* and the requirements of the NT Planning Scheme, be of a mind to allow the appeal, that the following conditions be applied:
- 1) Before clearing commences, the following areas identified for retention shall be flagged by officers of Department of Infrastructure, Planning and Environment:
 - An area of 100m from the centre point of Acacia Creek.
 - 50 metre wide native vegetation buffer, excluding a 4 metre firebreak, along the western boundary of the property.
 - 2) The areas as flagged for retention by Department of Infrastructure, Planning and Environment officers shall not be cleared, reinstated where necessary and shall be maintained in a natural state, to the satisfaction of the Chairman, Development Consent Authority.
 - 3) No works or permanent crossings are permitted across Acacia Creek, without the written consent of the Natural Resources Division, Department of Infrastructure, Planning and Environment.
 - 4) Any developments on or adjacent to any easements on site shall be carried out to the requirements and satisfaction of the relevant service authority.
 - 5) Firebreaks along boundaries or at appropriate locations shall be provided to the requirements and satisfaction of Bushfires Council of the Northern Territory.
 - 6) Before clearing commences, the landowner shall enter into a bore licensing agreement with the Department of Infrastructure, Planning and Environment to meter and limit the groundwater extraction. The groundwater extraction shall not exceed the sustainable limit as determined by the Director of Natural Resource Policy.
15. On 14 July 2003 the appellant filed submissions in reply (“appellant’s submissions in reply”) as set out hereunder:-

SUBMISSIONS IN REPLY TO SUBMISSIONS OF THE DEVELOPMENT CONSENT AUTHORITY
PURSUANT TO SECTION 128(2)

LMT-67-2003-P

APPLICATION: To clear in excess of 50% - Notice of Refusal issued
APPELLANT: Ian Quin and Hunt and Hunt Lawyers, Ms Danielle Howard
LAND OWNER: Ian Quin
LOCATION: Section 227 (315) Acacia Gap Road, Hundred of Colton
ZONE: RL2 – Rural Living 2
AREA: 130 hectares

REPLY TO DCA’S SUBMISSION ADOPTING THE HEADINGS AND NUMBERING USE IN DCA’S SUBMISSIONS

BACKGROUND

1. Notwithstanding that at the time of acquisition of the property by the Appellant that the sustainable yield with respect to the aquifer was much higher than the now adjusted sustainable yield of 160ML/year, no independent testing has been carried out on the subject property; that is, section 227 (paragraph 4 of the Appellant’s submissions). There was evidence before the Tribunal that in fact the Appellant uses much less water than the 220ML/year suggested to be require. Alternatively, if you take the revised figure of 160ML/year, is also uses much less than this.

There was evidence before the Tribunal that in fact the Appellant was using substantially less than those figures estimated by the Department of Infrastructure, Planning and Environment (DIPE) in respect of the Appellant's current mango farming operation. On the Appellant's view, the annual use on the existing 20,000 trees is approximately 63ML/year, adding to this the proposed 10,000 trees would require a total allowance of 94.7ML/year. (See paragraphs 10, 11, 12 and 13 of the Appellant's submissions).

2. There is evidence to the contrary that the Appellant's requirements will be well below the sustainable yield from the aquifer of 160ML/year. Therefore, it cannot be said that the proposed development of 227 is contrary to the land use objectives as the current usage reflects and also supports what the future usage by the Appellant will be. On this basis there is no suggestion that the environmental flow in the aquifer cannot be maintained.
3. Contrary to the submission by the Respondent that the removal in excess of 50% of the vegetation is not in accordance with the environmental guidelines with respect to the sustainability of the supply of groundwater, the Appellant's current usage suggests otherwise.
4. Whilst pursuant to section 51(j) of the *Planning Act* the capability of the land must be considered, notwithstanding that there are limited groundwater supplies, it cannot be said that this is inappropriate to support the planting of mango trees as put forward by the Appellant, as the proposed water usage will be well below that suggested to be appropriate by DIPE.
5. In view of the Appellant's submission that the total required water usage for his current 20,000 trees is approximately 63ML/year, then using these figures as a guide, it cannot be said that it is adverse to the public interest to allow the unsustainable clearing of native vegetation for the Appellant to plant 10,000 trees which would require only half as much water usage as for the existing 20,000 trees. It is not supported by the facts that there will be adverse impact on neighbouring properties. Furthermore, many of the neighbouring properties have already been cleared beyond the 50% criteria. The owners of those respective properties have obviously not been treated in the same manner as the Appellant is presently being treated. There has been no consideration given about the adverse effect of surrounding neighbours in the previous applications. For example, previous applications have been considered and granted with respect to the developments of sections 225 and 226 (see paragraph 6 of the Appellant's submissions), although such applications have not been limited to these sections.
6. If section 227 did change ownership, this is a matter for the proposed purchaser to consider and is not a matter which should be considered in determining the Appellant's application.

ANSWERS TO RESPONSES TO APPELLANT'S CLAIMS

1. There is no evidence before the Tribunal to give consideration to the response that:

"Mr Quin's argument that water requirements do not change with planting density are non-sensical, basic knowledge tells us that trees planted at higher densities require less water as close planting and associated pruning requirements would be expected to limit the development of tree canopies and limit evaporation."

This is a matter for expert evidence and there was no such specific expert evidence before the Tribunal to give consideration to the argument. The best evidence before the Tribunal is that of Mr Quin's own personal experience as a mango grower and should be preferred over the opposing suggestion in the submissions by DCA that it is basically a "non-sensical" argument.

2. Again, the issue of the sustainable extraction from the underlying aquifer is 160ML/year, is not contrary to what it is proposed will be needed to irrigate 30,000 trees. The Appellant has put before the Tribunal that his current use for 20,000 trees is approximately 63ML/year.
3. Dry mango farming does not mean that the mango trees will be without water at all ~~(to be clarified with client)~~. There was no evidence before the Tribunal concerning dry mango farming apart from the evidence put forward by the Appellant which includes the correspondence from the Deputy President of the Thai Horticultural Association and an extract from the 7th International Mango Symposium of Brazil, South America 2002 (refer to paragraph 13 of the Appellant's submissions). Both of these documents support the view that the information relied upon from the Department of Business, Industry and Resource Development needs to be reviewed to reflect these internationally recognised methods. It is also an indication that any documents from CSIRO which are purported to be relied upon may also require reviewing and therefore cannot be relied upon. We understand and simply said so as not to mislead the Tribunal, that in fact this has been reviewed by CSIRO.

There is also evidence before the Tribunal in a letter from Matthew Cheong, Director of Dennis May Pty Ltd trading as Goldmount Orchards of Gympie, Queensland, dated 4 March 2003 (addressed to the Development Consent Authority) which indicates that it has successfully engaged in dry mango farming. The evidence from that correspondence is that despite being in a one in 100 year drought and not being able to irrigate during 2002, a yield of around 80 kilograms per tree was achieved, with around 60% being of first grade. Furthermore, the correspondence refers to a neighbouring farm which is a dry land mango farm which achieves reasonable yields which would of course depend upon overall management practices. Certainly, it is not consistent with the allegation that trees with no irrigation at all "may survive but would be unlikely to produce a crop".

4. It can only again be restated in the absence of there being any evidence before the Tribunal with respect to the CSIRO's updating of water requirements for mango trees, that in fact the Appellant's evidence is that it uses substantially less than 1200 litres per tree per week for about 26 weeks. This is the amount which is alleged to be required, having regard to CSIRO figures. Again, on Mr Quin's evidence as to his current water usage that he uses substantially less than the underlying aquifer sustainability. With the total of 30,000 trees, which includes the proposed development of section 227, based on his current usage figures, Mr Quin would use 94.7ML/year.

The Appellant has already demonstrated sufficient water for its current requirements and for the establishment of a further 10,000 trees and distribution of nutrients via fertigation. In addition to the current review by CSIRO and world bodies on the reduction of water on

mangoes, the Appellant has been reliably getting well above the industry average with regular yields of around 14 tonne of mango per hectare from our Howard Springs property by watering for only 8 weeks per year based on 100 trees per hectare x 1000 litres per tree per week. This is 0.8 mg litre per hectare per year on 17-year-old very mature trees. (CSIRO now cite as low as 0.5 mg litre hectare per year under perfect conditions with 0.7 mg litre per hectare being as realistic). Also some leading Darwin growers now recognise and agree lower watering rates lead to more market preferred size fruit, better taste and less lenticel skin spotting. It should be recognised little or no water is pumped for mature trees from September onward and often water control is lost due to pre-wet seasons storms.

5. On the basis of the water usage put forward by the Appellant, it is not conceded that the land is not suitable for horticulture. The property is zoned Rural Living 2 (RL2) and the objectives include agriculture and other enterprises. These are matters which were in the Appellant's consideration when acquiring the property (see paragraphs 1 and 2 of the Appellant's submissions).

Further, the current revised Litchfield Plan 2003 proposes to rezone as horticulture both the Appellant's sections 225 and 226 and also those opposite the Appellant, being 224 and 223. This would seem to give de facto admission to the suitability of the area and water supply for horticulture.

6. This is noted but not necessarily conceded in terms of a condition the Authority would propose to restrict water use.
7. The fact that section 227 was not purchased until November 2002, which was approximately four years after the clearing application was processed for section 226 and two months after the determination was issued for 225, has no bearing on the Appellant's contention that to refuse the application currently before the Tribunal is contrary to previous similar applications considered and granted. The real issue is that there have been previous similar determinations made and it is not unreasonable for the Appellant to have expected a further determination to have been made regardless of when section 227 was acquired. There is no issue before the Tribunal regarding Mr Quin's decision to purchase section 227 occurred and whether it should have had any bearing on the earlier determination in respect of section 225 which is what the submission seems to be suggesting. Furthermore, again the Appellant's water usage, as determined by his current usage, is well below the aquifer's sustainability. The responses to this paragraph are substantially covered in the Appellant's submissions.
8. Whilst water modelling is relied on as being evidence of the sustainability of the existing orchards on sections 225 and 226, the evidence before the Tribunal is that these existing orchards use substantially less water than that expected to be the case by the DCA according to the water modelling. The evidence is clear that it is not demonstrably unsustainable.

REPLY TO DCA RESPONSE TO APPELLANT'S CONCLUSION

Notwithstanding these comments, there is evidence before the Tribunal that dry mango farming is sustainable. Furthermore, the Appellant is managing his current orchards at a far lower rate of irrigation than that suggested to be required.

RESPONSE TO DISCUSSION

The Appellant has responded to the reasons for the refusal. In the main, the refusal is based on the pre-supposed need for water in excess of the re-assessed sustainability of 160ML. The evidence from the Appellant is quite clear that he is currently sustaining his present crop on approximately 63ML/year.

- (a) As previously stated, section 227 is RL2 and horticultural purposes are permitted use within the zoning. This is contrary to the proposition being put forward.
- (e) With respect to Mr Skewes' concerns, whilst this is a matter which was referred to at the meeting on 10 April 2003, it is not a matter which was referred to in the ultimate decision to refuse the application. Of itself, it does not appear to have been a reason for refusal and this is a matter which perhaps could be dealt with in another way. Mr Skewes' submission does not stand on its own merits. Those public submissions from Ms Rickard and Mr Chapman are sufficiently covered in the submissions and in this document.
- (h) There is nothing to suggest that the Appellant is aware that there was insufficient water available for sustainable horticulture and, in fact, his evidence suggests otherwise having regard to the amount of water he currently uses for his present orchard crop.
- (j) It is denied that the land is not capable of supporting the proposed use and, again, the Appellant relies on those matters set out herein and in his submissions.
- (n) It is not accepted that the proposed orchard will require in excess of the total sustainable water supply available from the underlying aquifer and, again, the Appellant relies on those matters already set out with respect to his current use and his estimated future use should he proceed to plant the further 10,000 trees.
- (p) There is no specific evidence before the Tribunal (having regard to the water usage by the Appellant in his current orchard) that the clearing will lead to environmental degradation through soil erosion, loss of biodiversity and deterioration of surface and groundwater quality. Again, the Appellant has set out his current and future proposed water use. Furthermore, the Appellant is also a member of the public and has made the application on the basis of other applications granted in the area. There appears to be no valid basis upon which to preclude the Appellant from being given the same consideration as other applicants in the area for the same purpose.

RESPONSE TO SUMMARY

It is not agreed that the Appellant has not addressed the issue of lack of groundwater and has, in fact, put material before the Tribunal which sets out his current use. This current use can then be used to assess his future use. With respect, a precedent has already been created whereby development grants have been given in similar circumstances to the Appellant's. The results relied upon with respect to the aquifer are equivocal. There have not been specific tests carried out on the Appellant's property. The ground of refusal is on the basis of the insufficiency of water. The evidence of the Appellant is quite clear in that the water usage by him is well below the sustainable level.

FINDINGS OF THE TRIBUNAL

16. Firstly it is important to highlight that both the respondent in reaching its conclusion and this Tribunal in relation to the appeal from that decision are necessarily making a decision in respect of an application lodged by the applicant at first instance. The terms of the dispensations sought are clear. It is recited, although it appears elsewhere in this decision. It is an application to "*clear over 50% for horticultural production*". It is upon that particular dispensation to which there must be focus. If anything, the fact that apparently the additional planned planting of mango trees can be accommodated within that portion of Lot 227 which is already cleared does nothing more than demonstrate that there is no reason at all why the application should be considered, for reason that it is not on that basis, a necessary application. However, consideration of the matter will proceed on the basis of the application made by the appellant and specifically in respect of the dispensation which in fact is sought in the application.
17. As set out in the Notice of Refusal, without intending to canvass it in its entirety, the pivotal reality is that the grant of the application can only be acceded to where there has been established "*the availability of a proven water supply to support the intended future use of the land (at maturity);...*".
18. It has been consistently held that in Planning matters there is no burden of proof or onus, analogous to the legal or evidentiary burdens

which are intrinsically part of the curial processes in criminal and civil matters in the Courts. Nevertheless, it is clear in this Tribunal's finding that there must be "established" an **available ... proven water supply to support the intended future use of the land (at maturity)**. It cannot be an obligation incumbent on the respondent to "prove" the existence of a water supply. It is therefore in this Tribunal's finding that before it is appropriate for the dispensation sought to be granted it is incumbent on the appellant to have proven the availability of the requisite water supply to the specified standard set out in paragraph 16.

19. Further, that without the **proof** there is no power for the Development Consent Authority to have granted the application.
20. It is common ground that there is no bore on the subject land, namely section 227, but there are bores located on sections 225 and 226 which apparently are in the ownership of the appellant. What is clear from the material filed is that the basis of the application was an intention by the appellant to plant 10,000 mango trees on that portion of section 227 which he now seeks to clear and thereafter to irrigate them in conventional fashion. Apparently the published data relating to groundwater in the Acacia area was to be found in **Report NR2000/04 Groundwater Recourses of the Acacia Area**. This Report has in fact been reviewed and the result of the review is those factual matters and observations set out in the letter addressed to the Development Consent Authority, being a letter from the Director Natural Resource Policy on 24 March 2003, the text of which is set out hereunder:

I am advised that you have asked to be informed as to whether or not a sustainable water supply is available for the proposal to irrigate 10,000 mango trees on Section 227, Hundred of Colton.

Using irrigation rates supplied by the Department of Business, Industry and Resource Development (DBIRD), approximately 220ML/year would be required for the proposed development. The peak irrigation demand would require continuous pumping at 23L/sec.

There is no record of a bore on Section 227. It is understood, however, that the proposed new development is intended to be supplied from bores on Sections 225 and 226. Air lift yields of 15 L/sec and 2.9L/sec are recorded for the bores on each of these lots. Another bore on Section 226 was air lifted at 10 L/sec but was backfilled, presumably due to difficulties with its construction or continued development.

Normally, the final equipped delivery rates are less than the air lifted supply rates. It appears, therefore, that the existing bores cannot meet the peak irrigation rates required for mangoes, based on information from DBIRD.

Beyond the yield capability of existing bores, the more fundamental issue to be considered is the need to avoid impacts on local groundwater dependent ecosystems.

Report NR 2000/04, "Groundwater Resources of the Acacia Area" was prepared in February 2000 following targeted drilling, test pumping and measurement of spring flows and seepage rates in local streams. This report has only very recently been reviewed in the light of water allocation planning frameworks and the definition of sustainable groundwater yield which have been developed since it was prepared.

Current allocation planning in the Top End retains at least 50% of spring flows and seepage outflows to groundwater dependent ecosystems. Report NR 2000/04 identified fine flows to these systems iii. Acacia Creek and the Manton River.

Accordingly, the maximum total amount of groundwater that may be pumped from the Coomalie Dolomite in the vicinity of Acacia Gap Road is now determined to be 160ML/year. -

Based on irrigation rates supplied by DBIRD, 160ML/year would be sufficient for 32 hectares of mangoes. Alternatively, 80 hectares of hay could be irrigated. These potential Watered areas indicate the total extent of clearing that might be justified for irrigation. :In the case of irrigated hay, it may be appropriate to allow for 240 hectares of clearing to allow for the resting of cropped areas in two years out of three.

I understood that the current development application seeks approval to clear some 70 hectares for irrigated mangoes. This would exceed sustainable yield from the Coomalie Dolomite groundwater resource by at least 100%, based on watering rates supplied by DBIRD. Spring flows into Acacia Creek and Manton River would be reduced by more than 40%.

The development application should not be supported, unless the proponent accepts that the water supply available for irrigation is limited to no more than 160ML/year.

It should be noted, however, that the development application indicates that there are already 20,000 mango trees under irrigation on the neighbouring lots. Unless irrigated significantly below normally accepted rates, it is difficult to understand how even the existing level of development can be sustained.

21. It is obvious that the information has been compiled using irrigation rates supplied by the Department of Business, Industry and Resource Development (DBIRD). It is then necessary to highlight the following matters.

- 220ML/year would be required to irrigate 10,000 trees at maturity.
- Existing bores located on sections 225 and 226 cannot meet the peak irrigation requirement rates for mangoes located on those lots at the current time, It follows that if the clearance was permitted,

the appellant would then establish on Lot 227 alone on such cleared portion the mango trees which he has always planned to locate on that portion. It must follow that there is no available water in objective terms available for the irrigation of such trees at all.

- To avoid adverse impacts on relevant groundwater dependent ecosystems, the maximum total amount of groundwater permitted to be pumped from the Coomalie Dolomite in the vicinity of the subject property (Acacia Gap Road) is 160ML/year.
- The proposed development alone (excluding the need to supply existing demand) would exceed sustainable yield by “at least 100%”.
- Spring flows into Acacia Creek and Manton River would be reduced by more than 40%.
- For the reasons set out in the document, “unless irrigated significantly below normally accepted rates, it is difficult to understand how even the existing level of development can be sustained”.

22. The appellant attacks the above information. He says that it is incumbent upon the respondent to adduce expert evidence to establish those matters. This begs the fact that it is up to the appellant to achieve the necessary proof, not the respondent. The appellant further alleges a capacity or an ability to carry out dry land mango farming for the reasons that he sets in the material. He further asserts that his current operation employs a water consumption which is less than that specified by DBIRD. Of course, what he seems to overlook is that his current irrigation is not an irrigation utilised to irrigate existing trees “at maturity”. None of the attacks, criticisms or

explanations in this Tribunal's finding achieves an elevation amounting to proof to the requisite degree of the required available water supply.

23. The second Ground of Refusal is as stated and supported by the relevant Planning instruments. Part of the environmental reality is the existence of a "spring monsoon forest". Using previously cited figures, it is trite to observe that there seems, *prima facie* at least, to be over extraction of the aquifer already existing. The Department's conclusion is sustained by the letter from Natural Resource Policy set out in paragraph 19 of this decision. The over extraction which must result from the success of the application would prospectively damage, or at least have adverse impact on the spring monsoon forests, leaving aside any other adverse impacts which might occur. The appellant has not addressed this matter at all.
24. The next relevant Ground of Refusal is Ground No 5. The document referred to, namely the map, does not confer on land owners in the area an indisputable or unqualified right to involve horticultural exploitation of a piece of land merely because it is shown on the map. All the map indicates is that there may be horticultural exploitation of a piece of land reflected upon it providing there is no other planning or environmental impediment and provided there is adequate groundwater. The mere depiction of a piece of land on this map does not over-ride those realities.
25. The next relevant matter is raised in Ground of Refusal No 7. The contention by the respondent is that since there is no bore in any event located on section 227, it is not in the public interest to allow the "proven available water supply" to comprise water supplied from Lot 226 and indeed any other Lot even though such Lot be in the same ownership as the Lot the subject of the appeal. It is not

contradicted by the appellant that he has no desire to consolidate the 2 properties. There is no easement registered over Section 226 in respect of any water supply to Lot 227 and whether or not it is in the public interests which it may well be, it is clearly not, or at least not in the finding of this Tribunal, capable of proving the existence of an “available” water supply by pointing to a water supply on lot 226. Notwithstanding the commercial perspectives advanced by the appellant relating to alienation of lot 226, the current fact of the matter is that Lot 226 is alienable at the instance of the appellant. That alienation cannot be restrained by the respondent. Whether it is for reason that it is “not in the public interest” or whether it is because it fails to achieve the proof of available water supply, the fact is in either case there is a valid reason for refusing the application.

The Notice of Appeal

26. In the Notice of Appeal lodged by the appellant, some or all of these matters referred to above are addressed as is apparent from the above commentary. In relation to the Notice of Appeal and all the submissions, the Tribunal intends to confine any comment to a single occasion and not be repetitious. For that reason it will confine its comments to matters that have not been the subject of any traverse in the decision before.
27. The Tribunal’s comments (using the numbers from the Grounds of Appeal) are as follows:
 1. These matters are not relevant to the determination of the appeal. The application is to clear for the purposes of horticultural production the area of land the subject of the application.
 2. The proof of an existing available water supply is something to be established by the appellant. He has not done so.

3. Insofar as “dry land mango farming” may in any academic sense be relevant, it would and could only be on the basis of what the position would be in or around Lot 227 in the Northern Territory. That has not been addressed by the appellant at all. It is to no avail to provide the information that the appellant has on dry land mango farming operation occurring elsewhere in Australia and indeed elsewhere in the world. In any event, all parties including this Tribunal are bound by the relevant Planning instrument. It is not to the point that such agriculture may be possible. The appellant has to prove the existence of an available water supply.

4. That certainly wasn't the subject of ventilation prior to the refusal of the permit. Further and in any event if it was a matter upon which the appellant would seek to rely by way of proving the existence of a water supply, it was up to him to do so. As a matter of logic what “may” be is not in any event worthy of consideration.

5. That is simply a *non sequitur* (it does not follow as a matter of logic or construction).

6. That also does not matter. The exercise is constrained by fact.

7. That also is of no consequence.

8. This matter has already been canvassed.

The submissions

28. In respect of the appellant's submissions, assuming for the purposes of resolving the contention (since in fact it has not been done), that a high yielding bore on section 227 may, but never has exist, what difference would that make to the fact that the underlying aquifer cannot sustain the specified maximum extraction of 160ML/year. It is

not incumbent on the respondent to prove the matter raised. It would not matter if in fact there existed a bore on Lot 227 or not.

29. As already pointed out, Ground of Appeal 4 was for the appellant to establish. Since it is raised by the appellant although the information was obtained after the Refusal of the application, in this instance the Tribunal will have regard to what is set out in the respondent's submission, although, not before the respondent when its decision was made. Nevertheless for the reasons set out in paragraph 4, the information gained by the Development Consent Authority does not assist the appellant at all.
30. Since the neighbour's concerns were never part of the basis of the Refusal there is no relevance in reciting what they are or what they comprise.
31. The respondent's position is stated, in fairly strong emotive terms, in the Summary of the respondent's submissions. It is validly so stated in this Tribunal's finding and unexceptionally correct.

The submissions in reply

32. Again, confining its comments as previously set out, the Tribunal's commentary is succinct. The cryptic nature of this commentary is not to be construed as indicative of the fact that there is no validity in any of the material advanced in the submissions in reply, but merely because there is little purpose in the light of the Tribunal comments made in doing so. For instance, by way of example, in paragraph 3 of the respondent's submissions in reply, the correct methodology (in the Tribunal's view) of ascertaining the capacity of the aquifer is referred to. It is not whether or not there has been drilling on section 227 that is determinative of the quantification, which seems to be what the appellant is asserting.

33. It is valid comment that the information provided by the appellant in his submissions does not first of all establish that his existing irrigation is for trees “at maturity”. It is that obligation which is incumbent upon him and which he has clearly not discharged. It is only the question of irrigation at maturity which is of relevant consideration.

CONCLUSION

34. The appellant has not demonstrated in any respect that the Grounds of Refusal for the permit are in any way wanting.
35. The appellant has specifically failed to discharge the task of proving that which may have permitted the grant of the permit or the allowing of this appeal.

TRIBUNAL ORDERS

36. The appeal is dismissed.

Dated: 29 July 2003

DAVID LOADMAN
CHAIRPERSON