



Assessment of Code of Practice for Plantation Forestry: Queensland

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Cover Photo: The type of map used by some plantation managers in Queensland and other States and Territories. Key features shown on this map include streamside management zones that are widened for aerial spraying, and road management precautions required during operations. This map is supported by an aerial photo and a topographical map produced by a digital elevation model. Cultural heritage sites and other areas that require special management, if they are present, can also be identified in such maps.

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1. SUMMARY

Two draft Codes of practice for forest plantations in Queensland, and inter-related aspects of the forest practices system, were assessed for their potential effectiveness in meeting the 'Forest Practices Related to Wood Production in Plantations: National Principles'¹.

Queensland does not have an approved or endorsed Code of practice for forest plantations. This was also the case for the previous assessment in 2001. Currently, the two separate Codes in draft form intended to apply to private land. It will not be a requirement that either of them apply to most of the commercial forest plantations in the State, which are softwoods grown on Crown land in the south-east. One of the draft Codes is authored by the Department of Employment, Economic Development and Innovation (DEEDI). It is designed to be part of the State-wide planning scheme and thereby to guide local government during the assessment of plantation development proposals (we refer to this document as the Development Assessment Code). At present, there is wide variation in the way each Council deals with plantation development proposals. Having a Development Assessment Code specific for plantation forestry is an option for local government as part of the planning scheme in order to provide a basis for assessing plantation development proposals equitably with other land uses. The content of this Code is not adequate enough to meet the National Principles. Furthermore, at the time of our Queensland visit, this Code had not been made available for public comment, and therefore still required the endorsement of key stakeholders before the Minister for Planning could approve its inclusion in the State-wide planning scheme.

The second Code is voluntary, prepared on behalf of some members of the industry by Timber Queensland to provide guidance to plantation operations (we refer to this document as the Operations Code). It was developed to meet the National Principles and therefore guide responsible environmental management, and to meet regulations covering the export of unprocessed plantation wood. The Operations Code does not yet have the endorsement of the largest private plantation business in Queensland, Forestry Plantations Queensland Pty Ltd, which has a commitment to be the main supplier of softwood logs to sawmills. The capacity of this Operations Code to meet the National Principles will be heavily reliant on support from voluntary forest certification schemes that include environmental standards.

Although both draft Codes are aimed at promoting plantation development, the drafts are very different in content, structure and style. It is unlikely that they will be combined to form a single integrated Code. This is unsatisfactory because it would hinder effective implementation of either Code, as there is likely to be confusion amongst users of these Codes. For example, for the critical area of water management, they define stream classes quite differently and there is contrasting guidance on associated buffer, road and drainage requirements. In our view, it is unsatisfactory to have such divergent approaches.

Our assessment was constrained because both Codes were in draft form and there was no planned deadline for finalising them. The two draft Codes are goal-focused, offering little detailed guidance, and there is inadequate linkage to underpinning documents that plantation managers can use to tailor operations to site-specific circumstances. In general, the draft Codes will only partly satisfy the goals of the National Principles.

¹ <u>http://www.daff.gov.au/forestry/plantation-farm-forestry/principles</u>

While the status, contents and stakeholder endorsement of the two draft Codes remain uncertain, our discussions and field visits confirmed that the major softwood grower (Forestry Plantations Queensland Pty Ltd) has well-established and -tested procedures and guidelines for its plantation operations that ensure the achievement of the National Principles. This organisation is certified under the Australian Forestry Standard.

In general, the hardwood plantation sector in Queensland is facing major sustainability challenges. Some companies have developed adequate procedures and protocols for planning, developing and managing new plantations. A unified, stakeholder-endorsed code of plantation practice could be an important step in assisting the advancement of this sector.

We conclude that only the softwood sector of the plantation industry in the Queensland is achieving the objectives of the National Principles. This is not the case for other plantation sectors, because of the absence of a Code that covers all tenures, and this situation will not be helped by the divergent and confusing approaches in the two draft Codes. We suggest the following major actions:

- The two draft Codes should be integrated into a single Code endorsed by all stakeholders. The planning scheme may only need to use a subset of key provisions of such an integrated Code.
- Develop clear linkages in an integrated Code to other guidance documents and databases (e.g. flora and fauna overlays, and guidance for road construction, soil and water protection, chemical use, and cultural heritage protection etc.). This will unify and strengthen the approval process.
- Design and implement a system for monitoring and reporting on Code compliance and environmental outcomes that builds on existing voluntary auditing processes of the forest certification schemes, so that practices and procedures can be improved on an ongoing basis.

2. BACKGROUND

Codes of forest practice are integral to developing and managing forest plantations in Australia. Their development and implementation are a responsibility of State and Territory governments. The Commonwealth Government has a role in sustainable forest management at the national level, which is implemented through various Acts, regulations and policies (Plantations2020 2007). These include:

- Aboriginal and Torres Strait Islander Heritage Protection Act 1984
- Environment Protection and Biodiversity Conservation Act 1999
- Export Control Act 1982
- Export Control (Unprocessed Wood) Regulations 1986
- Export Control (Hardwood Wood Chip) Regulations 1996
- Export Control (Regional Forest Agreements) Regulations 1997
- National Forest Policy Statement

- Quarantine Act 1908
- Regional Forest Agreements Act 2002
- Renewable Energy (Electricity) Regulations 2001

The Export Control (Unprocessed Wood) Regulations 1986 (section 4) requires the Federal Minister for Agriculture, Fisheries and Forestry to take into account the outcomes of a scientific assessment of a State or Territory code of practice in relation to its effectiveness in meeting the 'Forest Practices Related to Wood Production in Plantations: National Principles' (National Principles, Appendix A).

The outcome of this assessment is part of the decision making process by the Minister, if businesses in the State or Territory are to be exempt from requiring export licences for unprocessed wood as chips or logs. This assessment has been conducted in close consultation with the State and Territory agencies responsible for developing and administering the Codes, and with input from other relevant parties including local government, planning authorities, and public and private plantation forest owners or managers. Codes in all States and Territories were previously assessed by CSIRO (Acronyms, Appendix B) during 1996-2002 (Queensland in 2001).

In July 2010, CSIRO was commissioned by the Department of Agriculture, Fisheries and Forestry (DAFF) to undertake a second assessment. In addition, after this assessment, CSIRO was requested by DAFF to comment on the National Principles (Terms of Reference, Appendix C). This report is our assessment of the Queensland Code.

3. METHOD OF ASSESSMENT

3.1 General Approach

The assessment followed a consistent approach across all States and Territories:

- Review of the scientific validity of the goals and guidelines contained in the Code, the way the Code is implemented, and how environmental performance and other aspects of compliance are monitored. The process did not fully evaluate environmental outcomes in the field, but observations at a sample of sites and discussions with stakeholders were used as the basis for assessing the impacts of forest operations on the environment.
- Effectiveness in complying with the National Principles was assessed against eight criteria based on responses to a set of questions exploring each criterion. These were agreed between DAFF, representatives of all States and Territories, and CSIRO at the outset.
- Review of the relevant regulations (e.g. planning) and guidelines applicable to the regional and local contexts that affect risk to environmental values.
- Discussions with key stakeholders.
- Visits to and discussions at representative sites where plantation forestry operations including harvesting could impact on the environment.
- In each State and Territory, we also sought information from organisations not concerned with wood production (e.g. Environment Protection Authority, local

government, and one or more Aboriginal organisations) that could advise on potential environmental impacts and provide comments.

Although this assessment is focussed on the Code, it also took into account guidelines, policies and regulations that contributed to overall environmental outcomes, e.g. State-wide environmental plans for biodiversity, catchment management plans, company internal processes, and forest management certification.

3.2 Approach in Queensland

Our assessment was facilitated by staff of the Department of Employment, Economic Development and Innovation (DEEDI) and the plantation industry. We gathered information during a visit to Queensland, during which we consulted widely (Organisations consulted, Appendix D) and visited several plantation sites (Meetings and field visits, Appendix E). Key documents reviewed included:

- Standard Code for Timber Plantations draft of February 2011 (hereafter referred to as the Development Assessment Code, Appendix F)
- Plantation Code of Practice for Operations Associated with Commercial Timber Plantations on Private Land in Queensland draft of 29 November 2010 (hereafter referred to as the Operations Code, Appendix G)
- Queensland Timber Plantation Strategy 2020 (DEEDI 2010)
- A conference paper outlining the Queensland planning scheme (Reynolds and Schneider 2009)
- Operational planning documents including maps.

In 2010, Queensland had 0.23 M hectares of plantations managed for commercial wood production, which was 12% of the national total of 2 M hectares (Gavran and Parsons 2011). This estate is made up of 0.19 M hectares of softwoods that are mainly *Pinus elliottii* (slash pine), *Pinus caribaea* (caribaean pine), their hybrids, and *Araucaria cunninghamii* (hoop pine). Softwoods are managed primarily for sawn timber products and provide the resource for the Queensland softwood processing sector. There are also 0.04 M hectares of recently planted hardwood plantations of mainly *Eucalyptus* species, *Tectona grandis* (teak), and a few other species. The eucalypts were planted for pulpwood and solid wood products and the other species for solid wood. Significant areas of these hardwood plantations have failed due to poor species-site matching, droughts, floods, cyclones or insect damage. In the south-east of the State (south of Gladstone), softwood and hardwood plantations are located predominantly in a 200 kilometre zone inland of the coast, and within 50 kilometre of the coast in the north between Gladstone and Cooktown (Fig. 1).

Softwood plantations were established in a number of key phases starting with trial plantings around 1930. This estate was largely owned and managed by the Government of Queensland until June 2010. This business model changed when the standing timber estate and the right to regrow plantations for three further rotations (over 99 years) was sold to Forestry Plantations Queensland Pty Ltd (FPQ). This major change to the plantation forestry sector came into effect on 1 July 2010. The Government retains the right to the land, but the plantation management responsibility lies exclusively with FPQ. Some of these plantations are in their second rotation of approximately 30-years.

The hardwood plantations are mostly less than 10 years old, and established exclusively on exagricultural land. They were first initiated by the Government agencies to encourage sawlog production as a response to a policy applicable to south-east Queensland to reduce native forest harvesting. The financial impetus for recent hardwood plantation development came from Managed Investment Schemes, but many of these companies have collapsed during the past five years due to poor financial performance and slow or failed plantation growth. Only relatively small areas of these plantations are likely to be financially viable.

Although we visited some hardwood plantations, our focus was on the large softwood estate managed by FPQ.

3.3 CSIRO Team

The CSIRO team consisted of Philip Smethurst (Project Leader), John Raison, Sadanandan Nambiar, and Bradley Moggridge, which covered all fields of expertise required and it specifically included sustainable plantation management, soils, nutrition, hydrology, biodiversity, conservation, and cultural heritage. Smethurst, Raison and Nambiar participated in the field visits. Moggridge conducted a desk-top assessment of cultural heritage values, including contact with relevant stakeholders.

3.4 Discussions and Field Visits

The team visited Queensland and participated in several meetings with stakeholders and field visits with private plantation companies. Both softwood areas in the south-east and hardwood areas between Cairns and Townsville were visited. The itineraries are outlined in Appendix E. During these visits and follow-up discussions with key stakeholders (Appendix D) we gathered the information required.

4. INTRODUCTORY COMMENTS ON THE QUEENSLAND CODES

When CSIRO provided the previous assessment in 2001, a Code was in a draft stage and seeking endorsement from the plantation industry. The draft version was being managed by the then Queensland Department of Natural Resources, which was not managing plantation forests, and thus in-principle able to independently develop the Code. That version of the Code was not finalised. At present, government and industry efforts are being directed towards developing two separate draft Codes, with no clear deadline for finalisation or implementation. This will add to the recurring uncertainty in development approvals for, and operational management of, plantation forests in the State.

Despite our attempts, we were unable to organise joint meetings of industry and government stakeholders. This reflects a lack of common purpose (even amongst all members of the industry), and it points to an uncertain future for the two draft Codes.

Figure 1. Map showing the location of commercial plantations in Queensland and neighbouring areas in 2005 (from the Plantation Information Network website of the Australian Bureau of Agricultural and Resource Economics and Sciences

<u>http://adl.brs.gov.au/mapserv/plant/index.phtml</u>). Hardwood plantations (mainly eucalypts) are shaded as grey, and softwoods (mainly pines) as red.



At the time of this assessment, Queensland does not have a voluntary or mandatory code in operation that is applicable to all land tenures. There are two separate draft Codes that have been in preparation during the past few years and that would apply only to private land. These Codes deal with two stages of the plantation forestry business, i.e. the planning and operations stages.

Firstly, DEEDI is developing a Development Assessment Code to facilitate an efficient and consistent approval process within local government, which has the authority to approve plantation development proposals. Secondly, industry is sponsoring a voluntary Operations Code that sets out the goals and broad guidelines for the management of approved plantations. This Code is also expected to support successive rotations of tree plantations.

Neither of these draft Codes will apply to plantations on Crown land, which is subject to other regulatory mechanisms that are mandatory and that apply to most of the area of plantations in Queensland. Sections 4.1 to 4.3 are a brief summary of these three regulatory instruments and approaches to environmental care.

4.1 Development Assessment Code

This draft Code is referred to as the Development Assessment Code. This terminology is confusing because the same document is also referred to in the draft provided (Appendix F) as both the 'Standard Code/s for Timber Plantations' and the 'Forestry for Wood Production Code'.

The Development Assessment Code, drafted by DEEDI, is expected to be a part of the plantation development planning process of the Department of Local Government and Planning. This draft Code is driven by the *Sustainable Planning Act 2009* which commits the State to take a series of specific Actions to promote sustainable development.

The Queensland Timber Plantation Strategy 2020 (DEEDI 2010) is the policy framework for promoting forestry. All planning developments that involve a change of land use require local government approval, and local government approvals are in accordance with the *Sustainable Planning Act 2009*. For each type of land use change, local government must decide, within its planning scheme, which one of five levels of assessment against which plantation proposals will be assessed. These assessment levels in order of increasing compliance obligation are: exempt, compliance assessable, self-assessable, code assessable, and impact assessable. At a State level, certain types of proposed development can be prohibited, but plantation forestry is not in this category. The Development Assessment Code, if approved, will cap the level of assessment required at the 'code assessable' level. As a consequence, local government will not be allowed to specify plantation proposals to be 'impact assessable' or 'prohibited'. Apart from the 'exempt' level, the next three levels require a standard code as defined by the Act, which is the draft shown in Appendix F.

The main purpose for this Code is to enable a common basis and uniformity in the way local government assesses plantation development applications. There are about 70 local government jurisdictions in Queensland within which forestry is considered to be technically feasible. However, we were told that local governments differ greatly in their attitudes towards plantation forestry and implement widely different assessment processes. The State Government is keen to see further development of plantation forestry and would like to establish a common basis across the State for dealing with plantation development applications and thereby streamline the currently complex processes. Implementation of this Code would decrease the current level of delegation (power) available to local government and thereby reduce the opportunity for *adhoc* approaches to approvals.

We were informed by DEEDI that the Government of Queensland does not recognise the adoption of a single code of plantation forestry practices in Queensland as a priority for promoting plantation forestry. The view of DEEDI is that if the plantation estate is certified appropriately for forest management, and that the relevant Acts and regulations are observed, there is no need to observe separate compliance to conditions set out in a code of plantation forestry practices. This view is shared by some private companies elsewhere in Australia. They argue that regulations that deal with plantation forestry should not be more restrictive than those applied to other agricultural land uses. The draft Development Assessment Code, if finalised and implemented, would promote this goal. Industry would also like to rely on forest management certification as a process for achieving environmental care, and in Queensland that appears to be the way the preparation of the Operations Code (section 4.2) is progressing.

Regardless of the merit of this view, it is likely that a good deal of the current uncertainty around the fate of the draft Development Assessment Code, and the rather unusual situation of having two separate codes in the same State, stems from this doubt across the plantation sector (including government) about the relevance of a single code of practice for plantations.

The draft Development Assessment Code is a response to action 1.2 in the Queensland Timber Plantation Strategy. This draft Code provides a simple set of guidelines to meet the level of assessment to which a plantation proposal will be subject: compliance assessable, self-

assessable, and code assessable. However, the requirements of each of these levels are almost identical and cover areas of:

- buffers between adjoining premises, infrastructure and waterways,
- plantation wildling control,
- slope limits for plantation establishment,
- some methods of plantation establishment, maintenance and harvesting, including roads, drains, and erosion control measures, and
- fire prevention and control.

The code-assessable level requires a 'timber plantation management report' that specifies planned plantation species and their methods of establishment, maintenance and harvesting. For some aspects, these guidelines are be supported by 'explanatory notes', e.g. for stream and bank definitions, drainage options.

Although a number of stakeholders were consulted during the drafting phase of this Development Assessment Code, we are unable to make a clear assessment of how effective it would be in meeting the National Principles for the following reasons:

- (i) the degree of acceptance of this Code by the plantation industry and other stakeholders is not known,
- (ii) the views of local government and the Minister for Planning are not known,
- (iii) the content of this Code is not consistent with the other draft Code, and
- (iv) no action is proposed for monitoring compliance or environmental outcomes.

4.2 Operations Code

We refer to a draft of The Code of Practice for Queensland Commercial Private Plantations (draft of 29 November 2010; Appendix G) as the Operations Code. This document is the outcome of an initiative by a group of plantation companies and industry organisations, through a body called Timber Queensland. As Timber Queensland facilitated the development of the draft Operations Code, we assume it will also be responsible for its future development and review.

Companies and organisations involved in developing this draft Operations Code are listed as Australian Forest Growers, Forest Enterprises Australia, Great Southern Ltd, ITC Limited, PF Olsen, Rewards Group, Willmott Forests Limited, Timber Queensland and Tree Crop Technologies. However, at the time of our assessment several of these plantation companies were in receivership. A notable absence in the group is the largest plantation manager in Queensland, FPQ, which operates on both Crown and private land.

The draft Operations Code is largely a set of goals and broad guidelines for achieving social, economic and environmental objectives to guide the establishment and management of plantations. It mentions that the Operations Code is 'informed by the National Principles'. It advocates independent, voluntary forest management certification as the compliance mechanism for protecting environmental values. Thus, all goals in the Operations Code are cross-referenced to the relevant set of criteria in two certification schemes, i.e. the Australian Forestry Standard (AFS) and the Forest Stewardship Council (FSC).

4.3 Plantations on Crown Land

About 90% of the land managed by FPQ is Crown land. These plantations are required to be managed in accordance with the regulatory requirements of DERM to protect environmental values. In some areas they need to cater for recreation, grazing and beekeeping (http://www.derm.qld.gov.au/land/state/qld-plantations-sale.html). The FPQ plantations are required to be certified by an internationally recognised forest management certification scheme.

5. CRITERION 1: COMPLIANCE OF PLANTATION MANAGEMENT WITH RELEVANT PLANNING SCHEMES AND LEGISLATION

5.1 Relevant National Principles and Questions

National Principle: 1.3

a) Are the processes adequate to meet this criterion?

5.2 Existing Processes

5.2.1 Legislation

In Queensland, the achievement of the National Principles relies entirely on (i) compliance with State legislation and policies, and (ii) implementation of the appropriate protocols and procedures adopted by the forest owners and managers.

A list of legislation applicable to plantation forestry in Queensland published by Plantations2020 (2007), with up-dates in the Operations Code as provided in this report (Appendix G).

The following is a list of legislation and a brief description of each:

Aboriginal Cultural Heritage Act 2003: This Act provides for the preservation and management of the anthropological, cultural, historic, and prehistoric components of cultural heritage.

Agricultural Chemicals Distribution Control Act 1966: This Act controls application of agricultural chemicals from aircraft or by ground based methods. It requires applicators to obtain a license, to use equipment of approved design, and that records of application are kept. Inspectors are empowered to enforce this Act.

Chemical Usage (Agricultural and Veterinary) Control Act 1988: This Act stipulates that only registered agricultural chemicals be used and that their application be in accordance with the label. Disposal of used containers must be in accordance with prescriptions contained in regulations.

^{1.3} Plantation management should comply with State and regional conservation and catchment management objectives, relevant planning schemes and legislation.

Coastal Protection and Management Act 1995: This Act restricts development and operations in certain zones identified in Coastal Management Zones.

Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987: This Act delegates the authority to appropriate Government agencies for the protection, preservation and management of all components of landscape and other related heritage values (anthropological, cultural, historic, and prehistoric). It provides for registers of Landscapes Queensland and Queensland Estate, and of State and regional committees to recommend listings and to advise on management issues.

Diseases in Timber Act 1975: This Act provides power for forest officers of the government to take measures to prevent or control the spread of any disease in timber.

Environmental Protection (Water) Policy 2009 (a regulation under the *Environmental Protection Act 1994):* This regulation sets out water quality guidelines and standards. Its major focus is on matters related to industrial and domestic use, but it also stipulates a requirement for local authorities to develop environmental plans relating to water. It also covers the protection of groundwater, and a responsibility to consider needs for environmental flows.

Environmental Protection Act 1994: This Act requires a duty of environmental care by all that in-turn requires the taking of all reasonable and practicable measures to prevent or minimise environmental harm. It empowers administering authorities to request environmental audits and to issue environmental protection orders. In the event of environmental damage, it stipulates what remedial steps are to be followed.

Forestry Act 1959: This Act provides for the declaration and management of State forest. It requires consideration of soil, water and recreation values. It includes provision for the control of forestry operations on State Forests, including those performed by contractors, and measures for fire protection and suppression additional to those contained in the *Fire and Rescue Service Act 1990*.

Land Act 1992: This Act provides powers for the administration of Crown leasehold land, including the management of trees. Removal of any tree requires a permit. Permit evaluation requires consideration of the principles of maintenance of productivity, prevention of degradation, and maintenance of biodiversity.

Land Protection (Pest and Stock Management) Act 2002: This Act provides for pest management for land, and managing the stock route network.

Nature Conservation Act 1992: This Act *p*rovides for the conservation of nature, dedication and declaration of protected areas of Crown land, management of protected areas, protection of native wildlife and its habit, and conservation plans. It states that a person must not interfere with a cultural or natural resource of a protected area, unless approved under certain conditions. This Act also provides for the declaration and management of National Parks, and other reserves, and for the protection of indigenous Queensland flora and fauna. Species and critical habitat can be listed for protection. It is an offence to take or posses listed species without a permit. The nature conservation provisions cover all tenures.

Nature Conservation (Wildlife) Regulation 1994: This regulation is made under the *Nature Conservation Act 1992,* and provides a listing of Queensland species and specific management requirements.

Plant Protection Act 1989: This Act covers the control and removal of pest infestations of plants and provides power to prevent the importation of potential pest plants.

Queensland Heritage Act 1992: This Act establishes a Heritage Council and a Heritage Register. It focuses on cultural heritage, and provides power for the protection of items listed on the register.

Rural Lands Protection Act 1985: This Act provides for the declaration and control of noxious plants and harmful animals on land of all tenures.

Soil Conservation Act 1986: This Act underpins and regulates the conservation of soil. It places a major emphasis on the role of the Soil Conservation Commissioner in dissemination of information and instruction in relation to soil conservation measures.

Sustainable Planning Act 2009: This act seeks to achieve ecological sustainability as a part of the boarder goal enunciated in what is called 'QPlan'. It is aimed at coordinating and integrating planning development processes and minimising the effects of development on the environment. It is implemented through local government planning schemes.

Vegetation Management Act 1999: This act controls the clearing of native forest on privately owned land.

Water Act 2000: This Act aims to sustain the management and use of water and other resources through implementing a system for the planning, allocation and use of water.

5.2.2 Development Assessment Code

All development proposals need to be submitted to local government for approval. A proposal for developing a plantation forestry enterprise is, in principle, treated like any other development. The application is channelled through a hierarchy of processes. If a local government has not deemed a plantation proposal to be a material change of land use and therefore exempt from further assessment, the application is assigned a manager who guides it through the various steps, seeks advice from DERM or other parties, and informs the applicant and other parties of the status of the application. In doing so, it is proposed that, for non-exempt plantations, the application will be assessed as per the Development Assessment Code (Appendix F).

Currently, local government has a wide range of discretionary powers to reject or accept a plantation development proposal. The introduction of the Development Assessment Code aims to considerably limit that discretion and to provide greater uniformity in decision making process across the State and to minimise the perception of arbitrary actions by local government. This Development Assessment Code would provide some general guidance on developing and managing a plantation with environmental care.

5.2.3 Operations Code

Signatories to the Operations Code would be expected to manage plantations in accordance with local government planning schemes and all legislation relevant to plantation forestry. Within the Operations Code, a list of protocols is provided for consideration when preparing a plantation management plan.

5.2.4 Plantations on Crown Land

Local government planning approvals are not required for plantations on Crown land, but they are subject to legislative requirements regulated by DERM. This is the case for the softwood plantations managed by FPQ on Crown land. Where this company operates on private land, which is a small portion of their estate, local government approval is required for a plantation development.

5.3 Comments on Existing Processes

The Development Assessment Code does not provide an overarching framework or guidance and linkages for all the requirements of this criterion. For example, it is not clear in this Code how environmentally sensitive issues such as vegetation clearance, bio-diversity protection and heritage values are accounted for in the development approval process. However, processes for covering this and several other values occur separate to this Code. For example, vegetation clearance on freehold, Indigenous land and State tenures in Queensland is regulated by the *Vegetation Management Act* 1999 through the Vegetation Management Framework (DERM 2009). Clearing can only be done under permit conditions, unless exempt (e.g. routine activities such as clearing for fence lines and yards). Where a timber plantation is a material change of use involving native forest clearing, a referral from local government will be triggered involving DNRM in the development assessment process. We were informed that any application for broad-scale clearing under the vegetation management framework is currently refused. Clearing of remnant vegetation for activities such as tracks or buildings can occur where exempted under the *Sustainable Planning Act* 2009, or where approval has been given through Regional Management Codes.

There is a strong perception within the plantation industry that local government decisions tend to have a high degree of arbitrary influence from local vested interests in land use. Related to this is the view conveyed to us that several local governments do not have adequate skills in the plantation forestry.

The absence of a single, comprehensive Code of practice for forest plantations applicable to all land tenures and plantation ownership is a major weakness of the system in Queensland. Such a Code should include appropriate references to legislation, and linkages to a knowledge base that aids environmental management.

Because environmental protection relies mostly on processes outside the Code, the draft Development Assessment Code takes a minimalist approach to the content and purpose of a code of practice, which in-turn does not provide adequate guidance for achieving the National Principles, especially for a small-scale forest grower. The Development Code is designed to deal only with matter relevant to the assessment of a timber plantation development and not covered by other existing statutory requirements. The Operations Code is relatively more comprehensive and it encourages forest management certification and auditing. The forest management system applied by the major plantation manager (FPQ) are comprehensive, but they operate mainly on Crown land. This organisation has well developed internal systems, skilled staff, data bases, and investments in planning to ensure that forestry operations are carried out with adequate regard to environmental values. It provides on its website FPQ's sustainability policy, an overview of its sustainable forest management activities, and AFS audit summary reports (http://www.fpq.net.au/asp/index.asp?sid=5&page=sustainability). This FPQ forest management system meets the requirements of the National Principles.

5.4 Scope for Improvement

We suggest several improvements:

- 1. Integration of the two draft Codes into one unified Code, and finalisation of that process. This integrated Code could be voluntary and endorsed by DEEDI, DERM and the major plantation growers. Subsections can be used as the Development Assessment Code in local government planning schemes, and could be stipulated as the minimal standard for the establishment and management of plantations.
- 2. Any integrated Code should be well cross-linked to sources of practical guidance on environmental management necessary for planning and managing plantations.
- 3. As is the aim of the Development Assessment Code, the planning scheme should be modified such that local government decisions in relation to plantation development proposals are made in more transparent, consistent and equitable ways.
- 4. A new integrated Code should be linked to a system of monitoring and reporting for compliance and environmental outcomes across all land tenures to enable continuous improvement in management standards.

5.5 Conclusion

The two draft Codes, if they are finalised in the present form, will be inadequate for achieving full compliance with the National Principles.

Some major plantation managers have adequate procedures, protocols and skills to ensure adequate environmental outcomes, which is currently demonstrated by AFS or FSC certification.

The effectiveness of the current planning procedures to deliver good environmental outcomes in the case of small-scale investors remains uncertain, and in that respect a unified and endorsed State Code is crucial. A unified Code will help support the development of a hardwood plantation sector.

6. CRITERION 2: PROTECTION OF NATIVE VEGETATION AND ANIMAL COMMUNITIES AND NATURAL LANDSCAPE VALUES

6.1 Relevant National Principles and Questions

National Principles: 1.1, 1.2 and 1.8, except for cultural heritage values, which are considered in Criterion 5

1.1 Native forest should not be cleared for plantation establishment where this would compromise regional conservation and catchment management objectives. In some circumstances it may be appropriate to clear forests that have been severely

degraded by impacts such as disease, weed invasion, wind and fire so as to enable rehabilitation through replanting.

- 1.2 Values such as intensive recreation, high scenic quality, significant geomorphic, biological, or cultural heritage sites, should be recognised in the planning of plantation forest operations.
- 1.8 Fauna, floristic, and landscape values should be protected by the careful planning of plantation layout establishment operations and the reservation and protection of appropriate areas of native vegetation; such values should be recognised in subsequent plantation management.
- a) Are the processes for managing the clearing of native vegetation adequate to meet the objectives of the National Forest Policy Statement (including the objective of not clearing for plantation establishment where this would compromise regional conservation and catchment management objectives)?
- b) Do these processes take into account the need to achieve adequate conservation of important natural heritage values?
- c) Are there measures and processes in place for the identification of these values in assessing proposed plantation sites and adjacent areas for natural values?
- d) Where values are identified are protection measures taken into account in the planning and future management of plantations?
- e) In the planning of plantation layout and establishment operations, are there measures and processes for managing identified natural heritage values, including the protection of threatened species and communities?

6.2 Existing Processes

6.2.1 Legislation

The Acts which provide for the protection of native vegetation and animal communities include:

Vegetation Management Act 1999 Vegetation Management and other Legislation amendment Act 2009 Vegetation Management (Regrowth Clearing Moratorium) Act 2009, and Nature Conservation Act 1992

The application of regulations under these Acts determining native vegetation removal depends on the tenure of the land and the type of vegetation, which are briefly described below.

The *Nature Conservation Act 1992* is the principal instrument for the protection of flora and fauna in Queensland. According to this Act, it is an offence to "take" protected wildlife, unless this is done in the course of another permitted activity (e.g. clearing for agricultural production). Where clearing is identified as "taking or threatening wildlife" or its habitat, Interim Protection Orders to stop clearing may be issued by DERM. Following investigation, areas may be protected permanently, and compensation may be payable where economic losses occur following the imposition of a Protection Order. Although, under this Act, there is no requirement for landholders to assess areas for the presence of critical habitat or protected

wildlife before clearing, it is catered for by the *Vegetation Management Act 1999* in the case of freehold and leasehold lands. On State plantation forest tenure, clearing of native vegetation is controlled by a contractual agreement between the State and FPQ.

Natural, remnant and regrowth native vegetation types are considered in relation to their conservation status. Restrictions on clearing are provided even for regrowth vegetation where it has high biodiversity values

(http://www.derm.qld.gov.au/vegetation/regrowth_vegetation_regulations.html).

On all land tenures, natural landscape values are protected through the *Queensland Heritage Act 1992*. Features with recognised values are protected upon discovery or by listing, but no formal surveys are required by legislation before development activities commence.

6.2.2 Development Assessment Code

The protection of native vegetation and animal communities or other landscape values is not considered in the Development Assessment Code, but local government is obliged to refer applications to DERM for advice on these values if a related issue is triggered.

6.2.3 Operations Code

Plantations established on private freehold land have been on cleared farm land that was under pasture or cropping and subjected to a high degree of long-term disturbance. Patches or individual trees can be removed only with the approval of DERM because clearing of native vegetation for the establishment of timber plantations is subject to several of the abovementioned acts.

The Operations Code includes guidance in regard to bio-diversity protection and conditions for native vegetation clearing for plantation establishment. It refers to the need to protect native vegetation 'identified under the *Vegetation Management Act 1999*'. This Operations Code provides goals and guidelines that remind plantation planners and managers to consider recreation, heritage, scenic or conservation values, as the land still belongs to the Crown.

6.2.4 Plantations on Crown Land

The *Vegetation Management Act 1999* applies to Crown land, and Queensland government policy does not allow native vegetation clearing for plantation establishment on Crown land. There has been no clearing for plantations since 1991. Under special circumstances, small patches or individual trees can be removed with approval from DERM, which considers the conservation status of the vegetation proposed to be cleared. This policy continues to apply even after the recent sale of timber management rights to the private sector.

Large areas of Crown land are managed under leasehold, primarily for pastoral and agricultural activities. There has not been significant plantation establishment on these lands because of their geographic location and legal issues relating to land title and timber rights. Proposals for clearing of native vegetation on leasehold land are evaluated under the *Land Act 1992*, the *Nature Conservation Act 1992*, the *Environmental Protection Act 1994* and those Acts mentioned in section 6.2.1. Permits are required for any tree clearing on leasehold land through an application by the leaseholder to DERM. Where there are concerns in relation to nature conservation values, permits, if granted, may include conditions such as restriction on the location or extent of clearing.

The agreement between Government and FPQ precludes clearing of native vegetation for plantations unless the area is small, of low conservation status, and approved by DERM.

6.3 Comments on Existing Processes

The existing processes are adequate for meeting this criterion. However, the implementation steps include a confusing matrix of assessment criteria and processes that growers may find difficult to follow.

6.4 Scope for Improvement

Significant improvements may be possible by providing more clarity on the steps to implementation through:

- a single Code that contains links to guiding documents and databases, and
- explicit recognition in the Development Assessment Code of the need to protect these values, even if these values are assessed elsewhere in the planning system.

6.5 Conclusion

The existing and proposed processes are adequate for meeting this criterion, but better links are needed to guiding documents and databases, and by explicitly mentioning in the Development Assessment Code the need to protect these values.

7. CRITERION 3: PROTECTION OF WATER QUALITY AND, WHERE REQUIRED, MANAGEMENT OF WATER YIELD

7.1 Relevant National Principles and Questions

National Principles: 1.4 and 1.5

- 1.4 Water quality (physical, chemical, or biological) should be protected by measures controlling change resulting from plantation activities
- 1.5 Water yield should be managed as required by careful planning of operations.
- a) Do measures that protect water quality include streams, springs, soaks, swampy ground and bodies of standing water, and minimise sediment and other contaminant input to streams from plantation areas including roads?
- b) What environmentally sound guidance regarding plantation management strategies for the use of nutrients and biocides do the codes of practice provide especially to ensure that changes to water quality are within acceptable limits?
- c) Where the water resource is required to be managed (for example, controlled catchments), do the codes of practice provide effective strategies for managing water yield?

7.2 Existing Processes

The two draft Codes include provisions for water protection.

In the Development Assessment Code, streams are classified into four orders from 1st order (starting at the head of a catchment) to 4th order, being a named watercourse. The stream order defines the significance of the stream and the appropriate lateral distance to be protected. The explanatory notes attached to the Development Assessment Code include some details about the nature and size of banks to be protected taking into account water flow levels.

This Development Assessment Code also recognises the need for separation between planted areas and wetlands in the landscape using buffer zones. Wetlands in plantation areas include those shown on a 'Map of referable wetlands', approved by and available from DERM.

The Operations Code sets out the goals and guidelines for the protection of soil and water in an integrated manner with the goal of minimising adverse impacts on both values. These guidelines include information on stream and soil erodibility classification, buffer widths for various streams and water features, and guidance to drainage spacing distances to be observed for snig tracks and roads. This draft Code stipulates the width of stream buffers to be 5 to 30 m, compared with 2 to 20 metres in the Development Assessment Code. The Operations Code also identifies relevant criteria in the AFS and FSC certification schemes.

The Operations Code also indicates that water yield regulations, if any, should be met and that adverse changes to hydrological flows should be minimised

On Crown land, FPQ follows the system already developed by predecessor government organisations, which generally included wider buffers than those proposed in the two draft Codes.

The use of agricultural chemicals (i.e. herbicides, fungicides and pesticides) in plantation forestry and other land uses is regulated by the *Agricultural Chemical and Distribution Act 1966* which provides for the declaration of hazardous areas and sets restriction for certain chemicals. Aerial applications require more extensive buffers.

7.3 Comments on Existing Processes

There is no uniformity in the way the two draft Codes deal with the critical issues of soil and water quality management. This is a serious deficiency and will confuse both plantation growers and local government.

We were not provided with documents that justified the prescribed buffer widths, which in the two draft Codes are questionable, because narrower buffers are suggested in some cases than probably would be required to filter most sediment, nutrients and pesticides (Zhang et al. 2010). The smallest stream defined in the Development Assessment Code is stream order 1 located as the first drainage line indicated on a 1:250,000 map. This is unlikely to provide adequate identification of headwater streams, which are generally the major source of contaminants in a stream network (Weaver et al. 2001). The Operations Code is more detailed in its description of streams, gullies, waterways and water features, and it emphasises the need to identify streams by field observation.

The protocols and internal auditing process of FPQ ensure that the National Principles are met. Plantation areas managed by them have streams identified using on-ground inspection and highly accurate digital elevation models developed using light detection and ranging (LIDAR) technology. The FPQ approach to waterway identification and protection using buffers is sound. During discussions with DERM, the main environmental regulator, staff did not raise any concerns about the quality of water draining from plantation areas.

Plantations in Queensland are currently not required to have a water use licence, and therefore this issue is not considered in the Development Assessment Code, and it receives minor attention in the Operations Code and in FPQ processes. However, it is possible that water yield regulation may arise in the future, in which case the Code should provide guidance to the legal requirements and to planning and management.

The *Water Act 2002* requires water resource plans to be developed to manage for environmental, social and economic needs. An assessment is undertaken when a plan is developed or reviewed which identifies activities which either do have or will have an impact on the water supply of a catchment or the groundwater resource. This includes plantation forestry. If an activity is identified as potentially having an impact, a risk assessment will be undertaken to determine if it is necessary to bring that activity into a higher level of management control than previously achieved. This can occur through actions such as the issuing of entitlements. If it is considered that the activity will not have an impact on the water resources or the use of that water resource during the life of the plan (10 years), then no change in management practices will be initiated.

The National Water Commission assesses water plans to ensure compliance with the National Water Initiative, which requires consideration of the management of interception activities such as plantation forestry.

7.4 Scope for Improvement

Integration of the key aspects of the two draft Codes (including water values) into one integrated Code with shared goals and guidelines would enhance the value and implementation of a Code. This need and opportunity for integration is clearly evident in the definitions of the stream network and the prescribed buffer widths proposed for protecting water quality.

7.5 Conclusion

Currently, the management of most plantations in Queensland, which are on Crown land, meet this criterion. However, the two draft Codes may be inadequate for protecting water quality values on private land. An improvement suggested is to produce an integrated Code that adequately identifies headwater stream and drainage areas, and protects them with adequate buffers and up-slope practices.

8. CRITERION 4: PROTECTION OF SOIL RESOURCES

8.1 Relevant National Principles and Questions

National Principles: 1.6 and 1.7, except cultural heritage values are considered in Criterion 5

1.6 Soil stability should be protected by measures, which regulate site disturbance.

- 1.7 Soil, water catchment, cultural and landscape values should be protected by the careful location, construction, and maintenance of roads and tracks, and regulation of their use
- a) Are there measures and processes in place to assess the risks to soil resources? How are differences in soil type,, topography and climatic conditions taken into account?
- b) Do the codes of practice provide guidelines for roading, harvesting and site preparation that minimise soil loss or adverse change to soil properties?

8.2 Existing Processes

The *Soil Conservation Act 1986* regulates soil protection. The Development Assessment Code has some guidance in relation to soil protection, e.g. slope limits are prescribed for cultivation types and drainage designs. The Operations Code addresses the protection of soil and water values in an integrated manner. It defines soil erodibility classes, and links slope and stream classes to drainage and buffer designs. In this Code, burning of slash after harvest is discouraged in order to conserve nutrients and minimise erosion. However, this issue is not recognised in the Development Assessment Code, which deals with plantation-specific development issues, slash management is not considered a development issue, and it is not specific to plantations, e.g. burning sugar cane slash is common.

Internal procedures of FPQ take into account soil erodibility, slope, and stream class in plantation cultivation, roads and drainage operations. They also retain slash to conserve organic matter and nutrients.

8.3 Comments on Existing Processes

Current FPQ systems and practices are adequate for protecting soils values. However, the two diverse draft Codes are likely to cause confusion amongst plantation managers operating on private land when planning to protect soil values. The two draft Codes will not provide an adequate basis for protecting soil values across the State.

8.4 Scope for Improvement

The two draft Codes should be integrated to provide one Code, and thereby provide one set of definitions and requirements for soil protection, including soil erodibility and slope considerations for planning buffers, roads and drainage systems.

8.5 Conclusion

The two draft Codes on their own will be inadequate for protecting soil values under the range of conditions encountered in Queensland. They should be integrated into one Code that is consistent with systems used by FPQ.

9. CRITERION 5: PROTECTION OF CULTURAL HERITAGE VALUES

9.1 Relevant National Principles and Questions

National Principle: NP 1.7 and 1.8, cultural heritage aspects only.

- 1.7 Soil, water catchment, cultural and landscape values should be protected by the careful location, construction, and maintenance of roads and tracks, and regulation of their use
- 1.8 Values such as intensive recreation, high scenic quality, significant geomorphic, biological, or cultural heritage sites, should be recognised in the planning of plantation forest operations.
- a) In the planning of plantation layout, establishment and maintenance operations, are there measures and processes for managing cultural heritage values?

9.2 Existing Processes

The Development Assessment Code does not include the protection of cultural heritage values, but plantation managers are obliged to protect these values under State and Commonwealth legislation. Aboriginal and non-Aboriginal heritage is protected under the State's *Aboriginal Cultural Heritage Act 2003*. The Operations Code includes a goal consistent with the National Principles, but no guidance is provided.

Information in cultural heritage overlays are used on Crown and private land to identify these values during the planning process. DERM is the main contact at a State level, as it maintains a database of cultural heritage sites

(http://www.derm.qld.gov.au/cultural_heritage/significant_places/index.html). A risk assessment during plantation planning can necessitate consultation with local heritage representatives (Aboriginal and non-Aboriginal).

9.3 Comments on Existing Processes

Most FPQ plantation activity is on land that has been under plantation management (and hence disturbed) for several decades, including one or two plantation cycles. The likelihood of discovering new, significant heritage sites or objects is low.

Some companies occasionally provide cultural heritage training for their employees and contractors.

9.4 Scope for Improvement

Improved and uniform guidance to cultural heritage responsibilities and identification of objects or sites is needed in the two draft Codes.

9.5 Conclusion

The draft Codes do not provide adequate guidance in relation to cultural heritage values, but we are not aware of any serious threats to heritage values that have arisen in relation to plantation activities in Queensland.

10. CRITERION 6: PROTECTION FROM FIRE, PESTS AND DISEASES

10.1 Relevant National Principles and Questions

National Principle: 1.9

- 1.9 Plantations and adjacent native forests should be protected from the adverse effects of fire and from the introduction and spread of plant, insect and animal pests and plant diseases.
- a) Do the codes of practice provide for fire management plans for plantations including containment from adjacent native forest?
- b) Do the codes of practice provide guidelines to deal with outbreaks of pest and diseases?

10.2 Existing Processes

Fire protection measures are specified in the two draft Codes in several places. Applications for plantation establishment need to specify zones of protection (referred to as 'buffers' in Appendix F and 'setbacks' in Appendix G) from various features such as buildings and power lines. Also, a plan is needed for a continuous fire road around the perimeter dedicated to access for fire protection, unless landscape features render this impractical. Fire roads and turnarounds may also be constructed within the plantation development area. Designated fire roads need to meet specific construction and maintenance standards, and their signage must meet specifications. Large forest companies liaise with regional fire protection agencies (particularly the Queensland Fire and Rescue Service and the Queensland Parks and Wildlife Service) to establish communication and command protocols to be deployed in the event of a fire, and to conduct fire protection measures such as prescribed burns.

In the Operations Code, a fire protection plan including fire risk maps is required.

Pests and diseases are managed at the State level under the *Plant Protection Act 1989* and *Land Protection (Pest and Stock Management) Act 2002*. As for other plantation management activities considered as operations rather than development, the management of weeds, pests and diseases is not considered in the Development Assessment Code. Weed management obligations of plantation managers are the same as those of other land managers. The Operations Code recognises that the concerns of neighbours should be considered when determining strategies to control declared weeds and animal pests, and that plantation managers should co-operate with government agencies on regional weed and pest management strategies.

10.3 Comments on Existing Processes

Large areas of softwood plantation in Queensland are in close proximity to urban areas, which increases fire risks. This may be a reason why prescribed burning is deployed routinely as a fire protection measure in the softwood plantations in the south-east of the State. However, the likely negative long-term consequences of burning for nutrient availability and wood production, and for greenhouse gas emissions, warrant evaluation. It is a goal of the Operations Code that the carbon footprint of plantations is minimised.

Weeds and pests cannot be completely controlled or eliminated from plantations due to technical and financial limitations. Plantation managers spend considerable effort on weed management. Grazing is used partially as a weed control measure by some plantation managers, but cattle, if they enter streams, can contaminate streams with sediment, nutrients and bacteria.

Pests and diseases are not addressed in the Development Assessment Code (apart from the issue of plantation wildlings), but they are set as a goal in the Operations Code. They are controlled by processes under the two Acts mentioned in the previous section. The entity responsible for biosecurity is DEEDI. An example of the challenges of risk and control is illustrated by the recent incursion of Myrtle rust. The incursion was first registered in north-eastern NSW in April 2010, but it might have been in that area for a year or more before being recognised. This rust is a threat to eucalypt plantations and other species in the *Myrtaceae* family. Delays in recognising the threat and implementing actions have been accompanied by its spread to additional areas in both NSW and Queensland. This example shows that there is a good case for increasing the investment in biosecurity. This view is supported by a review that was conducted recently of biosecurity risks and their management in Australia in relation to the plantation industry, in which DEEDI participated (Mohammed et al. 2010).

10.4 Scope for Improvement

Integration of all the factors (fire risk, wood production and air pollution) important for planning fire management is a complex task. Nevertheless, an integrated Code and company processes should explicitly consider these factors when developing fire management plans.

The Development Assessment Code does not specify the need for plantation development applications to consider regional or local fire risks and protection measures, or to inform local authorities of their fire protection measures. We propose that the planning process should require consultation of and compliance with the regional fire management plans. Local fire authorities should be informed soon after plantation development approval, of the location of designated fire roads and water storages as a minimum responsibility, and that measures consistent with local requirements be included in an integrated Code.

There is a case for reviewing the current buffer management practices with the aim of improving environmental outcomes in relation to weed control, protection from fire, and managing grazing, while retaining their primary function of buffers for soil and water protection. It might be possible to develop management systems that exclude livestock from streams, and allow some harvestable trees to be planted and harvested in the buffers and thus control weeds.

It would be appropriate for an integrated Code to cross-reference weed and other biosecurity responsibilities of plantation managers to regulatory measures and guidance specific to plantations.

10.5 Conclusion

The draft Codes individually or together do not address the risks of fire, weeds and other pests satisfactorily. It would be useful to cross-reference these responsibilities in these Codes with links to guidance. However, the major companies are achieving this to a large extent.

11. CRITERION 7: TRAINING FOR ENVIRONMENTAL CARE

11.1 Relevant National Principles and Questions

National Principle: 1.10

1.10 Operators will be trained in the principles of environmental care.

a) Are the processes adequate to meet this criterion?

11.2 Existing Processes

The two draft Codes do not mention the need for environmental training.

11.3 Comments on Existing Processes

Large companies have well developed systems for training managers and supervisors, but environmental training programs at the operational (contractor) level is not consistent. We did not assess the situation with small growers.

11.4 Scope for Improvement

Environmental management is complex, including understanding and implementing a code of practice. Managers and supervisors are often trained to some extent in these aspects, but a Code's effectiveness is likely to be enhanced if all practitioners have an understanding of the key principles and practices of environmental management. This training needs to include machine operators and other contractors and arrangements for continuous improvements in skills. There is merit in co-ordinated and accredited training programs containing different modules. A co-operative effort by both private sector and public agencies should be considered for this purpose.

11.5 Conclusion

The importance of training of field supervisors and operators in environmental management should be more specifically addressed in the two draft Codes to foster wider adoption of training by all growers.

12. OTHER NATIONAL PRINCIPLES

There are a further 23 National Principles (NPs), but many of these overlap extensively with those of Environmental Care dealt with above. In this section each of these additional NPs is listed and a *'Comment'* added if the NP has not already been addressed.

12.1 NP2. SAFETY

2.1 All plantation establishment, management and utilization activities will be conducted to comply with relevant occupational health and safety legislation and policy. In particular, all operators should be trained to designated standards in the safe and efficient use of equipment and machinery, and be responsible for safe working practices.

Comment: This NP restates a provision that also exists under federal and State worker safety legislation. Large plantation companies go beyond the minimum requirements, but we did not explore to what extent small growers and agro-forestry operators provide safe working conditions.

12.2 NP3. PLANNING

3.1 State and Local Governments should, with appropriate public involvement, pursue planning policies that provide secure zoning for commercial planting with the objective that tree planting and subsequent harvesting for commercial wood production should be an "as of right" use.

3.2 State Governments will establish a sound legal basis for separating the forest asset component from the land asset for tree plantings. The Commonwealth Government will consider similar action re taxation, capital valuation etc.

3.3 Plantation strategic planning should be developed in conjunction with regional development plans.

3.4 The environmental, social and economic effects of all plantation operations envisaged for an area will be considered during the planning process.

3.5 Individual plantation operations will be conducted in accordance with relevant codes of practice.

Comment:

The Operations Code mentions the contribution that plantation forestry makes to social and economic values, but it does not emphasise the need for economic plantation operations. Environmental effects of plantations are considered earlier in this assessment (sections 5-10).

With regard to separating land and tree assets, amendments to the Land Title Act 1994 allow such situations to be registered on the land title, thereby allowing landowners to sell an interest in the trees separate to the land.

12.3 NP4. ACCESS

4.1 Planning of road systems in plantations will be based on both the economic principle of minimising the combined cost of roading and extraction and on the Principles of Environmental Care.

4.2 Road design will be to standards consistent with the purpose for which the road is to be used, and capable of carrying the anticipated traffic with reasonable safety.

4.3 Construction and maintenance of roads and associated works will be undertaken in a manner, which will ensure compliance with the Principles of Environmental Care.

4.4 Roads will be closed in wet conditions when unacceptable damage would occur or when such other conditions may warrant.

Comment: Roads are recognized in the two draft Codes as a major potential environmental risk, and they are dealt with in several sections. Suggested improvements and other aspects of these NPs have been discussed earlier in this report (sections 7-8).

12.4 NP5. ESTABLISHMENT AND MAINTENANCE

5.1 Plantation establishment methods should be economically and environmentally appropriate for the particular requirements of the species to be planted and the specific site conditions.

5.2 Establishment of plantations may involve introduction of selected species, provenances or populations to increase productivity or value. However management of these plantations should aim to constrain or prevent the introduction of these species into surrounding areas.

5.3 Intensive management practices, such as site preparation, fertilising, weed control, pest and disease control and other operations will be carried out in accordance with codes of practice, and consistent with the Principles of Environmental Care.

Comment: The potential contribution of plantations to economic values is recognized in the Operations Code, but only general guidance is given and it is therefore assumed plantation managers will make only sound economic decisions, including those involving species, site and silviculture. Through the Sustainable Planning Act 2009 local government assessment includes consideration of the social and economic sustainability of a plantation proposal. Recent developments in the management investment sector of the plantation industry brings into question the attainment of NP 5.1, but it was beyond the scope of our assessment to analyse this situation in detail. Other aspects of these NPs have been discussed earlier in this report (section 10).

12.5 NP6. TIMBER HARVESTING

6.1 Timber harvesting will be planned and carried out under codes of practice to meet the Principles of Environmental Care.

6.2 The harvesting plan will consider factors such as harvesting unit size, slope and location of harvesting units: design and location of landings and snig tracks; harvesting equipment; areas excluded from logging; and areas specified for protection and reforestation.

6.3 Harvesting operations should not be conducted in a manner which compromises the Principles of Environmental Care, or where the safety of workers is at unacceptable risk.

6.4 Soil and water values should be protected by progressive rehabilitation and drainage of snig tracks, temporary roads, log dumps and any other earthworks associated with harvesting operations.

Comment: These NPs on timber harvesting have been addressed earlier in this report (e.g. section 5).

12.6 NP7. FOREST PROTECTION

7.1 Fire protection planning should be undertaken on a regional basis in co-ordination with relevant land management agencies and with local bush fire control organisations.

7.2 Plantation health surveillance should be undertaken on a regular basis.

7.3 Where weeds, pests or diseases cause significant damage, decline, or deaths of trees, prompt specialist advice should be sought to address the problem.

7.4 Use of chemicals, such as herbicides and pesticides, and other pest control methods in plantation operations will be in accordance with State policies, procedures and approved usage.

Comment: These NPs on forest protection have been addressed earlier in this report (section 10).

12.7 NP8. MONITORING AND REVIEW

8.1 Where practicable, plantation operations should be supervised and monitored by qualified persons and be subject to audit.

8.2 The National Principles should be reviewed and evaluated after three years.

Comment: There is no uniform, comprehensive system of monitoring, auditing and reporting proposed in the two draft Codes for compliance or the attainment of environmental objectives. However, some auditing does occur, as most large plantation companies are certified for sustainable forest management under the AFS or FSC schemes. These certification schemes require audits, but detailed audit results are not publicly available. A system of auditing should be extended to non-certified growers, and the value of auditing would increase if there was a systematic, State-wide process to capture the lessons on an annual basis and to use them to improve practices and two draft Codes.

An evaluation of the National Principles will be conducted after all Australian State and Territory codes of practice for plantation forestry have been assessed.

13. ACKNOWLEDGEMENTS

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APPENDIX A – NATIONAL PRINCIPLES

FOREST PRACTICES RELATED TO WOOD PRODUCTION IN PLANTATIONS: NATIONAL PRINCIPLES

PREAMBLE

Wood production is an accepted major commercial use of Australia's forests and is the primary purpose for establishing and managing plantations. In addition, plantations can provide a range of commercial, environmental and aesthetic benefits to the community. In pursuing a vision of ecologically sustainable management of Australia's forests, Australian Governments, through the National Forest Policy Statement, have enunciated a national goal for plantations:

"to expand Australia's commercial plantations of softwoods and hardwoods so as to provide an additional, economically viable, reliable and high quality wood resource to industry".

In this context, the establishment of plantations for wood production should be determined on the basis of economic viability and international competitiveness, and market forces should determine the extent of resource use and the nature of industry operations. In essence, plantations established for wood production should be treated in the same way as any agricultural productions.

To achieve greater investment in plantations, it will be necessary to ensure that the impediments to plantation development are minimal, that clear and consistent policies for resource development are established across all levels of government and that there is security of access to established resources. Provided that social and environmental objectives are met, Governments will keep regulations to a minimum. For example, the Commonwealth will remove controls over the export of unprocessed public and private plantation wood subject to the application of codes of practice to protect environmental values. Furthermore, it is not intended that controls be imposed on the plantation industry that would not apply to other agricultural activities.

In accordance with the National Forest Policy Statement, the Ministerial Council on Forestry, Fisheries and Aquaculture, representing the States and the Commonwealth's forestry authorities, has prepared this statement of national principles to be applied in the management of plantations.

These principles et the framework for a consistent and scientific basis for sound plantation management to which all States and Territories subscribe. Codes of practice for plantations, conforming to the national principles, will be developed by the States and Territories taking into account the range of plantation types, conditions and situations applying due to natural and cultural variations. Several States and Territories already have such codes in place.

The principles have been structured into several sections relating to different activities associated with plantation production: The principles apply to both public and private plantations.

1. PRINCIPLES OF ENVIRONMENTAL CARE

1.1 Native forest should not be cleared for plantation establishment where this would compromise regional conservation and catchment management objectives. In some circumstances it may be appropriate to clear forests that have been severely degraded by impacts such as disease, weed invasion, wind and fire so as to enable rehabilitation through replanting.

1.2 Values such as intensive recreation, high scenic quality, significant geomorphic, biological, or cultural heritage sites, should be recognised in the planning of plantation forest operations.

1.3 Plantation management should comply with State and regional conservation and catchment management objectives, relevant planning schemes and legislation.

1.4 Water quality (physical, chemical, or biological) should be protected by measures controlling change resulting from plantation activities

1.5 Water yield should be managed as required by careful planning of operations.

1.6 Soil stability should be protected by measures, which regulate site disturbance.

1.7 Soil, water catchment, cultural and landscape values should be protected by the careful location, construction, and maintenance of roads and tracks, and regulation of their use.

1.8 Fauna, floristic, and landscape values should be protected by the careful planning of plantation layout establishment operations and the reservation and protection of appropriate areas of native vegetation; such values should be recognised in subsequent plantation management.

1.9 Plantations and adjacent native forests should be protected from the adverse effects of fire and from the introduction and spread of plant, insect and animal pests and plant diseases.

1.10 Operators will be trained in the principles of environmental care.

2. SAFETY

2.1 All plantation establishment, management and utilisation activities will be conducted to comply with relevant occupational health and safety legislation and policy. In particular, all operators should

be trained to designated standards in the safe and efficient use of equipment and machinery, and be responsible for safe working practices.

3. PLANNING

3.1 State and Local Governments should, with appropriate public involvement, pursue planning policies that provide secure zoning for commercial planting with the objective that tree planting and subsequent harvesting for commercial wood production should be an "as of right" use.

3.2 State Governments will establish a sound legal basis for separating the forest asset component from the land asset for tree plantings. The Commonwealth Government will consider similar action re taxation, capital valuation etc.

3.3 Plantation strategic planning should be developed in conjunction with regional development plans.

3.4 The environmental, social and economic effects of all plantation operations envisaged for an area will be considered during the planning process.

3.5 Individual plantation operations will be conducted in accordance with relevant codes of practice.

4. ACCESS

4.1 Planning of road systems in plantations will be based on both the economic principle of minimising the combined cost of roading and extraction and on the Principles of Environmental Care.

4.2 Road design will be to standards consistent with the purpose for which the road is to be used, and capable of carrying the anticipated traffic with reasonable safety.

4.3 Construction and maintenance of roads and associated works will be undertaken in a manner, which will ensure compliance with the Principles of Environmental Care.

4.4 Roads will be closed in wet conditions when unacceptable damage would occur or when such other conditions may warrant.

5. ESTABLISHMENT AND MAINTENANCE

5.1 Plantation establishment methods should be economically and environmentally appropriate for the particular requirements of the species to be planted and the specific site conditions.

5.2 Establishment of plantations may involve introduction of selected species, provenances or populations to increase productivity or value. However management of these plantations should aim to constrain or prevent the introduction of these species into surrounding areas.

5.3 Intensive management practices, such as site preparation, fertilising, weed control, pest and disease control and other operations will be carried out in accordance with codes of practice, and consistent with the Principles of Environmental Care.

6. TIMBER HARVESTING

6.1 Timber harvesting will be planned and carried out under codes of practice to meet the Principles of Environmental Care.

6.2 The harvesting plan will consider factors such as harvesting unit size, slope and location of harvesting units: design and location of landings and snig tracks; harvesting equipment; areas excluded from logging; and areas specified for protection and reforestation.

6.3 Harvesting operations should not be conducted in a manner which compromises the Principles of Environmental Care, or where the safety of workers is at unacceptable risk.

6.4 Soil and water values should be protected by progressive rehabilitation and drainage of snig tracks, temporary roads, log dumps and any other earthworks associated with harvesting operations.

7. FOREST PROTECTION

7.1 Fire protection planning should be undertaken on a regional basis in co-ordination with relevant land management agencies and with local bush fire control organisations.

7.2 Plantation health surveillance should be undertaken on a regular basis.

7.3 Where weeds, pests or diseases cause significant damage, decline, or deaths of trees, prompt specialist advice should be sought to address the problem.

7.4 Use of chemicals, such as herbicides and pesticides, and other pest control methods in plantation operations will be in accordance With State policies, procedures and approved usage.

8. MONITORING AND REVIEW

8.1 Where practicable, plantation operations should be supervised and monitored by qualified persons and be subject to audit.

8.2 The National Principles should be reviewed and evaluated after three years.
APPENDIX B – ACRONYMS

AFS	Australian Forestry Standard
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry
DEEDI	Department of Employment, Economic Development and Innovation
DERM	Department of Environment and Resource Management
FPQ	Forestry Plantations Queensland Pty Ltd
FSC	Forest Stewardship Council
NP	National Principle

APPENDIX C – TERMS OF REFERENCE FOR CSIRO

In undertaking a review of Codes of Practice for the states and territories for assessment against *"Forest Practices Related to Wood Production in Plantations: National Principles"*, (National Principles), the CSIRO will:

- 1. By December 2011, assess codes of practice for measures and processes for the protection of environmental values. This will include:
 - the scientific quality of the measures
 - their method of implementation
 - adequacy of procedures for auditing, monitoring and securing compliance.
- 2. Provide a statement on the measures and processes that are in place that address each National Principle.
- 3. Identify if new measures and processes or modifications are required to adequately address the any National Principle.
- 4. Prepare draft reports for comment by the Commonwealth and the relevant State/Territory following each assessment.
- 5. Prepare a final report for the Commonwealth and the relevant State/Territory following revision of the draft reports.
- 6. Provide assessment of areas to be considered for updating the National Principles following completion of all assessments.

APPENDIX D – ORGANISATIONS CONSULTED

African Mahogany Australia Department of Employment, Economic Development and Innovation Department of Environment and Resource Planning Elders Forestry Forestry Plantations Queensland Rewards Group Timber Queensland

APPENDIX E – MEETINGS AND FIELD VISITS

Visit 7th-9th June 2011

Tue 7 th June	Meetings in Brisbane
1000-1200	Meeting with DEEDI, Brisbane
1300-1430	Meeting with DERM, Brisbane
1500- 1700	Meeting with FPQ, Brisbane
Wed 8 th June	
0900-1645	Visit to FPQ Regional Office (Beerburrum) and pine plantations
1700-1800	Meeting with Timber Queensland, Brisbane
Thurs 9 th June	
0800-1400	Meeting and field visits (teak and eucalypt plantations) with Elders Forestry and
	Rewards Group, Cairns-Townsville.

APPENDIX F – DEVELOPMENT ASSESSMENT CODE (FEB. 2011 DRAFT)

Draft standard code/s for timber plantations

Draft standard code – compliance assessment (for inclusion within the QPP)

(1) The purpose of this forestry for wood production code is to assess requests for compliance assessment for a material change of use if for timber plantations that are forestry for wood production that requires compliance assessment as prescribed under a relevant local planning instrument.

Forestry for wood production code

Compliance outcomes

Impacts on adjoining premises and infrastructure

CO 1 The timber plantation is buffered from adjoining premises and infrastructure through the application of the following minimum separation (buffer) distances:

- property boundaries 6 metres
- dwellings and machinery storage sheds 30 metres
- above ground transmission lines and pipelines (excluding farm irrigation) 25 metres

Impacts on areas of environmental interest

CO 2 The timber plantation is buffered from areas of environmental interest through the application of the following minimum separation (buffer) distances:

• from the top of a defining bank of streams (gully, creek or river) that are represented on the 1:250 000 topographic map series in accordance with the stream order classification system defined in the Explanatory Notes/guideline:

Stream order classification	Separation distance
1 and 2	2 metres
3 to 5	5 metres
6	10 metres

- wetland (as defined under the Queensland Planning Provisions) 10 metres
- protected vegetation under the Vegetation Management Act 1999 6 metres.

CO 3 Self-propagated seedlings (wildlings) generated from the timber plantation are eradicated in a manner that minimises ecological impacts where:

• wildlings on the premises but outside the area where the timber plantation is established and maintained.

CO 4 The timber plantation is not established on slopes greater than 25 degrees.

CO 5 The establishment, maintenance and harvesting (including associated track and

road construction and maintenance) of the timber plantation utilises the following methods where applicable:

- mechanical establishment cultivation is used on the contour for slopes <15 degrees and spot establishment cultivation is used for slopes >15 degrees;
- tracks and roads are established on ridges and away from unstable areas that are subject to erosion and landslips;
- any part of a track or road which has the capacity to accelerate soil erosion beyond the range of natural variation are appropriately drained adopts the following measures as appropriate:
 - (a) maintain vegetation cover (that is, plant material, living or dead, that protects the soil surface from erosion);
 - (b) cover the ground with on-site timber plantation residue biomass (harvesting slash, debris, etc);
 - (c) establish and maintain a grass cover;
 - (d) crossfall drain the track or road with outfall or infall drainage (preferably with the outward or inward slope being between 4% and 6%) or by shaping the track or road to a crown so that water drains to both of its sides;
 - (e) establish and maintain drainage structures to convey water away from the track or road formation (for example, crossdrains, mitre drains or relief culverts).
- drainage water is directed away from exposed and unstable areas;
- installation of erosion control sediment collection structures (for example, sediment fence or hay bales) prior to the start of any soil disturbance that has the capacity to accelerate soil erosion beyond the range of natural variation;
- timber plantation residue biomass is retained on-site to minimise accelerated soil erosion beyond the range of natural variation.

Fire risk

CO 6 Firebreaks are established and maintained:

- between the timber plantation, infrastructure listed in CO 1, protected vegetation detailed under CO2 and adjoining premises; and
- are a minimum width of 6 metres; and
- are free of all flammable material (including timber plantations and over-hanging branches) from the ground to a minimum of 5 metres in height; and
- are accessible and trafficable by fire suspension vehicles for travel at any time.

CO 7 Fire access tracks and roads are established and maintained:

- at a minimum width of 4 metres; and
- to be accessible and trafficable for fire suspension vehicles; and
- no more than 250 metres apart in the timber plantation; and
- to service at a minimum any contiguous 30 hectare part of the timber plantation.

General

CO 8 The establishment of the timber plantation complies with any additional relevant provisions for cropping in a rural zone under a relevant local planning instrument.

Draft standard code - self-assessable and assessable development

- (1) The purpose of the code is to provide for the efficient establishment of timber plantations that are for forestry for wood production activities while managing significant impacts resulting from the development.
- (2) The purpose of the code will be achieved through:
 - (a) ensuring timber plantations are located appropriately and separated (buffered) from areas of environmental interest, adjoining premises and infrastructure;
 - (b) minimising the risk of wildfire; and
 - (c) ensuring the long-term security of harvest for timber plantations.

Performance outcomes	Acceptable outcomes	
Self-assessable and assessable development		
Impacts on adjoining premises and infrastruc	ture	
PO 1 – The impacts of the establishment and maintenance of a timber plantation on adjoining premises and infrastructure are minimised.	 AO 1.1 The timber plantation is buffered from adjoining premises and infrastructure through the application of the following minimum separation (buffer) distances: property boundaries – 6 metres dwellings and machinery storage sheds – 30 metres above ground transmission lines and pipelines (excluding farm irrigation) – 	
	25 metres	
Impacts on areas of environmental interest		
PO 2 – The impacts of the establishment and maintenance of a timber plantation on areas of environmental interest are minimised	 AO 2.1 The timber plantation is buffered from areas of environmental interest through the application of the following minimum separation (buffer) distances: from the top of a defining bank of streams (gully, creek or river) that are represented on the 1:250 000 topographic map series in accordance with the stream order classification system defined in the Explanatory Notes/guideline: 	
	Stream order Separation classification distance	
	1 and 2 2 metres	
	3 to 5 5 metres	
	6 10 metres	

	 wetland (as defined under the Queensland Planning Provisions) – 10 metres protected vegetation under the Vegetation Management Act 1999 – 6 metres.
	 AO 2.2 Self-propagated seedlings (wildlings) generated from the timber plantation are eradicated in a manner that minimises ecological impacts when: they are located on the premises but beyond the site area where the timber plantation is established and maintained.
PO 3 The impacts of the establishment, maintenance and harvesting of a timber plantation (including associated track and road construction) on soil structure, fertility and stability are minimised and not accelerated beyond the range of natural variation.	AO 3.1 The timber plantation is not established on slopes greater than 25 degrees.
	AO 3.2 The establishment, maintenance and harvesting (including associated track and road construction and maintenance) of the timber plantation utilises the following methods as appropriate:
	 mechanical establishment cultivation is used on the contour for slopes <15 degrees and spot establishment cultivation is used for slopes >15 degrees;
	 tracks and roads are established on ridges and away from unstable areas that are subject to erosion and landslips;
	 any part of a track or road which has the capacity to accelerate soil erosion beyond the range of natural variation is appropriately drained by adopting the following measures where applicable:
	 (f) maintain vegetation cover (that is, plant material, living or dead, that protects the soil surface from erosion);
	 (g) cover the ground with on-site timber plantation residue biomass (harvesting slash, debris, etc); (h) establish and maintain a grass
	cover; (i) crossfall drain the track or road with outfall or infall drainage

	 (preferably with the outward or inward slope being between 4% and 6%) or by shaping the track or road to a crown so that water drains to both of its sides; (j) establish and maintain drainage structures to convey water away from the track or road formation (for example, crossdrains, mitre drains or relief culverts). drainage water is directed away from exposed and unstable areas; installation of erosion control sediment collection structures (for example sediment fences or hay bales) prior to the start of any soil disturbance that has the capacity to accelerate soil erosion beyond the range of natural variation; on-site timber plantation residue biomass is retained to minimise accelerated soil erosion beyond the range of natural variation.
Wildfire risk	
PO 4 – The risk of wildfire to adjoining premises, infrastructure and areas of environmental interest is minimised.	 AO 4.1 Firebreaks are established and maintained: between the timber plantation and adjoining premises and infrastructure (listed in AO 1), and areas of environmental interest (listed in AO 2 and adjoining premises; and at a minimum width of 6 metres; and free of all flammable material (including timber plantations and over-hanging branches) from the ground to a minimum of 5 metres in height; and to be accessible and trafficable for fire suspension vehicles.
	 AO 4.2 Fire access tracks and roads are established and maintained: at a minimum width of 4 metres; and to be accessible and trafficable for fire suspension vehicles; and no more than 250 metres apart in the timber plantation; and to service at a minimum any contiguous 30 hectare part of the timber plantation.
Assessable development only	
Timber plantation management	

PO 1 The timber plantation developer informs the Local Government of the timber plantation management regime, including	AO 1.1 A timber plantation management report is attached to the development application that:
harvest regimes and cycles.	 provides details on the species to be planted and harvested; and
	 specifies the proposed management practices of operations, including establishment and intended harvest regimes.

Explanatory notes to the draft standard code/s

Self-assessable and assessable development code

The explanatory notes provide further information on the technical concepts included within the standard code.

Impacts on areas of environmental interest

AO 2.1 Stream orders

For separation (buffering) from streams, the code utilises a stream order classification system to define the significance of each stream and consequently determine the appropriate separation distance.

Stream orders relate to the numerical ordering of watercourses based on their relationship to other watercourses in the landscape. For example, starting at the 'head' (top) of a catchment, the first drainage line indicated upon a 1:250 000 topographic map is regarded as a first order stream. Where two first order streams meet they form a second order stream, where two second order streams meet they form a third order stream, and so on. Two streams of the same order must meet to advance to a higher stream order.



AO 2.1 Defining banks

Separation distance (buffer) measurements must be taken from the top of the defining banks of mapped streams. Defining banks are the banks within which seasonal flows are contained, but may be inundated from time to time. These seasonal flows are those that occur in most years, but not in major flood events.

The top of a defining bank for mapped streams are variable as they can take differing forms (sharp to rounded banks or no banks). When determining where the separation distances are measured from, it is important to consider:

- the various banks or seasonal high water lines;
- the point which represents the usual peak flow that has been experienced;
- the bank or high waterline that confines flows



The following diagram provides some examples of the various banks and seasonal high waterlines that streams can have:



AO 2.1 Separation from wetlands

The code also adopts separation (buffer) distances from wetlands to manage the impacts of the establishment and maintenance of a timber plantation. The buffer to be established in the code is from the wetlands defined under the QPP and the *Sustainable Planning Regulation 2009*. These wetlands are shown on a 'Map of referable wetlands', a document approved by the chief executive (environment). This map is available on request from the Department of Environment and Resource Management (see <u>http://www.derm.qld.gov.au/wildlife-ecosystems/ecosystems/referable-wetlands-maps.html</u>*)

*Accurate as at 19 January 2011.

AO 2.1 Separation from protected vegetation

The code also adopts separation (buffer) distances from protected vegetation to manage the impacts of the establishment and maintenance of a timber plantation. Protected vegetation refers to the defined areas under the *Vegetation Management Act 1999*. The purpose of the code provision is not to duplicate existing law and/or policy, but to minimise the impacts of timber plantations to these areas. Further information on mapped areas is available from the Department of Environment and Resource Management (see http://www.derm.qld.gov.au/wildlife-ecosystems/introduction_and_status/regional_ecosystem_maps/index.ph p*)

* Accurate as at 19 January 2011.

AO 2.2 Wildlings

Self-propagated seedlings (wildings) are the trees generated from the timber plantation that establish within plantations or on nearby land. Examples of wildling eradication in a manner that minimises ecological impact include through direct stem injection, prescribed burning or low impact mechanical means.

AO 3.2 Impacts on soil structure, fertility and stability

AO 3.2 establishes that appropriate drainage options must be undertaken to minimise the impact of the timber plantation on soil structure, fertility and stability. Some examples of drainage options are as follows:



Wildfire risk

The draft standard code addresses the risk of wildfire by setting out requirements to establish fire breaks and fire access tracks and roads.

AO 4.1 Firebreaks

A firebreak is an area that is clear of flammable material established to prevent or manage the spread of wildfire. This includes being clear of any branches from trees that hang over the firebreak to a minimum of 5 metres in height are to be removed.

Fire access tracks and roads

Fire access tracks and roads differ to firebreaks, whereby the intent of a firebreak is to prevent or manage the spread of wildfire, while fire access tracks and roads relate to the safe access for fire-fighting purposes.

Assessable development only

AO1.1 Timber plantation management

The draft standard code includes the requirement for a developer of timber plantations to submit a timber plantation management report. The purpose of this report is to provide the relevant local government with further details surrounding the objectives, establishment and operational management practices for the timber plantation development. These details can be provided in the following template:

A. Species to be managed		
List of species use botanical name 	 Area (hectares) provide the total area for each species 	Brief description of expected products (e.g. pulp, poles, sawlogs)
B. Proposed manageme	ent practices of operation	ons
Description of establishment and management practices		
Description of intended harvest/thinning regimes (including		

anticipated dates)	

APPENDIX G - OPERATIONS CODE (NOV. 2011 DRAFT)

(The formatting shown here is incomplete)

Plantation Code of Practice for Operations Associated with Commercial Timber Plantations on Private Land in Queensland



29 November 2010

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Introduction

Queensland Forest and Wood Industry

The Queensland forest industry and plantation sector is strategically important to Queensland because it provides multiple economic, environmental and social benefits to the State, including many rural and regional economies. These include investment, employment and greater economic diversity, integrated and diversified land use practices, removal of carbon dioxide from the atmosphere, protection of biodiversity; production of solid wood, wood fibre, biomass and other products to support downstream processing industries.

Queensland forest and wood/paper industry facts

- Comprises over 2000 businesses and directly employs around 20 000 people.
- Annual sales turnover of more than \$4 billion.
- Attracted an estimated \$400 million from the private sector towards new wood plantations over the past four years.
- Approximately 250 000 hectares of commercial wood plantations.
 - 190 000 hectares of Softwood (Native Hoop pine, Slash pine, Caribbean pine, Slash and Caribbean pine hybrids, Monterey pine and Loblolly pine).
 - 60 000 hectares of Hardwood (Spotted Gum, Western White Gum, Blackbutt, Gympie Messmate, Eucalypt and Corymbia hybrids, Teak, Red Mahogany and Sandalwood).
- Large number of small (<30 hectares) singled and mixed species plantations throughout Qld.

New plantations also underpin key Queensland Government policy initiatives such as, the Queensland Timber Plantation 2020 Strategy, the South East Queensland Forests Agreement (SEQFA) and the Statewide Forests Process / Western Hardwoods Plan.

Purpose of the Code of Practice

This Code of Practice (Code) has been developed by key private plantation industry companies and industry organisations in Queensland, including Australian Forest Growers (AFG), Forest Enterprises Australia (FEA), Gunns Plantations Limited, Elders Forestry Limited, PF Olsen Australia, Rewards Group, Willmott Forests Limited, Timber Queensland (TQ) and Tree Crop Technologies (TCT).

The purpose of this Code is to provide goals and guidelines to plantation owners/managers so that their plantation operations in Queensland are conducted in a manner that is in accordance with accepted principles for good plantation management, recognising that the primary aims of commercial forest plantations are to be profitable whilst being environmentally and socially sustainable. The Code is therefore informed by the "Forest Practices Related to Wood Production in Plantations: National Principles" (see Appendix 1).

Whilst key responsibilities in achieving the goals and observing the guidelines defined in the Code generally rest with the plantation manager they are also a task for all parties associated with a

plantation. This includes the land owner, the plantation owner, the plantation manager and any employees and contractors employed to work in a plantation.

Application of the Code

The Code applies to Queensland plantation land owned / managed by those who have voluntarily endorsed the Code

A list of signatories is contained in Appendix 6

The function of the Code of Practice

The function of the Code is to provide sound guidance on good plantation planning and management, and thereby enable the plantation sector to demonstrate their commitment to sustainable management.

It should be noted that:

The Code does not include detailed compliance prescriptions as it is acknowledged that these should generally reflect individual plantation management objectives and circumstances. It is also recognised that prescriptions can vary between plantation growers and are contingent on individual plantation characteristics

The Code complements Acts, Regulations, State Government policies, Local Government Planning Schemes and local laws that relate to commercial plantation development, however it should be noted that this code deals with operational works associated with plantation management and as such is not a development assessment code under the Queensland Sustainable Planning Act 2009 (SPA).

The Code will be reviewed by the endorsing forest plantation owners and managers every 5 years, or as required.

Benefits of the Code of Practice

Compliance with this Code will provide the plantation industry with tangible benefits:

Greater transparency in the planning and management of plantations, leading to improved confidence in the forest plantation industry operations by the community.

Improved confidence and security for plantation owners/managers in securing opportunities for the export of plantation products without additional licenses or approvals

Increased confidence for plantation investors that products produced from plantations managed in accordance with the Code will be better placed to gain the approval of an increasingly environmentally conscious market.

Legislation Relevant to Plantations in Queensland

This Code is intended to provide guidance on the main obligations of plantation owner/manager and other parties associated with forest plantation operations. Specialist legal advice may be required to ensure all obligations are identified.

Local Government planning schemes under the Sustainable Planning Act (2009) (SPA) provide the development assessment and approval process for new plantations. The level of assessment of plantations is currently determined by the relevant Local Government. Plantations growers must comply with any local government requirements.

Plantations that are established in compliance with the local government planning scheme in operation at the time, as well as any planning approval conditions, are protected from further regulation by provisions contained in the SPA, and thus achieve a high level of harvest security.

A list of the core Queensland Government legislation that impacts on commercial plantations in Queensland is detailed in Appendix 2. All Queensland legislation can be accessed on the web at - <u>www.legislation.qld.gov.au</u>

A list of the core Australian Government legislation that impacts on commercial plantations in Queensland is detailed in Appendix 3. All Commonwealth legislation can be accessed on the web at - <u>www.comlaw.gov.au</u>

The Acts and Regulations described in the Code are currently in force but users of the Code must be aware that these and other related pieces of legislation are liable to change.

Goals and Guidelines of the Code of Practice

This code is divided into nine Goals that outline the key issues needing to be addressed to demonstrate good plantation practice plantation management. Plantation practices to achieve these goals are then provided in relevant Guidelines.

Small Sized Plantations (i.e. <30 hectares)

It is recognised that some of the goals in this Code would be particularly onerous for small plantation owners/managers. Although all goals should be strived for by any plantation owner/manager, goals 1 and 2 are not required for compliance with the Code for small plantation owners/managers.

Forest Certification

Forest certification schemes such as the Australian Forestry Standard (AFS) and the Forest Stewardship Council (FSC) are independent schemes that can be adopted by forest managers to demonstrate sustainability of their forest management. Plantations already accredited under AFS or FSC are considered to meet or exceed the Goals of this Code and are thus considered compliant with it. Compliance with this Code on its own is not sufficient to secure forest certification.

Forest Certification Scheme Facts

Forest Certification schemes are voluntary and involve independent assessment against established criteria that ensure sustainable forest management. Forest Managers adopt certification in order to demonstrate the sustainability of their operations.

Certification schemes have specific provisions that address:

- A commitment to planning and monitoring
- Adherence to laws and rights to the land
- Consideration of indigenous, community and worker rights, values and benefits
- Protection of environmental and ecological values
- Assurance of the sustainability of production.

Compliance with certification schemes is assessed on an ongoing basis by independent auditors to ensure the desired forest management outcomes are being achieved. Certification also requires forest managers to monitor and report on their environmental performance on an ongoing basis.

The Australian Forestry Standard (AFS) and the Forest Stewardship Council (FSC) certification schemes are the two schemes currently in operation in Australia. These schemes cover all of the goals identified in this code, ensuring best management practices in these and other areas. For certified operations, the required outcomes of this Code are considered to be achieved, either through the provisions outlined in this code or through alternative measures that have been signed off by the independent certifier.

For further information on sustainable forest certification in contained in Appendix 4, or contact:

- Australian Forestry Standard <u>www.forestrystandard.org.au</u>
- Forest Stewardship Council (Australia) www.fscaustralia.org

Management Planning

Goal 1 Plantations are properly planned and managed to provide rural socio-economic and environmental benefits

The intent of this Goal is to ensure plantations are properly planned and managed to ensure the full suite of management matters are considered before operations commence, in order to optimise the socio-economic and environmental benefits for Queensland.

Guidelines to meet Goal 1:

A plantation is managed according to a plantation management plan that incorporates key elements as specified in Schedule 1 and is updated as required to account for new techniques and procedures or new circumstances. Plantation owners/managers with plantations spread over a number of properties may develop generic management plans that apply to a number of properties.

Or,

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 2-1-2: Forest certification criteria / principles applicable to Goal 1:

Standard	Relevant criteria
AFS	4.1.1 to 4.1.5
FSC	7.1 to 7.4, 10.1, 10.2

Community Relations and Stakeholder Management

Goal 2 Plantation owners/managers are good neighbours and build ongoing working relationships with stakeholders

The intent of this Goal is for plantation owners/managers to maintain effective working relationships with neighbours and other stakeholders by implementing good plantation practices and adopting appropriate communication and engagement strategies.

Guidelines to meet Goal 2:

Plantation owners/managers adopt and comply with this Code and the Good Neighbour Charter for Commercial Plantations in Queensland, as outlined in Appendix 5.

Or,

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 3-1: Forest certification criteria / principles applicable to Goal 2:

Standard	Relevant criteria
AFS	4.2.1 to 4.2.3
FSC	4.1 to 4.5, 10.8

Biodiversity Values

Goal 3 Biodiversity values on plantation land are protected

The intent of this Goal is to protect biodiversity values on plantation land including those associated with both the plantation itself and native forest associated with the plantation.

Guidelines to meet Goal 3:

Plantations are established on already cleared land.

All 'protected native vegetation' identified under the Vegetation Management Act 1999 is protected from clearing, with allowances made for required firebreaks, roads and infrastructure subject to approval or under an exemption.

Plantation owners/managers identify, protect and maintain biodiversity values on their plantation land in accordance with the applicable Government legislation and regulations, accounting for values identified in Regional NRM Plans, local government strategies and plans.

To maintain connectivity in regional and landscape biodiversity priority areas identified in the preceding stage, the forest manager shall progressively establish and maintain a spatial configuration of forest cover, stand structure elements and growth stages that are intended to support the protection and maintenance of the identified values.

Native forest within and adjacent to plantation areas is protected from excessive disturbance and degradation by:

Provision of plantation boundary fire breaks on already cleared land and of an appropriate width, taking into account the protected forest type (e.g. rainforest) and the topography

Locating major disturbance areas (e.g. management roads, logging ramps and other infrastructure) outside of native forest and where biodiversity values will not be impacted

Harvesting machinery remaining outside of adjacent undisturbed native forest

Silvicultural operations minimising damage to adjacent native forest

Where burning is necessary for establishment operations, locating windrows within the plantation area to limit any impact on retained native forest

When conducting hazard reduction and residue burning, operations are planned and undertaken in appropriate weather conditions, aiming to:

meet objectives of the operation

contain the fire within the operational area, and

minimise scorch to plantation trees and retained native forests

When undertaking hazard reduction burning in adjacent native forest to protect a plantation, conservation values of the native forest are considered

Restoration of native forest where it has been degraded as a result of plantation establishment or management

Retention of habitat trees* and feed trees** unless WH&S or fire protection considerations make this unviable.

* Habitat trees are trees used or potentially used by hollow-dwelling fauna and identified as a living trees with one or more visible hollows of 10 cm or more in diameter that are positioned at least 2 m above the base of the tree.

** Feed trees are trees used by yellow-bellied gliders and identified as trees having five or more recent bark incisions typically made by the glider. Feed marks are regarded as 'recent' when the cut edges of the feed marks either have no callusing or when the calluses have not healed completely across the cut.

For plantations comprised of Koala habitat trees* and located in mapped Koala Habitat Areas** a pre harvest Koala inspection is undertaken by a suitably qualified Koala Spotter** less than 12 hours before commencement of thinning or harvesting operations, followed by daily inspections of the harvest area. If a Koala is located inside a plantation, then a temporary harvest buffer equivalent to 1.5 times tree height will be retained around the Koala, plus a temporary vegetation corridor >8m wide linking to the boundary of the plantation (and where possible to adjacent habitat) to allow the Koala to exit the plantation of its own accord.

* Koala habitat trees include trees greater than 10 cm DBH from the genera: Angophora, Corymbia, Eucalyptus, Lophostemon and Melaleuca.

** Details of Mapped Koala Habitat Areas and Koala Spotter requirements can be accessed at the Queensland Department of Environment and Resource Management website:

http://www.derm.qld.gov.au/wildlife-ecosystems/wildlife/koalas/koala_plan/index.html

The encroachment of plantation species into surrounding native forest areas is monitored and where found to be significantly impacting emnvironmental values, and effective control plan is implemented. If the plantation includes species that would be very difficult to control if invasion into native forest occur, specific measures will be taken to prevent invasion.

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 3-1: Forest certification criteria / principles applicable to Goal 3:

Standard	Relevant criteria
AFS	4.3.1 to 4.3.7
FSC	9.1 to 9.4

Sustain Productive Capacity of Plantations

Goal 4 Plantations are established, managed and harvested in a sustainable way to maintain their long term productive capacity

The intent of this Goal is for plantation owners/managers to be cognisant of and practicing forest management that maintains the long term productive capacity of plantations.

Guidelines to meet Goal 4:

Plantation owners/managers seek to ensure that methods used to establish, manage and harvest plantations are planned and implemented so the present and future productivity of the land is maintained or improved.

Or,

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 3-1: Forest certification criteria / principles applicable to Goal 4:

Standard	Relevant criteria
AFS	4.4.1 to 4.4.6
FSC	5.2, 5.3, 5.6, 10.3

Ecosystem Health and Vitality

Goal 5 The health and vitality of plantations and surrounding areas are maintained

The intent of this Goal is to ensure that plantation owners/managers take the appropriate measures, within their capacity, to minimise the impact of damage agents on plantation and surrounding lands.

Guidelines to meet Goal 5:

Plantation owners/managers take the appropriate measures to manage potential damage agents (pests, diseases, fire, etc) to maintain the health and vitality of plantations and associated ecosystems.

Plantation owners/managers minimise the use of chemicals consistent with the availability of practical and cost-effective alternatives.

Plantation owners/managers ensure that the impacts of forest management on water yield are in accord with authorised catchment goals, and any adverse changes to hydrological flows are minimised.

Plantation owners/managers implement appropriate fire control measures to protect plantation and surrounding areas from uncontrolled fire. This will be achieved by:

Preparing and regularly reviewing a Fire Management Plan that includes items contained in Appendix 1, taking into account Bushfire Risk Analysis maps produced by the Queensland Fire and Rescue Service.

Implementing setbacks and trafficable breaks such that:

the plantation boundary is protected by a fire access road or track that is maintained in a condition that is trafficable by fire suppression vehicles;

a plantation is not established within 30m of a neighbour's existing dwelling in a low fire hazard area, 50m in a medium fire hazard area or within 100m of a neighbour's existing dwelling in a high fire hazard area;

any contiguous part of a plantation (compartment or block) of more than 50 hectares is served by a fire access road or track;

any part of a plantation is not more than 500m from a fire access road or track.

Ensuring adequate resources are available to control residue and hazard reduction burns such that they will be contained within the operational area.

See RFSQ website for Bushfire Risk maps:

http://www.ruralfire.qld.gov.au/Bushfire_Safety/Building_in_Bushfire_Prone_Areas/Shire_Risk_Maps_Page.html

Or,

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 2-5-1: Forest certification criteria / principles applicable to Goal 5:

Standard	Relevant criteria
AFS	4.5.1 to 4.5.5
FSC	6.1 to 6.10, 10.1 to 10.9

Protection of Soil and Water Resources

Goal 6 Soil and water resources are protected

The intent of this Goal is for plantation owners/managers to minimise the impact of plantation operations on soil structure, fertility, stability and water quality parameters (turbidity, sediment, changes in hydrological flows, etc.) beyond the range of natural variation.

Guidelines to meet Goal 6:

Plantation owners/managers protect the natural soil capital (including soil structure, fertility, stability and nutrient status) of their plantation lands during establishment, management and harvesting operations, by taking into account soil erodibility (refer to Table 3-6-2), slope, rainfall erosivity and soil moisture, and by taking the appropriate measures to prevent, control or manage issues if they occur.

New plantations should not be established on slopes greater than 25° . Strip cultivation is generally appropriate when establishing plantations on slopes of less than 15° , where water run-off is minimal and the soil type is not susceptible to erosion. Plantation establishment on slopes of greater than 15° or in areas where soils are easily eroded, spot cultivation or similar other low impact methods are recommended.

Modified harvesting methods (e.g. cable harvesting or modified excavator based methods) should be used where plantations have been established on slopes greater than 25° or where the operation cannot be conducted safely, threatens the stability of the soil or has high potential for adverse off-site effects.

For second rotation plantation establishment, where possible, harvest debris should not be burnt on site in order to conserve nutrients and reduce erosion risk.

Plantation owners/managers protect all significant natural water courses and water bodies occurring on plantation and adjacent lands and apply buffer setbacks as specified in Table 3-6-3 to minimise the impact on critical water quality parameters beyond the range of natural variation.

Plantation owners/managers will manage plantation roads and tracks to minimise soil erosion and potential sedimentation. Overland waterflows will be diverted onto undisturbed ground (where possible) before water is able to traverse the maximum distances given in Table 3-6-4.

Existing plantation roads, tracks, drainage or other infrastructure located within buffer zones before the Code came into effect can continue to be used where the risk of significant impacts is assessed to be low, however plantation owners/managers should endeavour to move them for future operations where possible.

Existing plantation trees located within buffer zones as a result of the code may be harvested but only using techniques that minimise soil disturbance and potential water impacts. These areas may be replanted to not-for-harvest plantations (e.g. carbon or biodiversity plantings), preferably with locally indigenous species.

Plantation owners/managers will restrict chemical use to those chemicals that are registered or have an off-label permit approved by the Australian Pesticides and Veterinary Medicines Authority (APVMA). Chemical use will be in accordance with applicable legislation and permit details and conditions, as well as recognised silvicultural, agricultural and environmental practices and techniques. Particular care will be taken when using chemicals in water supply catchments.

Plantation owners/managers should, where practical, conduct monitoring at relevant times for possible impacts on soil and water resources and implement appropriate measures to control or manage issues if they occur (e.g. during active operations and major rainfall events).

Or,

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 3-6-1: Forest certification criteria / principles applicable to Goal 6:

Standard	Relevant criteria
AFS	4.6.1 to 4.6.5
FSC	5.5, 6.5, 10.2, 10.6, 10.8

Table 3-6-2: Soil Erodibility Classification

Soil Erodibility Class	Surface Texture and Subsoil Colour

High	 Shallow gravelly soils Sands or sandy loams with yellow, pale grey or black subsoils (or derived from granitic material) Loams or clay loams with pale grey or black subsoils
Moderate	 Sands or sandy loams with red subsoils (except on granitic material, then erosion is high) Loams or clay loams with red or yellow subsoils Clays with yellow, grey or black colours
Low	 Clay with yellow subsoils Clay with red subsoils

Table 3-6-3: Minimum Levels of Protection from Operations Applied Adjacent to Natural Waterways and Water Bodies (metres) and minimum Drainage Disposal Distances (Measured from edge of Buffer Setbacks in metres) on plantation land

Waterway / Water Body Classification	Minimum Operational	Minimum Drainage Disposal Distances (Measured from edge of Buffer Setbacks in metres) on plantation land	
(refer to Schedule 2 - Watercourse Classification System)	Buffer Setback Width* (metres)	Management roads, major snig tracks and log ramps (metres)	Major extraction roads (metres)
Stream 1	30	10	20
Stream 2	20	10	20
Stream 3	10	10	20
U Shaped Gully 1, 2 or 3	5	10	20
V Shaped Gully 1, 2 or 3	5	10	20
Waterway Class 1	2.5	10	10
Waterway Class 2	0	10	10

Isolated natural water feature <0.1 hectares	10	10	20
Isolated natural water feature >0.1 hectares	20	20	30

* The width of the buffer zone is measured from the 'defining bank**' or if a defining bank is not present, the seasonal high waterline or from the high water mark if tidal.

**A defining bank can be defined as a bank within which seasonal flows are contained, however may be inundated by flooding from time to time.

Slope	Maximum distance (metres)
<3 degrees	145
3 to 5 degrees	100
6 to 7 degrees	65
8 to 10 degrees	40
11 to 14 degrees	25
>14 degrees	15

Table 3-6-4: Maximum distance of overland flow

Greenhouse gas emissions

Goal 7 Minimise Carbon Footprint

The intent of this Goal is for plantation owners/managers to minimise their plantation carbon footprint.

Guidelines to meet Goal 7:

Plantation owners/managers acknowledge their plantation's capacity to act as a net carbon sink over time, and where practical minimise net carbon emissions resulting from plantation operations.

Or,

Plantation/s are certified under the AFS sustainable forest management certification scheme.

Table 3-1: Forest certification criteria / principles applicable to Goal 7:

Standard	Relevant criteria
AFS	4.7.1

Indigenous Rights

Goal 8 Indigenous peoples' legal or customary rights are protected on plantation land

The intent of this Goal is for plantation owners/managers to ensure the legal or customary rights of Indigenous peoples associated with plantation lands are protected.

Guidelines to meet Goal 8:

Plantation owners/managers protect all indigenous peoples' legal or customary rights on plantation land in accordance with the applicable Government legislation and regulations.

Or,

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 3-1: Forest certification criteria / principles applicable to Goal 8:

Standard	Relevant criteria
AFS	4.8.1 to 4.8.3
FSC	3.1 to 3.3

Social and Economic Benefits

Goal 9 The social and economic benefits of plantations are realised locally

The intent of this Goal is to encourage plantation owners/managers to consider, where commercially viable, opportunities to maximise the value of production and opportunities for regional communities.

Guidelines to meet Goal 9:

Plantation owners/managers consider, where commercially viable, procedures to provide local employment opportunities and patronage for regional businesses.

Or,

Plantation/s are certified under the AFS or FSC sustainable forest management certification schemes.

Table 3-1: Forest certification criteria / principles applicable to Goal 9:

Standard	Relevant criteria
AFS	4.9.1 to 4.9.5
FSC	5.4, 10.3

Schedules

Schedule 1 – Protocols for Plantation Management Plans

A Plantation Management Plan is prepared prior to operations and should demonstrate how the principles of environmental care, cultural heritage maintenance and fire protection objectives will be achieved, accounting for the scale of operations. The Plantation Management Plan should be revised at appropriate intervals or in response to changed circumstances.

It may not be appropriate for a plantation owner/manager to finalise a *Plantation Harvest Plan until 6 months prior to harvest to take account of contemporary harvesting technologies and market conditions.

A Plantation Management Plan should detail the following:

Plantation Information:

forest owner/ manager details

land owner details (if applicable)

locality plan and plantation access roads

lot plan info, boundaries and size of proposed plantation/s

Plantation Planning:

Names, roles and contact details of significant local stakeholders and services – relevant local and state government (DPI, DERM) contacts, Rural Fire Brigade, etc

Annual average rainfall

Soil erodibility class and surface texture and subsoil colour

Species being planted, harvest cycle

plantation management intent, objectives, targets, plus monitoring and evaluation systems locations of fire management zones, firebreaks and water points Natural watercourses and wetlands locations if any location of any native vegetation protected under the Vegetation Management Act 1999 location of significant features including cultural and heritage sites existing buildings, roads, bridges, creek crossings, fences, gates, buried services, powerlines and water points presences of any significant species requiring special management considerations

Plantation Establishment and Maintenance:

staff and contractor training and WHS

buffer distances to the applicable natural watercourses, wetlands and significant features

buffer distances to existing buildings, roads, powerlines and other applicable features on the plantation property

Control methods and maintenance schedules for declared animal, declared plants, pest plants, pests and diseases.

species and areas to be planted and compartment sizes

direction of planting lines in relation to contours and natural drainage

description of soil preparation methods

access roads

proposed fertilising methods

Plantation Fire Protection:

names and telephone numbers of adjacent land holders for each plantation names, addresses and telephone numbers of all local fire agencies firebreak and water point establishment methods and maintenance schedules hazard reduction methods and maintenance schedules specific measures to protect powerlines, gas pipelines and other significant features staff and contractor training and WHS procedures

*Plantation Harvest Plan harvest manager details (if applicable) location, size and slope of proposed harvesting operations proposed harvest commencement and estimated duration design and location/s of plantation harvest roads, tracks and landings seasonal and weather restriction thresholds and procedures fuel storage and containment harvesting equipment to be used haulage routes to be used on public roads buffers to watercourses, wetlands and harvesting exclusion areas specific measures to protect powerlines, gas pipelines, other significant features, etc notification process of harvest operations to relevant local stakeholders Schedule 2 - Watercourse Classification System

How to classify a watercourse and implement the applicable protection

Classify the watercourse type – At the assessment point, look both ways along the watercourse. Refer to watercourse classification (see below) and classify on the basis of the features.

Consult the minimum protection requirements for the applicable classification of watercourse (Tables 3.6.3 and 3.6.4).

Apply the determined protection requirement on the ground.

Watercourse classifications

Streams

Streams are rivers and creeks with a channel or braided channel and distinct bed and banks. Terraces and lateral flood plains may also be present. Flow may be permanent, semi-permanent, intermittent, or limited to periods after heavy rain. Streams may often exist only as waterholes or a chain of waterholes. In the absence of surface water, the bed and immediate banks will have vegetation characteristic of frequent recharge of groundwater or be locally known water sources.

3 <10m <2m

Ref: Code of practice for native forest timber production on State lands, DERM, 2007

Gullies

Gullies are incised, 'u' or 'v'-shaped channels, conveying runoff during or immediately after periods of heavy rainfall. Bed and banks are clearly defined with at least one steep bank with a slope >25 degrees. The bed generally has clear evidence of soil erosion/deposition. Gullies may be continuous or discontinuous and be formed as either hillside or valley bottom gullies. Discontinuous hillside gullies may have an outlet fan that may be sensitive to disturbance. These watercourses would be difficult to traverse by a vehicle. The 'u' shape gullies may be experiencing undercutting.

3 | <1m | <0.5m

Ref: Code of practice for native forest timber production on State lands, DERM, 2007

Waterways

Waterways are gently inclined, shallow, and open depressions, which are easily discernible to the eye. They have a concave cross section and moderate approach slope (generally <15 degrees). Active zones may be vegetated or slightly incised. These can generally be traversed by vehicle. These convey water after heavy rainfall but may be seasonally waterlogged with ground vegetation indicative of a wetter micro climate.

Water features

Water features are water systems associated with, or separate to, watercourses:


• Major and minor features are natural or artificial waterholes, impoundments and wetlands where in all cases water is detained for more than three months in a normal wet season.

• Springs and soaks are areas where water flows from the surface or where the soil is damp as a result of seepage.

• In the absence of surface water, the bed and immediate banks have vegetation characteristic of frequent recharge of groundwater or be locally known as being associated with water features.

Ref: Code of practice for native forest timber production on State lands, DERM, 2007

Important definitions

Active zone – This is a zone of active erosion or deposition characterised by either an erosion face greater than 10cm high or a scour/deposition area greater than 1m in width. Deposited material may be loose, unconsolidated sand, gravel or waterwashed stone. The zone may be obscured by litter or be associated with a significant reduction in surface cover. Width is measured between erosion faces where these exist or across the deposited material where no erosion face exists.

Characteristic vegetation – Characteristic vegetation is that which indicates good subsoil moisture conditions as a result of prolonged subsoil seepage and is different from that found on areas adjacent to the bed and banks. For example, stream beds have dead aquatic vegetation, water couch, rushes, sedges and smartweeds, while stream banks have tea trees, bottlebrushes, forest red gum and river red gum. Stream bed vegetation may be sparsely represented in intermittent streams with sandy beds. Water features will usually have typical vegetation including greater than 50% representation of sedges, rushes and various broad-leaved plants.

Appendices Appendix 1 – National Plantation Principles

The National Principles in Forest Practices Related to Wood Production in Plantations are:

Principles of environmental Care

Native forests should not be cleared for plantation establishment where this would compromise regional conservation and catchment management objectives. In some circumstances it may be appropriate to clear patches of bushland that have been severely degraded by impacts such as disease, weed invasion fire, waterlogging or other agents of tree decline, so as to enable rehabilitation through replanting.

Values such as intensive recreation, high scenic quality, significant geomorphic, biological, or cultural heritage sites, should be recognised in the planning of plantation forest operations.

Plantation management should comply with state and regional conservation and catchment management objectives, relevant planning schemes and legislation.

Water quality (physical, chemical or biological) should be protected by measures controlling change resulting from plantation activities.

Water yield should be managed as required by careful planning of operations.

Soil stability should be protected by measures which regulate site disturbance.

Soil, water catchment, cultural and landscape values should be protected by the careful location, construction, and maintenance of roads and tracks, and by regulation of their use.

Fauna, floristic and landscape values should be protected by the careful planning of plantation layout, establishment operations and the reservation and protection of appropriate areas of remnant native vegetation - such values should be recognised in subsequent plantation management.

Plantations and adjacent remnant native forests should be protected from the adverse effects of fire and from the introduction and spread of plant, insect and animal pests and plant diseases.

Operators will be trained in the principles of environmental care.

Safety

All plantation establishment, management and utilisation will be conducted to comply with the relevant occupational health and safety legislation and policy. In particular all operators should be

trained to designated standards in the safe and efficient use of equipment and machinery, and be responsible for safe working practices.

Planning

State and Local Governments should, with appropriate public involvement, pursue planning policies that provide zoning for commercial planting with the objective that tree planting and subsequent harvesting for commercial wood production should be an 'as of right' use.

State governments will establish a sound legal basis for separating the forest asset component from the land assets for tree plantings. The Australian Government will consider similar action regarding taxation, capital evaluation etc.

Plantation strategic planning should be developed in conjunction with regional development plans and Natural Resource Management strategies.

The environmental, social and economic effects of all plantation operations envisaged for an area will be considered during the planning process.

Individual plantation operations will be conducted in accordance with relevant Codes of Practice.

Access

Planning for road systems in plantations will be based on both the economic principle of minimising the combined cost of roading and extraction and on the Principles of Environmental Care.

Road design will be to a standard consistent with the purpose for which the road is to be used, and capable of carrying the anticipated traffic with reasonable safety.

Construction and maintenance of roads and associated works will be undertaken in a manner which will ensure compliance with the Principles of Environmental Care (2.4.1).

Roads will be closed in wet conditions when unacceptable environmental damage would occur or when such other conditions warrant.

Establishment and maintenance

Plantation establishment methods should be economically and environmentally appropriate for the particular requirements of the species to be planted and the specific site conditions.

Establishment of plantations may involve the introduction of selected species, provenances or populations to increase productivity or value. However, management of these plantations should aim to constrain or prevent the introduction of these species into surrounding areas.

Intensive management practices, such as site preparation, fertilising, weed control, pest and disease control and other operations will be carried out in accordance with relevant Codes of Practice and be consistent with the Principles of Environmental Care (2.4.1).

Timber harvesting

Timber harvesting will be planned and carried out under Codes of Practice that meet the Principles of Environmental Care (2.4.1).

The Harvesting Plan will consider factors such as harvesting unit size, slope and location of harvesting units; design and location of landings and snig tracks; harvesting equipment; areas excluded from logging; and areas specified for protection and reforestation.

Harvesting operations should not be conducted in a manner which compromises the Principles of Environmental Care (2.4.1), or where the safety of workers is at unacceptable risk.

Soil and water values should be protected by progressive rehabilitation and drainage of snig tracks, temporary roads, log dumps and any other earthworks associated with harvesting operations.

Forest protection

Fire protection planning should be undertaken on a regional basis in co-ordination with relevant land management agencies and with local bushfire control organisations.

Plantation health surveillance should be undertaken on a regular basis.

Where weeds, pests or disease cause significant damage, decline or death of trees, prompt specialist advice should be sought to address the problem.

Use of chemicals, such as herbicides and pesticides, and other pest control methods in plantation operations will be in accordance with National and State policies, procedures and approved usage.

Monitoring and review

Where practicable, plantation operations should be supervised and monitored by qualified persons and be subject to audit.

Appendix 2-Queensland Legislation Relevant to Plantations

Listed below is the current core Queensland Government legislation that impact on commercial plantations in Queensland.

Legislation	Agency	Comment
Aboriginal Cultural Heritage Act (2003)	Department of Environment and Resource Management	To provide for the granting, and the claiming and granting, of land as Aboriginal land, and
Aboriginal Land Act (1991)		for other purposes. To provide for the granting, and the claiming and granting, of land as Torres Strait Islander land, and for other purposes.
Aborigines and Torres Strait Islanders (Land Holding) Act (1985)		
Agricultural Chemicals Distribution Control Act (1966)	Department of Employment, Economic Development and Innovation	Provides for declaration of hazardous areas and sets restrictions on distribution of chemicals. Also refer to the Great Barrier Reef Protection Amendment Act 2009.
		Note: it's currently proposed that this Act will be incorporated into a new Biosecurity Bill by mid 2010.
Aboriginal Cultural Heritage Act (2003)	Department of Environment and Resource Management	Provides for the preservation and management of all components (anthropological, cultural, historic, prehistoric) of landscapes and estate areas.
Environmental Protection Act (1994)	Department of Environment and Resource Management	Aims to protect Queensland's environment through an integrated management program that is consistent with ecologically sustainable development.
		Through the Act, subordinate Environmental Protection Policies (EPPs), bind all persons, including the State, and is administered with community involvement.
		Also refer to the Great Barrier Reef Protection Amendment Act 2009.
Fire and Rescue Service Act (1990)	Department of Emergency Services	Aims to reduce loss and damage on rural lands.
Forestry Act (1959)	Department of Environment and Resource Management	Provides for forest reservation, management, silvicultural treatment and protection of State Forests, and the sale and disposal of forest products and quarry material, the property of the crown on State Forests, Timber Reserves and on Other Crown Lands.
Sustainable Planning	Department of	The SPA seeks to achieve ecological

Legislation	Agency	Comment
Act (2009)	Infrastructure and Planning	sustainability through coordinating and integrating, planning and managing the process of development and the effects of development on the environment. Local Government planning schemes are one of the main instruments that progresses the aims of the SPA.
		Regulates the development of land and captures a range of activities including plantations, the clearing of all types of vegetation and provides security for established plantation forestry enterprises.
Nature Conservation Act (1992)	Department of Environment and Resource Management	Provides for the conservation of nature, dedication and declaration of protected areas of Crown land, management of protected areas and protection of native wildlife and its habit and Conservation Plans. States that a person must not interfere with a cultural or natural resource of a protected area, unless approved under certain conditions.
		Includes the Nature Conservation (Koala) Conservation Plan 2006 and Management Program 2006–2016 (Koala Plan) requires Koalas and immediate habitat is protected.
Plant Protection Act (1989)	Department of Employment, Economic Development and Innovation	Provides for the control and removal of pest infestation of plants in Queensland, helps other jurisdictions prevent, control or remove plant pests, diseases, pest infestations, infections and conditions, and facilitates the movement of plants in and out of Queensland.
		Note: it's currently proposed that this Act will be incorporated into a new Biosecurity Bill by mid 2010.
Queensland Heritage Act (1992)	Department of Environment and Resource Management	Provides for the conservation of Queensland's heritage, recording of protected areas, and restrictions on development of such areas.
Land Protection (Pest and Stock Management) Act (2002)	Department of Employment, Economic Development and Innovation	Provides for the declaration and control of noxious plants and harmful animals on land of all tenures, and requires regulation of pests. Identifies exotic woody weed species to be controlled and allows landholders to control them without tree clearing permits provided the overstorey trees are not removed.
		Note: it's currently proposed that this Act will

Legislation	Agency	Comment
		be incorporated into a new Biosecurity Bill by mid 2010.
Soil Conservation Act (1986)	Department of Environment and Resource Management	The Act regulates the conservation of soil resources and facilitates the implementation of soil conservation measures by landholders for the mitigation of soil erosion - on project areas subject to an approved project plan, persons can be required to undertake, construct and maintain soil conservation measures.
Timber Utilisation and Marketing Act (1987)	Department of Employment, Economic Development and Innovation	Relates to the sale of Lyctus susceptible timber, and controls the use of wood preservative chemicals.
Transport Infrastructure Act (1994)	Department of Main Roads and Department of Transport	Provides a regime that allows for and encourages effective integrated and efficient management of a system of transport infrastructure.
		Amongst other objectives, in the case of roads, to establish a regime which can exercise influence over the total road network in a way that contributes to overall transport efficiency.
Transport Planning and Coordination Act	Department of Main Roads and	Aims to improve, within the government's overall policy agenda,
(1994)	Transport	(a) the economic, trade and regional development performance of Queensland; and
		(b) the quality of life of Queenslanders; by achieving overall transport effectiveness and efficiency through strategic planning and management of transport resources.
Vegetation Management Act (1999)	Department of Environment and Resource	Regulates native vegetation on Crown and freehold land if it is 'Remnant', 'Protected Regrowth' or 'Native vegetation within 50
Vegetation Management and other legislation amendment Act (2009)	Management	metres of a regrowth watercourse in a priority Great Barrier Reef catchment (Burdekin, Mackay Whitsunday and Wet Tropics). All 'protected native vegetation' is protected from clearing or subject to development approval
Vegetation Management (Regrowth Clearing Moratorium) Act (2009)		including for plantations. Clearing and/or management of protected native vegetation adjacent to plantations, required for firebreaks, roads, tracks, plus weed control in protected native vegetation may be an exempt activity or subject to approval under the Act/s (permit)

Legislation	Agency	Comment
		Harvesting and silvicultural activities (forest practices) of protected native vegetation is generally permitted as long as it conforms to the code applying to a native forest practice on freehold land'. Landowners must 'notify' the Department of Environment and Resource Management in writing before conducting forest practices.
Water Act 2000	Department of Environment and Resource Management	Regulates the use of and activities in and around strategic watercourses in Queensland defined under the Act. Approval permits may be required from the Department of Environment and Resource Management for plantation activities that destroy vegetation, excavate or place fill (roads or crossings) in the 'bed and banks' of a watercourse defined under the Act.
Workplace Health and Safety Act (1995)	Department of Employment and Industrial Relations	Is about workplace health and safety, and for related purposes.

Appendix 3 – Australian Legislation Relevant to Plantations

Listed below is the current core Australian Government legislation that impacts on commercial plantations in Queensland.

Legislation	Agency	Comment
Aboriginal and Torres StraitDepartment o Environment a Water ResourIslander Heritage Protection Act (1984)Water Resour		The Act is to preserve and protect areas and objects of particular significance to Indigenous people in accordance with their tradition. The Act provides for Indigenous people to apply to the Minister for the Environment and Water Resources to protect significant areas and objects under threat of injury or desecration, when there is no effective protection under a state or territory law.
		The states and territories retain the primary role to protect significant areas and objects, with the Australian Government Act providing for protection in the last resort.
Environment Protection and Biodiversity Conservation Act (1999)	Department of the Environment and Water Resources	The Act is Australia's key environmental law which protects matters of national environmental significance. It regulates any activity that is likely to have a significant impact on nationally threatened species and ecological communities, World Heritage properties and National Heritage places.
		The Act also defines and lists 'Weeds of National Significance' (WONS).
		Areas of native vegetation on plantation land may be listed as 'protected' under this Act and subject to approval for clearing or before conducting plantation activities.
Export Control Act (1982)	Department of Agriculture, Fisheries and Forestry	To control the export of various regulated products, including unprocessed wood and woodchips.
Native Title Act (1993) (Amended 1998)	Department of the Environment and Water Resources	To provide a mechanism, for claimants and non-claimants, to determine whether native title exists and what the rights are that comprise that native title. A determination under the Act will establish whether the holders have exclusive possession and, if not, the native title

Legislation	Agency	Comment
		rights and interests that are of importance.
Quarantine Act (1908)	Department of Agriculture, Fisheries and Forestry	The Act with its subordinate regulations and proclamations provides the comprehensive system of control to prevent the introduction into Australia of diseases or pests affecting human beings, animals or plants.

Appendix 4 – Certification in more detail

Forest certification is a voluntary process that can be used by forest managers to demonstrate the sustainability credentials of their forest management, addressing environmental, economic, social and cultural sustainability. A forest certification standard that meets international criteria is used to define the requirements of the forest management, and the management is then assessed by an independent auditor on a regular basis for compliance with the standard.

The Australian Forestry Standard (AFS) and the Forest Stewardship Council (FSC) certification schemes are the two schemes currently in operation in Australia. Despite evolving via different means, there are significant parallels between how the standards are structured, how they are implemented and monitored, and the outcomes that are achieved on the ground.

The standards

Certification under both AFS and FSC uses a three tiered approach to establish overarching principles, and then expand on these with more detailed management requirements, which are further detailed by the auditable assessment criteria. AFS and FSC use different names for each tier.

	FSC	AFS
Tier 1	Principles (10)	Criteria (9)
Tier 2	Management Criteria (55)	Management requirements (38)
Tier 3	Norms or Points of Assessment (>150)	Basis of assessment (>150)

FSC has ten Tier 1 Principles while AFS has nine Tier 1 Criteria. Although the tier 1 FSC Principles and AFS Criteria are not directly aligned, they ultimately address the same suite of management issues.

FSC Principles	AFS Criteria
Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.	Forest management shall be undertaken in a systematic manner that addresses the range of forest values
Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and	public participation and foster on-going relationships to be a good neighbour
The legal and customary rights of indigenous peoples to	Forest management shall protect and maintain the biological diversity of forests,
own, use and manage their lands, territories, and resources shall be recognised and respected.	including their seral stages, across the regional landscape
Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.	Forest management shall maintain the productive capacity of forests
Forest management operations shall encourage the	ecosystem health and vitality

efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

A management plan, appropriate to the scale and intensity of the operations, shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.

Monitoring shall be conducted, appropriate to the scale and intensity of forest management, to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

Plantations shall be planned and managed in accordance with the above Principles. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests. Forest management shall protect soil and water resources

Forest management shall maintain forests' contribution to carbon cycles

Forest management shall protect and maintain, for Indigenous and non-Indigenous people, their natural, cultural, social, recreational, religious and spiritual heritage values

Forest management shall maintain and enhance long-term social and economic benefits

The 10 Principles under FSC are supported by 55 Tier 2 Management Criteria. Under the AFS, the 9 Criteria are supported by 38 Tier 2 Management Requirements. Both schemes have over 150 Tier 3 auditable assessment criteria.

This hierarchical approach is demonstrated for Criterion 6 of the Australian Forestry Standard.

Criterion 6: Forest management shall protect soil and water resources



Both schemes provide a further level of detailed guidance to forest managers and auditors, which outline how to implement the requirements, as well as identifying indicators that can be used to verify that the requirements have been addressed.

Implementation of the standards

Achieving certification requires plantation managers to develop and implement management systems and practices that are compliant with the certification standard. Achieving certification invariably requires that forest managers institute changes from their standard practices.

A recent study of 25 forest management organisations in Australia and New Zealand found that there were more than 500 changes required to achieve certification under FSC. Similar experiences are reported by forest managers for achieving certification under AFS.

Audit Process

The systems and practices are then audited by independent auditors to establish whether they meet the standard, and once certification is achieved, they are then audited on at least an annual basis for compliance with the standards.

The auditors are independent of both the certification body and the business being audited. Guidance documents published by AFS and FSC are used to help interpret the standards. Auditors collect and analyse objective evidence to assess compliance with the standard.

A non-conformance with the standard will require either immediate remedial action for a major nonconformance, or where non-conformance is only minor then an action plan may be an acceptable means of addressing the non-conformance. Certification can be withdrawn where a non-conformance is not addressed within a reasonable timeframe.

Certification and Codes of Practice

Certification offers a rigorous and internationally recognised means of demonstrating the sustainability of forest management in relation to environmental, economic, social and cultural criteria. Certification addresses a range of criteria that are beyond the scope of this operational code of practice

The certification process is informed by documents such as operational codes of practice, to provide guidance on acceptable means of addressing various aspects of forest management within a local context.

Where certification is identified as an alternative to the provisions contained with this code of practice, the certification and independent audit process will ensure that the alternative approach delivers an equivalent or better outcome.

For further information on forest certification go to: Australian Forestry Standard <u>www.forestrystandard.org.au</u> Forest Stewardship Council (Australia) <u>www.fscaustralia.org</u>

Appendix 5 - Good Neighbour Charter for Commercial Private Plantations in Queensland

Preamble

This Charter has been developed by Queensland forest and wood industry companies in consultation with local government and state agencies. The Charter explains how we will communicate with our neighbours and key stakeholders.

We seek to engage our neighbours and key stakeholders in constructive and cooperative dialogue based on mutual trust and respect.

Commercial plantation operations involve the establishment and harvesting of forest plantations that may include the associated construction and maintenance of roads and tracks within the plantation property.

Small plantation owners/managers (<30 ha) will be mindful of the content of the Good Neighbour Charter but as their estate is not significant they will not be expected to meet all of the undertakings in this charter.

All of our operations will meet or exceed the requirements of the Queensland Commercial Private Plantations Code of Practice and all other relevant legislation and state policies.

What you can expect from us?

We will ensure active, ongoing and timely communications by:

Informing the neighbours and key stakeholders of potential impacting activities.

Explaining the detail of the Plantation Management Plan with neighbours and key stakeholders following a reasonable request and with suitable notice. For legal reasons, information that may be commercial in confidence may not be disclosed.

Consulting and responding appropriately with neighbours and key stakeholders on issues of concern.

Providing access to local field staff and managers of forest operations following a reasonable request and with suitable notice.

Encouraging neighbours and key stakeholders to communicate directly with field staff to obtain information, discuss concerns and work to resolve issues in a timely manner.

What is the planning process for a commercial plantation operation?

Where required we will lodge a development application for any new plantation development with the applicable local government and be assessed under the current planning scheme under the Integrated Planning Act 1997, guided by other applicable legislation, State Planning Policies, Regional Statutory Plans, etc.

We are advised under the Queensland Commercial Private Plantations Code of Practice to prepare a Plantation Management Plan detailing environmental requirements, proposed harvesting techniques and fire management strategies.

We will notify neighbours and key stakeholders prior to potentially impacting plantation operations occurring.

How will we engage with local government?

We will consult with local government on issues such as zoning, transport routes, planning schemes and local laws.

We will provide local governments with up-to-date contact lists of key industry people.

We will work proactively and cooperatively to resolve issues of concern to local government.

How will we look after the environment?

We are committed to sustainable plantation management (SPM) practices that are environmentally, economically and socially sound. We will manage Queensland's natural and cultural heritage through the application of the Queensland Commercial Private Plantations Code of Practice.

How will we manage fire risk?

We will undertake fire management planning at strategic, tactical and operational levels with the objectives of preventing fires from entering, starting or spreading from our plantations.

We will carry out strategic fuel hazard reduction programs to reduce the risk of intense wildfires.

We will establish and maintain fire breaks, water supply points and access roads where necessary.

We will provide and maintain fire-fighting equipment and trained fire-fighting crews where practicable

We will actively co-operate with other state and local fire management agencies when appropriate to ensure a coordinated effort in fire protection and suppression.

How will we manage planned fuel hazard reduction burns?

We will apply for rural fire permits and ensure compliance with permit conditions.

We will communicate our intention to conduct a burning operation to neighbours in accordance with state regulations and Section 2 of this Charter.

We will be considerate of neighbours' assets requiring protection.

We will conduct burning operations only when forecast and actual weather conditions are suitable and as specified on the fire permit.

Burning operations will be planned and managed to minimise smoke impact on the community.

How will we keep our property roads and tracks safe?

Transport routes involved with plantation operations will be carefully selected taking into account all safety issues.

If appropriate, we will negotiate specific cartage hours and erect advisory speed signs in sensitive areas.

We will induct staff and regularly communicate safety information to employees and our contractors.

We will seek to minimise any damage to roads that may arise from haulage operations, and will contribute to the repair of damage that is directly attributable to our operations.

How will we protect landscape values?

Landscape values will be protected in accordance with the applicable local government planning scheme.

We will take account of neighbours and key stakeholders' concerns when planning the development of new plantations.

Care will be taken when planning operational boundaries in sensitive landscapes in accordance with the requirements of the Queensland Commercial Private Plantations Code of Practice, and with Queensland and Australian legislative requirements.

Where will plantations be established?

We will conduct negotiations with landowners for land purchase, lease or share-farm activities in an honest, commercial and ethical manner.

We will conduct our business in line with Queensland Government policy in that timber and fibre plantations are considered a form of agriculture albeit with a long term cropping cycle, and operate in a manner commensurate with that of other agricultural activities.

We will make every reasonable effort to retain existing well-maintained dwellings on plantation properties. Where this is not practicable, we will actively facilitate relocation of dwellings.

How will we control declared weeds and pests?

We will take account of neighbours' concerns when determining strategies to control declared weeds and animal pests, and co-operate with government agencies on regional weed and pest management strategies.

We will meet our legal responsibilities in relation to the control of declared pests

We will only use approved chemicals and pest and weed control techniques in strict compliance with applicable legislation.

We will use chemicals in accordance with standard silvicultural, agricultural and environmental practices and techniques, with particular care in water supply catchments.

How will we manage shading and boundary fences?

We will take account of neighbours' concerns when planning the development of new plantations.

We will equitably share the cost of establishment and maintenance of appropriate boundary fencing.

How will we consider 'recreational values'?

We will communicate with legitimate users of our plantations about any planned plantation operations that may impact on their use.

Where stakeholder consultation identifies a need we will inform them of timeframes and expected outcomes of the plantation operation.

What options are available for neighbours to resolve their concerns?

If a neighbour has a concern, or even just a query, they should contact the local field staff whose names would have been provided during initial neighbour consultations.

We pride ourselves in being responsive to neighbouring landowners' queries and concerns and we seek, as far as is reasonably possible, to ensure that concerns are resolved at this local level. We will ensure your concerns are addressed in a timely manner.

If you do not feel that the concern has been addressed in accordance with the Good Neighbour Charter, then please contact the company conducting the forest operation through the phone numbers listed below.

Enquiries may also be made to Timber Queensland (TQ), Australian Forest Growers (AFG) and Local Government Association Queensland (LGAQ). However, in the first instance, people should contact directly the company conducting the operation prior to raising concerns with other parties.

Contact details

Quote Good Neighbour Charter and locality so that you can be transferred to the appropriate designated manager.

Elders Forestry Limited Central Queensland Ph ... North Queensland Ph ... Gunns Plantations Limited Ph ... Rewards Group Ph ... PF Olsen Australia Ph... Tree Crop Technologies (TCT) Ph ... Others TBA

Timber Queensland (TQ) Ph (07) 3254 1989 Australian Forest Growers (AFG) Ph (02) 6162 9000 Local Government Association Queensland (LGAQ) Ph (07) 3000 2222

TQ, AFG and LGAQ commend the development of a Good Neighbour Charter as an expression of the commitment of plantation owners/managers to open and considerate engagement with their neighbours, key stakeholders and local communities.

Appendix 6 - Signatories to the Plantation Code of Practice

By endorsing this code, the companies below agree to conduct operations in compliance with the provisions contained within this code.

Provisional list.....

Timber Queensland Australian Forest Growers (AFG) Elders Forestry Limited Gunns Plantations Limited Rewards Group PF Olsen Australia Tree Crop Technologies (TCT)

Others TBA

Em

Contact Us Phone: 1300 363 400 +61 3 9545 2176 Email: enquiries@csiro.au Web: www.csiro.au

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