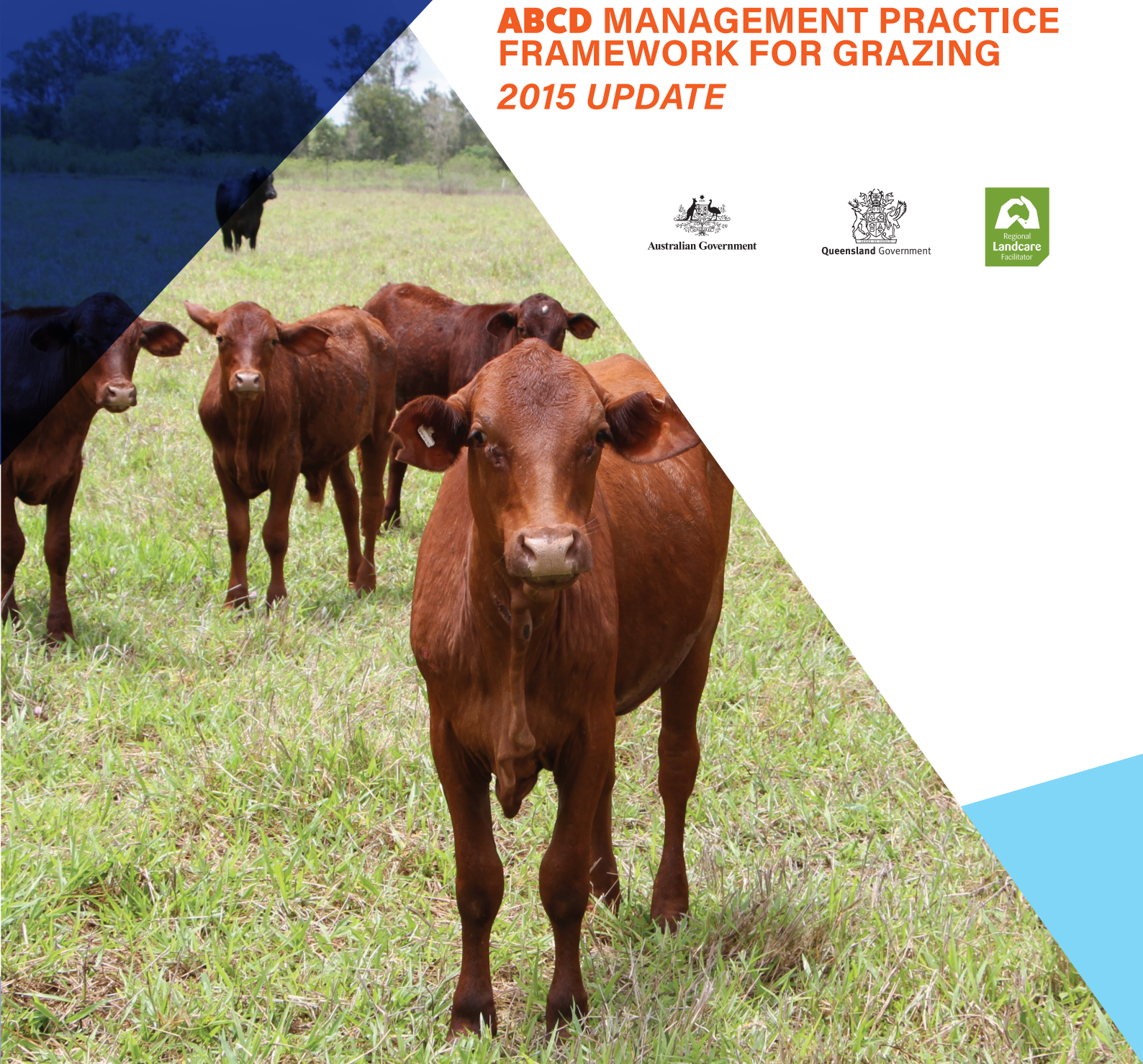
REEF CATCHMENTS

Mackay Whitsunday Region

ABCD MANAGEMENT PRACTICE FRAMEWORK FOR GRAZING

2015 UPDATE



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1. Introduction

This document is an update of the 2010-11 Mackay Whitsunday Region Grazing Management Practices ABCD Management Frameworks. The ABCD Management Frameworks are designed to communicate different standards of management practices for each land use for different water quality parameters (i.e., soil management, nutrient management, pesticide management). The frameworks provide standard definitions of a progression of improvements to water quality from D class ("Dated") management practices with the lowest corresponding water quality outcomes, through C class ("Conventional" or "Common"), B class ("Best Practice") and finally to A class ("Aspirational") or as yet unproven management practices (Folkers, et al., 2014).

This framework is an essential component of delivering the 2014-2021 Reef Catchments Water Quality Improvement Plan (WQIP). It is also used at a State and Federal level to model impacts of government policy and incentive programs.

The framework is periodically revised by the Mackay Whitsunday Grazing Working Group to ensure that the framework continues to espouse scientifically robust principles and identify new management practices that are now considered Best Practice or Aspirational. This report collates the updates provided by the Grazing Working Group in 2015.

2. Principles of ABCD Management Practice Frameworks

ABCD management practice frameworks describe a continuum of practices that are recommended to improve water quality and land resource condition. The frameworks categorise agricultural practices as: A (Aspirational), B (Best Practice or Best Management), C (Conventional) or D (Dated). For grazing systems, the frameworks describe practices impacting upon land condition, soil erosion and water quality. Each catchment has a framework based on land management practices that are relevant to that region.

While the frameworks look to promote activities that will improve water quality, to be 'best management' each practice also needs to be economically sustainable for the landholder. Often activities identified within A class are known to reduce pollutant loads but they are not described as B class (best management) until there is evidence that they are at a minimum financially neutral, or preferably financially beneficial (Folkers, et al., 2014). Table 1 describes the practices that meet the standard for each management class and the expected effect on resource condition.

Table 1: *Description of practices for each management class and effect on resource condition.*

Class		Description Of Practice	Effect On Resource Condition
A	**Aspirational**	▪ New and innovative practices adopted by graziers that require further validation to determine industry wide environmental, social and economic costs/benefits. ▪ Validation requires R&D and if appropriate, some validated practices will become recommended BMP. ▪ Development of Farm Management Plans and utilisation of new and innovative technology.	▪ Validated practices likely to achieve medium to long term target resource condition goals if widely adopted. ▪ Some practices may have good environmental outcomes which may not be universally endorsed as feasible by industry and community.
B	**Best practices**	▪ Currently promoted practices referred to as 'Best Management Practices.' ▪ Widely promoted by industry to achieve current and future industry expectations and community standards. ▪ Development of Farm Management Plans and utilisation of common technology.	▪ Practice likely to achieve short to medium-term target resource condition goals if widely adopted.
C	**Conventional**	▪ Common practices widely adopted by industry but meet only basic current industry expectations and community standards.	▪ Practice unlikely to achieve short-term target resource condition goals if widely adopted.
D	**Dated**	▪ Practices superseded or unacceptable by current industry expectations and community standards.	▪ Practice likely to degrade resource condition if widely adopted

It is important to specify the current resource condition (where applicable), set resource condition targets and timeframes, as well as the year of reference for the level of classification. This provides a common reference point and allows the framework to be used when communicating with: government; water quality researchers; social scientists; economists; industry research and extension organisations; and land managers. This framework is integral to reporting on:

- The expected water quality improvement that can be achieved through improved management practices;
- The social and economic costs and benefits of adopting improved management practices;
- The level of adoption of management practices required to achieve water quality targets;
- The emphasis on the importance of detailed farm management planning and record keeping to achieving improved water quality outcomes;
- The importance of holistic management, rather than a single technology or individual practice;
- The type and scope of action such as Market Based Incentives (MBIs) required to achieve water quality targets.

Figure 1 illustrates the conceptual flow of the ABCD Framework. Water Quality improvement grants are used as incentives for graziers in recognition of the fact that they are absorbing the cost of practice change that will have a public benefit. These grants are supported by extension, research and development provided by NRM groups, departmental staff and private entities.

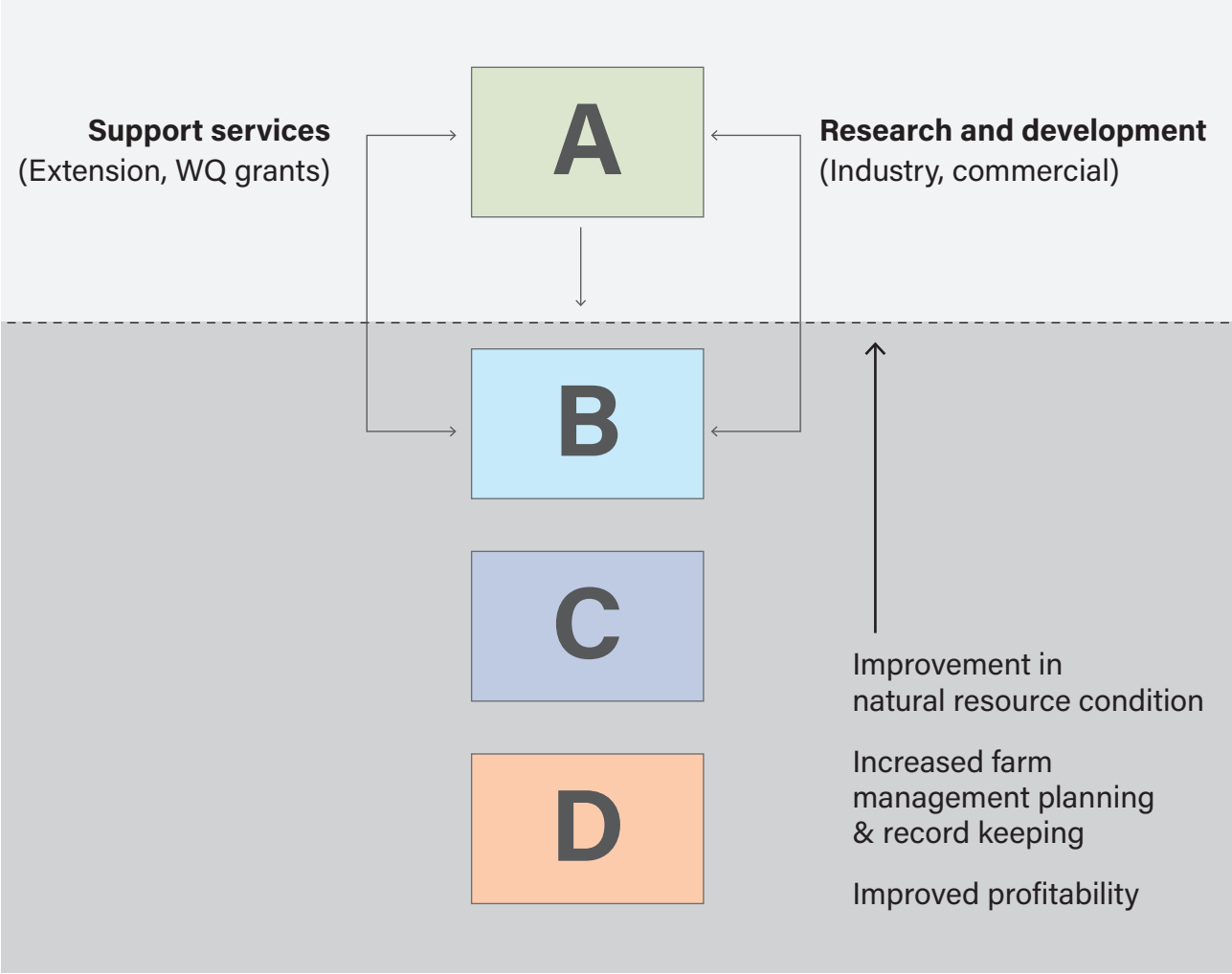

Figure 1: *ABCD Conceptual Flow Diagram.*

3. Developing the Mackay Whitsunday Framework

This document is an update of the 2010-11 Mackay Whitsunday Region Grazing Management Practices ABCD Management Frameworks. Contributors to the original document are listed in Appendix A. The Mackay Whitsunday Grazing working met in September 2015 to provide input on the current update.

Whilst the focus of the outcomes associated with practices outlined in this document is on optimising end-of-catchment water quality and marine ecosystem health; the practices identified have also been evaluated in terms of their economic and social benefits to the individual land managers and the broader community prior to being adopted as the most suitable grazing management practices.

The ABCD framework classification descriptions for grazing have been reviewed and updated to ensure:

- the wording of the classification descriptions match current industry terminology;
- resource condition indicators have been defined (for appropriate parameters);
- the link between the resource condition indicators and the level of practice is validated;
- actions required to move from one level of management to another level of management are further defined;
- the practice and classifications align with the Grazing BMP program.

The Grazing BMP Program is a joint initiative between the Queensland Government, Agforce and the Fitzroy Basin Association. This program is a voluntary, industry led process that helps graziers identify improved practices, which in turn can help improve the long-term profitability of their enterprise. In time, it will also allow the grazing industry to demonstrate good environmental and animal welfare management to the wider community.

Further information on Grazing BMP can be found at www.bmpgrazing.com.au

4. Grazing Management Practices

The ABCD framework for Mackay Whitsunday identifies standards of grazing management (as opposed to resource condition) within the grazing industry for different parameters that impact on water quality including:

1 . Pasture Management
2. Pasture Spelling
3. Riparian Management
4. Gully Management
5. Nutrient Management
6. Pesticide Management
7. Planning and Record Keeping

The grazing management practices that are considered A, B, C or D class are presented in Sections 4.1 to 4.7.

4.1 Pasture Management

Pasture management practices for grazing are summarised below. Current practice within any one enterprise is likely to be a combination of all practices in the table and producers may need to alter the combination in response to seasonal fluctuations, input costs or market forces.

DATED	CONVENTIONAL
Pasture management practices that are superseded or unacceptable	Pasture management practices that meet minimum expectations
Stocking rate exceeds pasture availability Description: 1. No pasture monitoring. 2. Ground cover targets exceeded for most grazing land types in most years. 3. No spelling. 4. Regular survival supplementary feeding. 5. No weed control. 6. Lack of infrastructure to deal with stocking rate. 7. No stock management or animal husbandry.	No differentiation between grazing land types Description: 1. Pasture management strategy based on the major grazing land type. 2. Pasture monitoring only conducted for the major grazing land type. 3. Stocking rates are based on seasonal visual assessment or set stocking rate (not recorded). 4. Occasional survival feeding.
Resource Condition: 1. Badly degraded. 2. Absence of perennial, palatable and productive (3P) grasses. 3. Increasing areas of erodible bare ground. 4. Increasing proportion of weeds.	Resource Condition: 1. Evident decline in frequency of (3P) grasses. 2. Increase in less desirable pasture species. 3. Susceptible to erosion. 4. Some increase in areas of bare ground. 5. Increased weed presence.

BEST PRACTICE	ASPIRATIONAL
Currently promoted Best Management Practices	Innovative pasture management practices that require further validation
Independent management of less resilient grazing land types Description: 1. Pasture management strategy based on all grazing land types. 2. All grazing land types fenced where practical and appropriate. 3. Pasture monitoring is conducted across multiple land types at critical times and results are used to make decisions on stocking rates and supplement programs to maintain an acceptable level of ground cover. 4. Soil testing of different land types and recommended fertiliser regimes are then followed where appropriate. 5. Water infrastructure is appropriate for paddock size and carrying capacity and minimises uneven grazing and sacrifice zones around water points. 6. New watering points are established when cattle are excluded from existing watering sources by fencing to land type. 7. Seasonal spelling. 8. Monitoring grass: legume ratios. 9. Provide feed supplements to improve animal nutrition and utilise dry (lignified) standing feed. 10. Provide feed supplements to alleviate potentially damaging grazing pressure. 11. Females managed in classified groups according to pregnancy status, cows, maiden heifers, first calf heifers and placed in specific paddocks according to nutritional requirements. 12. Bulls have access to females for a restricted time based on calving in the middle of the Green Date. 13. Shelter (for example timber belts, non-boggy terrain and ridgelines) is available in adverse weather.	Property specific – independent management all grazing land types Description: 1. All B Class practices implemented. 2. Stocking rates are based on consideration of longer term climatic data for all grazing land types. 3. Long-term carrying capacity is known for all grazing land types but stocking rates are adjusted seasonally to achieve ground cover targets. 4. Soil testing is georeferenced and monitoring sites established for each land type. 5. Nutrient deficiencies remedied based on soil tests and subsequent professional recommendations. 6. Stock requirements seldom exceed pasture availability. 7. Adoption of holistic resource management systems such as cell or rotational grazing. 8. Seasonally tailored supplement programs match results of soil tests, faecal NIRS sampling, pasture monitoring or blood samples. 9. Improved pastures are sown specifically for heifers and sale stock (steers and cull females). 10. Paddocks are subdivided into areas that optimise resource utilisation. 11. Joining, weaning and stock sales are planned around seasonal pasture production and strategies are in place to respond to seasonal conditions.
Resource Condition: 1. Stable or increasing frequency of 3P grasses. 2. Managed weed presence (woody or otherwise). 3. Maintain or improve soil condition.	Resource Condition: 1. High frequency of 3P grasses. 2. Proactive weed control program. 3. Minimal erosion, with management strategy in place. 4. Minimal woodland thickening, with management strategy in place.

4.2 Pasture Spelling

Pasture spelling practices for grazing are summarised below. Current practice is likely to be a mix of all practices in the table.

DATED	**CONVENTIONAL**
Pasture spelling practices that are superseded or unacceptable	Pasture spelling practices that meet minimum expectations
Stocking rate exceeds pasture availability Description: 1. Pasture spelling not used in the management of any grazing land types. 2. Lack of internal fencing.	No differentiation between grazing land types Description: 1. Spelling is opportunistic and is usually a one-off occurrence in the wet season with limited planning. 2. Inadequate fencing and infrastructure. 3. De-stocking as a consequence of above.
Resource Condition: As per Pasture Management	Resource Condition: As per Pasture Management
BEST PRACTICE	**ASPIRATIONAL**
Currently promoted Best Management Practices	Innovative pasture spelling practices that require further validation
Pasture spelling for less resilient grazing land types Description: 1. Pasture allowed to re-seed at appropriate intervals. 2. Pasture monitoring to determine spelling regime is conducted periodically for the management of less resilient land types. 3. Planned annual grazing strategy based on optimum utilisation of country. 4. Grazing rotations are based on seasonal conditions and pasture monitoring results. 5. Land types assessed and vulnerable types given more consideration. 6. Fodder for future droughts is produced on - farm or purchased cheaply during wet cycles. 7. Destocking strategy is in place for climatic extremes such as drought. 8. Opportunistic herd management strategy is in place to optimise resource use in favourable seasons. 9. Paddock and overall property stocking rates are calculated using standard stock units for different classes and spelling regimes determined accordingly.	Pasture spelling for all grazing land types Description: 1. All B Class practices implemented. 2. Pasture spelling (such as wet season spelling) is used periodically in the management of all grazing land types to maximise soil seed bank and to provide sufficient rest for the pasture. 3. Appropriate planning is conducted for all land types. 4. Grazing strategies implemented during the growing season. 5. Stocking numbers per paddock are recorded electronically and compared across different seasons and various years. 6. Long-term weather forecasting is used to make decisions on stocking rates and buy and sell trigger points.
Resource Condition: As per Pasture Management	Resource Condition: As per Pasture Management

4.3 Riparian Management

Riparian management practices for grazing are summarised below. Current practice is likely to be a mix of all practices in the table.

DATED	**CONVENTIONAL**
Riparian management practices that are superseded or unacceptable	Riparian management practices that meet minimum expectations
No independent management of riparian / frontage grazing land types. Description: 1. Riparian grazing land types are not managed independently of other grazing land types. 2. Unrestricted access to riparian zones all year. 3. Extended periods of excessive stocking rates.	Some independent management of riparian / frontage grazing land types. Description: 1. Riparian grazing land types are not fenced or only partly fenced. 2. Off stream watering points used to encourage stock away from riparian area.
Resource Condition: 1. Bank erosion and slumping, eroding cattle tracks, minimal grass or vegetation cover, weed distribution and density is extensive.	Resource Condition: 1. Bank erosion and slumping, eroding cattle tracks, acceptable grass or vegetation cover, weed distribution and density is concerning.
BEST PRACTICE	**ASPIRATIONAL**
Currently promoted Best Management Practices	Innovative riparian management practices that require further validation
Independent management of riparian / frontage grazing land types. Description: 1. Riparian grazing land types are managed independently of other grazing land types **where practical**. 2. **Where practical** riparian areas fenced using permanent robust fencing that is a minimum of 20m from the top of the bank, **where appropriate** on defined watercourses to create a riparian paddock. 3. Pasture monitoring at critical times in riparian areas drives decisions on stocking rates. 4. Stocking rates adjusted independently of other grazing land types in response to pasture monitoring to maintain higher ground cover for riparian grazing land types. 5. Grazing management is based on regular, short interval grazing period/s with wet season spelling to maintain ground cover and minimise stock losses. 6. Off-stream watering points provided.	Regeneration or revegetation of native vegetation within riparian / frontage grazing land types. Description: 1. All B Class practices implemented. 2. Independent grazing management is applied to encourage natural regeneration (weed control) or revegetation of a native riparian vegetation buffer (at least 10m wide) from the top of the bank. 3. Stock is excluded while native riparian vegetation buffer is established up to 5m tall. The native riparian vegetation buffer consists of local native trees & shrubs consistent with the original regional ecosystem. 4. Seasonal grazing consistent with 'B' class practice can be implemented to manage pasture grass adjacent to the native riparian vegetation buffer, once established.
Resource Condition: 1. Reduced riparian bank slumpage with adequate grass and vegetation cover.	Resource Condition: 1. Stable riparian banks with well-established or regenerating native riparian vegetation buffer at least 10m wide from the top of the bank.

4.4 Gully Management

Gully management practices for grazing are summarised below. Current practice is likely to be a mix of all practices in the table.

DATED	CONVENTIONAL
Gully management practices that are superseded or unacceptable	Gully management practices that meet minimum expectations
No gully management Description: 1. Gully management not used for any grazing land types.	Gully management for identified risk areas Description: 1. Identification of risk areas with appropriate action taken. 2. No rehabilitation of identified eroding gullies.
Resource Condition: 1. Actively eroding gullies, with moving sediment.	Resource Condition: 1. Actively eroding gullies, with moving sediment.
BEST PRACTICE	**ASPIRATIONAL**
Currently promoted Best Management Practices	Innovative gully management practices that require further validation
Gully management for vulnerable grazing land types Description: 1. All grazing land types in the active gully catchment are managed independently of other grazing land types where appropriate. 2. Active stabilisation of gullies using restoration or mechanical intervention. 3. Prevent establishment of new gullies and contain expansion of established gullies in susceptible or vulnerable grazing land types. 4. Rehabilitated areas are fenced and managed independently during rehabilitation period. 5. Planning for infrastructure aims to minimise the risk of gully erosion. 6. Susceptible areas are monitored and site-specific restoration activities (including mechanical intervention) are implemented when appropriate. 7. Stocking rates adjusted independently of other grazing land types in response to pasture monitoring to maintain higher ground cover within the active gully catchment. 8. Stocking rates based on pasture monitoring at critical times conducted for vulnerable grazing land types.	Gully management for all grazing land types Description: 1. All B Class practices implemented. 2. Stocking rates are based on consideration of seasonal variability and monitoring in critical periods conducted for grazing land types in the active gully catchment. 3. Annual or biannual wet season spelling or complete exclusion is conducted for grazing land types within the active gully catchment during the rehabilitation period. 4. Identify all at risk soil types via soil mapping. 5. Professional advice informs appropriate mix of strategies to improve areas of gully erosion, which may include stock exclusion, mechanical reshaping of gully heads and sides and the installation of porous check dams.
Resource Condition: 1. Reduction in the expansion of gully erosion, or movement of sediment out of gully areas.	Resource Condition: 1. Stable gullies, no expanding gully erosion or movement of sediment out of gully areas. Increasing vegetation cover in erosion prone gullies.

4.5 Nutrient management

Nutrient management practices are summarised below. As nutrient management progresses to B and A class there is increasing precision in management of nutrient inputs to optimise the supply of nutrients to the pasture. The use of equipment as defined in this table can be owned individually, share-owned or contracted.

DATED	**CONVENTIONAL**
Nutrient management practices that are superseded or unacceptable	Nutrient management practices that meet minimum expectations
No Nutrient Management Description: 1. No nutrient program or opportunistic (price-based) unregulated application.	All land types managed the same for nutrient applications Description: 1. Applying fertiliser based on visual assessment, and historic application. 2. Limited soil testing. 3. Uneven application of fertiliser with limited calibration of application equipment. 4. One rate application to all land types/property.
Machinery: 1. Broadcast applicator.	Machinery: 1. Broadcast applicator.
BEST PRACTICE	**ASPIRATIONAL**
Currently promoted Best Management Practices	Innovative nutrient management practices that require further validation
Land types managed independently for nutrient application Description: 1. Conduct soil tests per representative soil type/ land type and appropriate fertilizer application related to soil test results/pasture composition/ land type. 2. Legumes introduced for increased pasture protein and nitrogen soil levels. 3. Timing nutrient applications with respect to seasonal conditions, rainfall probabilities and appropriate ground cover density (nitrogen-end of wet season / phosphorous-pre wet season where practical). 4. Seasonally timed strategic pasture renovation to reduce compaction issues. 5. Even application of fertiliser and regular calibration. 6. Strategic high nitrogen paddocks (grazing or fodder). 7. GPS guidance (light bar or auto steer) in fertiliser application.	Variable rate nutrient application within land types Description: 1. All B Class practices implemented. 2. Combined program of soil testing, faecal NIRS sampling, pasture quality monitoring or animal blood samples are used to determine required inputs. 3. Soil testing is georeferenced and monitoring sites established for each land type. 4. Nutrient deficiencies remedied based on soil tests and subsequent professional recommendations. 5. Apply variable fertiliser rates between paddocks based on representative soil type. 6. Soil ameliorants are used to achieve desirable pH. 7. Planned pasture renovation based on analysis of soil compaction measurements then treatments are appropriately timed 8. Even application of fertiliser is achieved through regular calibration. 9. If appropriate soils are available, a finishing system of high input pasture or fodder crop paddocks are used to finish sale stock to genetic potential 10. Use of recycled organics to build soil and substitute synthetic fertilisers. 11. Use of new legume and grass cultivars matched to soil fertility and used to improve soil properties.
Machinery: 1. Application of granular or liquid fertiliser with GPS guidance.	Machinery: 1. Ability to adjust rate for granular or liquid applicators with GPS guidance.

4.6 Pesticide Management

Pesticide management practices are summarised below. The term pesticide is used in this section and is a general classification for chemicals including herbicides, fungicides, rodenticides and insecticides for which similar management principles apply. The equipment as defined in this table does not have to be owned individually (e.g. can be share-owned, contracted or other).

DATED	CONVENTIONAL
Pesticide management practices that are superseded or unacceptable	Pesticide management practices that meet minimum expectations
Unplanned pesticide management Description: 1. Inappropriate and reactive application and use of chemicals. 2. One herbicide strategy for the whole farm based on historic application rates or rules of thumb. 3. Often the maximum label rate of residual and knockdown products used irrespective of weed pressure. 4. No drift control. 5. No calibration knowledge. 6. Poorly maintained machinery. 7. Inappropriate nozzles used. 8. Chemical accreditation training not completed or out of date.	Basic pesticide management Description: 1. Basic weed strategy based on chemicals. 2. Reactive preventative weed control. 3. Alternate strategies not considered. 4. Infrequent calibration of spray equipment conducted and limited nozzle maintenance. 5. Limited chemical selection based on one or two strategies 6. Limited knowledge of appropriate chemicals and application rates. 7. Minimal Personal Protection Equipment (PPE). 8. Meet legislative requirements for chemical storage, application and disposal. 9. Drift control measures in place.
Machinery: 1. Standard spray rig, with conventional nozzles.	Machinery: 1. Standard spray rig, with a suitable range of nozzles for various application tasks.

BEST PRACTICE	ASPIRATIONAL
Currently promoted Best Management Practices	Innovative pesticide management practices that require further validation
Strategic pesticide management Description: 1. Implementation of new application technology for, improved placement, timing and drift reduction. 2. Choice of herbicides and application rates based on weed spectrum and growth stage. 3. Knockdown herbicides replace residual herbicides where practical (residual herbicides only used where weed species and pressure demands it). 4. Timing chemical applications with respect to weed stage, irrigation and rainfall probabilities. 5. Integrated weed control approach to weed management including chemical, mechanical biological and nutrition. 6. The impact of chemicals on beneficial legumes considered. 7. Completed accreditation and competency requirements for chemical usage. 8. Frequent calibration of spray equipment including appropriate nozzle maintenance. 9. Methods in place to prevent weed seed spread and property hygiene. 10. Animal health activities are rotated. 11. Targeted herbicide strategies within paddocks. 12. GPS guidance (light bar or auto steer) in chemical application.	Strategic, spatial and innovative pesticide management Description: 1. All B Class practices implemented. 2. NIR detection and control of weeds. 3. Low rates of nitrogen are used to fertilise pastures so they can outcompete low-level weed infestations. 4. Use of drones to map problem weeds and to spray inaccessible places. 5. Spatial recording of the control of major weed species with GPS.
Machinery: 1. Boom jets, low drift nozzles (matched to job), splatter guns, wick wipers with manual rate control. 2. Pressure sprayers, knapsack sprayers, stem injection/cut stump and slashers. 3. GPS.	Machinery: 1. Boom jets, low drift nozzles (matched to job), splatter guns, wick wipers with manual rate control. 2. NIR detectors. 3. GPS guidance. 4. Low impact machinery.

4.7 Planning and Record Keeping

It is recognised that planning and record keeping practices are inherent to good management and are needed for efficient implementation of all other management practices (i.e. pasture management, pesticide management etc.). As shown in Figure 1, good planning and record keeping drives improvement from lower classes (D or C) to higher classes (B or A).

DATED	**CONVENTIONAL**
Planning and record keeping practices that are superseded or unacceptable	Planning and record keeping practices that meet minimum expectations
No record keeping or planning on natural resource management. Description: 1. No current practice review completed. 2. No formal records kept. 3. Records kept in head. 4. No forward planning for property improvement or increased sustainability. 5. No farm map. 6. No financial planning.	Basic record keeping and some forward planning on natural resource management. Description: 1. No current practice review completed. 2. Basic record keeping. 3. Basic records kept in pocket notebook or similar highlighting major events. 4. Some forward planning into business. 5. No or outdated farm map. 6. Financial planning for current year.
BEST PRACTICE	**ASPIRATIONAL**
Currently promoted Best Management Practices	Innovative planning and record keeping practices that require further validation
Record keeping and forward planning for optimum resource management is part of the annual business cycle. Description: 1. Current practice review completed. 2. Formal record keeping process established. 3. Records kept in a paddock journal or diary. 4. Develop and implement a grazing land management plan, including a plan for water infrastructure. 5. Identify grazing land types and pasture types for each paddock using farm maps. 6. Record pasture condition and stocking rates. 7. Farm map in electronic or paper format. 8. Paper or electronic photo records kept. 9. Financial planning is conducted for both the current and future years. 10. Pregnancy testing. Female management is planned and dependant on pregnancy status and feed requirements. 11. Planning for extreme climatic conditions – drought, heavy wet seasons, flooding.	Electronic record keeping and forward planning using GIS and emerging technologies. Description: 1. All B Class practices implemented. 2. High quality formal electronic records kept. 3. Develop and implement a grazing land management plan, which is updated regularly, including a plan for water infrastructure. 4. Identify grazing land types, pasture types, weed pressure and variability within each paddock using GPS and mapping technology. 5. Pasture assessments conducted on a regular basis to formulated accurate pasture budgeting using tools such as 'Stocktake Plus' App. 6. Electronic farm map. 7. Records kept in computer database. 8. Business regularly benchmarked using tools such as 'Profit Probe'. 9. Virtual fencing. 10. GPS tracking of livestock.

5. Implementation of the ABCD Framework

This framework identifies and supports the validation of grazing management practices that can improve both freshwater and marine water quality and ecosystem health as identified in the Water Quality Improvement Plan (WQIP), (Folkers, A., Rohde, K., Delaney, K., Flett, I., 2014).

The ABCD framework is designed to highlight and facilitate communication about the different levels or standards of management practice (as opposed to resource condition) within the grazing industry for different water quality parameters (i.e. sediment, nutrients and pesticides. The classifications provide a definition and a scale of improvement from Dated to current Best Practice through to future Aspirational or 'cutting edge' practices.

If implemented, the A and B class grazing management practices that have been identified in this document will improve water quality and increase enterprise viability through long-term improvements in land condition. This aligns with the Water Quality Improvement Plan and associated State and Federal funding programs.

6. Review of the ABCD Framework

Over time, changes in knowledge, technology, costs and market conditions may validate cutting-edge, 'A' class (Aspirational), practices so they eventually become B class (Best Management) practices. If these practices are widely adopted and become the new industry standard, they may become Conventional practices within an ABCD framework.

The Mackay Whitsunday Grazing Working Group will therefore review the framework periodically to monitor emerging Aspirational practices and to determine those practices that need to be re-considered as Best Practice. Considerable effort was made to consult with grazing industry partners to develop the original ABCD framework in 2010 and this will be repeated over time to ensure there is continued relevance to the industry in the Mackay Whitsunday region.

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Appendix A

Grazing Industry Working Group (as at 2010-11)

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