

Module 6. Natural Systems Management

Standards

6.1 Natural features are mapped and benefits recognised

Practices:

Below Industry Standard -

There is no comprehensive mapping of natural features. Any High Conservation Value areas are not identified. Benefits of natural features not well recognised.

Industry Standard -

Natural features such as wetlands, waterways, riparian areas and patches of native vegetation are recorded on suitable maps. Areas classified as High Conservation Value are identified. Benefits of natural features are recognised.

Above Industry Standard -

Areas which could benefit from rehabilitation have also been identified.

6.2 Levees, bunds, and crossings

Practices:

Below Industry Standard -

No effort to have crossings, bund walls, floodgates and/or levee banks allow, where practical, for free flow of water and passage of fish.

Industry Standard -

Crossings, bund walls, floodgates and/or levee banks allow, where practical, for free flow of water and passage of fish.

Above Industry Standard -

All crossings, levees or bunds are constructed as bridges or open culverts across the full width of the wetland or waterway.

6.3 Retaining and connecting native vegetation

Practices:

Below Industry Standard -

Patches of remaining native vegetation have not been retained. There has been development of high conservation vegetation to sugarcane after 1 Jan 2008.

Industry Standard -

Patches of native vegetation have been retained. No development of any high conservation vegetation to sugarcane after 1 Jan 2008.

Above Industry Standard -

Corridors of vegetation have also been established to link patches.

6.4 Enhancing habitat value of natural features

Practices:

Below Industry Standard -

There is little effort to enhance habitat value of natural features.

Industry Standard -

Where practical, fallen branches, trees, vegetation debris and rocks been left in place in streams and on land. There is regular control of weeds in or near natural features. Weed control in cane avoids spray drift onto non-target vegetation. Control measures for pest animals have been implemented as required. Natural features have been protected from damaging fires.

Above Industry Standard -

Artificial nesting/roosting boxes are in place. Wetlands and/or vegetation have been restored. There is coordinated weed management with neighbours, and deep rooted native vegetation has been planted after control of the weeds. There is also coordinated feral pig control and coordinated fire management with neighbours, as needed.

6.5 Greenfield expansions and other major projects

Practices:

Below Industry Standard -

The impacts of significant conversions of land to first time use as sugarcane are not covered by an adequate impact assessment. There is no effective process for engaging stakeholders.

Industry Standard -

- a. Significant conversions of land (including land that was other crops or cattle grazing) to first time use as sugarcane (> 10% increase over average area of previous five years) are covered by a thorough Environmental and Social Impact Assessment.
- b. There is an effective process for engaging stakeholders who may be affected and for addressing any grievances.

6.6 Monitoring Greenhouse Gas, Acid Rain Emissions and Primary energy efficiency

Practices:

Below Industry Standard -

Emissions are not monitored or exceed certain thresholds. Primary energy efficiency is not monitored or consumption per tonne of cane exceeds certain thresholds.

Industry Standard -

- a. GHG emissions are monitored and are less than 40 kg CO₂ eq per tonne of cane.
- b. Acid rain emissions are monitored and are less than 0.15 kg per tonne of cane.
- c. Primary energy efficiency is measured and consumption is less than 300 MJ per tonne of cane.

6.7 Recycling of waste materials

Practices:

Below Industry Standard -

Recycling is not practiced for three or more of the major waster categories.

Industry Standard -

Recycling is practiced for at least three of the major categories of waste (plastic, batteries, chemical products, oil and lubricants, metal, fibre).

Evidence checklist for each practice standard

PRACTICE	INDUSTRY STANDARD <i>(Entries in italics indicate the above industry standard requirements)</i>	EVIDENCE REQUIRED	EVIDENCE SIGHTED	FINDING (C – BMP C – above NC – below N/A)
6.1 Natural features are mapped and benefits recognised	<p>Natural features such as wetlands, waterways, riparian areas and patches of native vegetation are recorded on suitable maps. Areas classified as High Conservation Value are identified.</p> <p>Benefits of natural features are recognised.</p>	<p>Map showing natural features and any areas of High Conservation Value.</p> <p>Grower understands their value.</p>		
	<p><i>Areas which could benefit from rehabilitation have been identified.</i></p>	<p><i>Map shows areas that could benefit from rehabilitation.</i></p>		
6.2 Levees, bunds, crossings	<p>Crossings, bund walls, floodgates or levee banks allow, where practical, for free flow of water and passage of fish.</p>	<p>Examples of levees, bunds or crossings meeting these criteria.</p>		
	<p><i>All crossings, levees or bunds are constructed as bridges or open culverts across the full width of the wetland or waterway.</i></p>	<p><i>All levees, bunds and crossings meet these criteria.</i></p>		
6.3 Retaining and connecting native vegetation	<p><i>Have patches of native vegetation been retained.</i></p> <p><i>No development of any high conservation vegetation to sugarcane after 1 Jan 2008</i></p>	<p><i>Examples meeting these criteria.</i></p> <p><i>Current coverage of HCV, relative to PMAV or similar mapping of vegetation status, shows no development after 1 Jan 2008.</i></p>		
	<p><i>As for Industry Standard, plus</i> <i>Have corridors of vegetation been established to link patches.</i></p>	<p><i>Examples meeting these criteria.</i></p>		

PRACTICE	INDUSTRY STANDARD <i>(Entries in italics indicate the above industry standard requirements)</i>	EVIDENCE REQUIRED	EVIDENCE SIGHTED	FINDING (C – BMP C – above NC – below N/A)
6.4 Enhancing habitat of natural features	<p>a. Where practical, fallen branches, trees, vegetation debris and rocks been left in place in streams and on land.</p> <p>b. There is regular control of weeds in or near natural features. Weed control in cane avoids spray drift onto non-target vegetation.</p> <p>c. Control measures for pest animals have been implemented as required.</p> <p>d. Natural features have been protected from damaging fires.</p>	<p>Examples meeting these criteria.</p> <p>Control records if applicable</p> <p>Control records if applicable</p> <p>Examples in the field</p>		
6.5 Greenfield expansions and other major projects.	<p><i>As for Industry Standard, plus</i></p> <p><i>Artificial nesting/roosting boxes in place.</i></p> <p><i>Wetlands and/or vegetation restored.</i></p> <p><i>Coordinated weed management with neighbours.</i></p> <p><i>Deep rooted native vegetation planted post-control.</i></p> <p><i>Coordinated feral pig control with neighbours.</i></p> <p><i>Coordinated fire management with neighbours.</i></p>	<p><i>Examples meeting these criteria.</i></p> <p><i>Documentation of coordinated approaches and their implementation</i></p>		
6.6 Monitoring Greenhouse Gas,	a. GHG emissions are monitored	a. <40 kg CO2 eq / tonne cane (using Bonsucro or equivalent		

PRACTICE	INDUSTRY STANDARD <i>(Entries in italics indicate the above industry standard requirements)</i>	EVIDENCE REQUIRED	EVIDENCE SIGHTED	FINDING (C – BMP C – above NC – below N/A)
Acid Rain Emissions and Primary energy efficiency	<p>b. Acid rain emissions are monitored</p> <p>c. Primary energy efficiency is monitored</p>	<p>calculator e.g. QUT Farming Enterprise Greenhouse Gas Emissions Calculator)</p> <p>b. <0.15 kg per tonne cane (using Bonsucro or equivalent calculator)</p> <p>c. <300 MJ per tonne of sugarcane (using Bonsucro or equivalent calculator)</p>		
6.7 Recycling of waste materials	Recycling is practiced for at least three of the major categories of waste.	Evidence (e.g. receipts) of recycling for at least three of the following categories: plastic, batteries, chemical products, oil and lubricants, metal, fibre.		