Appendix A – Required modifications to existing and proposed flood control works

Figures A1 to A13 show the FMP Floodway Network and the required hydraulic modifications for existing works. Further information is given in Table 5.1 (pp 32-39).

Figure A-1  Bugaboo Point Floodways (RHAC A)
Figure A-2  Gin Gin and Mullah Floodways (RHAC B)
Figure A-3  Miegunyah Floodways (RHAC C)
Figure A-4  Toucan Floodways (RHAC D)
Figure A-5  Greenhide Area Floodways (RHAC E)
Figure A-6  Ardoch/Nellyvale Area Floodways (RHAC F)
Figure A-7  Marebone Creek Area Floodways (RHAC G)
Figure A-8  Gradgery Lane Area Floodways (RHAC H)
Figure A-9  Buttabone Floodways (RHAC I)
Figure A-10 Bellevue Floodways (RHAC J)
Figure A-11 Five Mile Cowal Area Floodways (RHAC K)
Figure A-12 Five Mile Cowal Upstream Area Floodways (RHAC L)
Figure A-13 Twenty-Stone Floodways (RHAC M)
Figure A-1

Bugaboo Point
Floodways (RHAC A)

Legend

- Cross Section with Design Flood Level (mAHD)
  (= Maximum Levee Height Upstream of Warren)
- Existing Banks to be removed or limited in height
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non complying s.3.2.7)
- MDBC Draft Irrigation Areas 2002

Direction of Flow

- RMP Area
  Area where Flood control works are deemed to be complying works s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)

Bank Level 226.6 m AHD

Bank Level 225.7 m AHD

Bank Level 227.7 m AHD

Bank Level 227.8 m AHD

Bank Level 228.4 m AHD

Bank Level 228.5 m AHD

Design Peak Flow: 11,400 MLD

Design Peak Flow: 32,800 MLD

Design Peak Flow: 45,700 MLD

Min. floodway width 500 m

Required minimum floodway width 1000 m if banks 'A' & 'B' are not maintained at specified bank heights

Required backwater storage - Floodway active for floods greater than Design Flood

Bank across floodway to be removed

Preferred alignment of floodway bank 'Burratipi'

Preferred alignment of floodway bank 'Byron'

Existing Bank 'A' to be removed

Existing Bank 'B' to be removed

Existing Bank 'C' to be removed

Existing flood control bank 'A' Top of Bank level not greater than 224.9 m AHD

Existing flood control bank 'B' Top of Bank level not greater than 1.00 m below Design Flood height

Top of Bank level not greater than 1.00 m below Design Flood level

Top of Bank level not greater than 1.00 m below Design Flood level

Top of Bank level not greater than 1.00 m below Design Flood level

Top of Bank level not greater than 224.9 m AHD

Top of Bank level not greater than 1.00 m below Design Flood level

Top of Bank level not greater than 1.00 m below Design Flood level

Bank across floodway to be removed

Preferred alignment of floodway bank

Preferred alignment of floodway bank

Required minimum floodway width 1000 m if banks 'A' & 'B' are not maintained at specified bank heights

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[Map Description and Details]
Figure A-2

Gin Gin and Mullah Floodways (RHAC B)

Legend

- Cross Section with Design Flood Level (mAHD)
  (= Maximum Levee Height Upstream of Warren)
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non-complying s.3.2.7)
- MDSC Draft Irrigation Areas 2002
- Direction of Flow

Area where Flood control works are deemed to be complying works a 3.2.7 (Approval of flood control works are subject to the determination process a 3.2.4)

- Reservoir
- 'Maggumya' Reservoir
- 'Mullah' Reservoir
- Localised rise in flood levels
  (To be monitored during major flood events)
- During major flood, high velocity
  and scouring expected (To be
  monitored during major flood events)
- Design peak Flow: 17,200 MLD

Map Projection: AMG (AGD66) Zone 55

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Figure A-3
Miegunyah Floodways (RHAC-C)

Legend
- Cross Section with Design Flood Level (mAHD) (= Maximum Levee Height Upstream of Warren)
-_requested Development Area
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non-complying s.3.2.7)
- MDBC Draft Irrigation Areas 2002
- Direction of Flow

Area where Flood control works are deemed to be complying works s.3.2.8 (Approval of flood control works are subject to the determination process s.3.2.4)

Design Peak Flow: 4,700 MLD
Requested Development Area
Requested width of Floodway 450 m
Requested Minimum 600 m

1976/82 Guideline Floodway 500 m width (Minimum)

Requested width of Floodway 100 m
Requested Minimum 300 m

Direction of Flow

0 1 2 3 Kilometres

Ban Ban Creek
Gin Gin to Warren Road
Mullah
Mullah Cowal
Gin Gin
Miegunyah

Requested Development Area

1976/82 Guideline Floodway 500 m width (Minimum)

Design Peak Flow: 4,700 MLD

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Figure A-4
Toucan Floodways (RHAC-D)

Legend
- Cross Section with Design Flood Level (mAHD) (= Maximum Levee Height Upstream of Warren)
- Requested Development Area
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non complying s.3.2.7)
- MDBC Draft Irrigation Areas 2002
- Direction of Flow

Area where Flood control works are deemed to be complying works s.3.2.6 (Approval of flood control works are subject to the determination process s.3.2.4)

Design Peak Flow: 29,500 MLD

Existing stockpile of cotton waste (To be cleared)

Major Floodway leading to Beleringar Creek

Proposed Flood Bank 'C' across Northern Floodway (Not to be constructed)

Proposed Flood Bank 'A' across Southern Floodway (Not to be constructed)

Design Peak Flow: 14,500 MLD

Design Peak Flow: 18,500 MLD

Proposed Flood Bank 'B' across Southern Floodway (Not to be constructed)

Trangie Cowal

Existing above ground Supply Channel to be lowered to ground level

"Toucan"

Beleringar Creek Cutting

Beleringar Creek Regulator

Ban Ban Creek

Design Peak Flow: 203.5 MLD

Floodwaters from major overflows on Left Bank at and Downstream of Gin Gin

Proposed Flood Bank 'B' across Southern Floodway (Not to be constructed)

Proven Flood Bank 'C'

Ban Ban Creek

MDBC Draft Irrigation Areas 2002

Area where Flood control works are deemed to be complying works s.3.2.6 (Approval of flood control works are subject to the determination process s.3.2.4)
Figure A-5
Greenhide Area Floodways (RHAC-E)

Legend
- Cross Section with Design Flood Level (mHDL)
- Maximum Levee Height Upstream of Warren
- Direction of Flow
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non-complying s.3.2.7)
- MDBC Draft Irrigation Areas 2002

Direction of Flow:
1. Wambianna
2. Greenhide Swamp
3. Siphon to be lowered to natural surface over the full width of the floodway
4. Siphon to be lowered to natural surface over the full width of the floodway
5. Straighten floodway by removing sharp bends and restrictions
6. Ensure a floodway minimum width of 110 metres is maintained
7. Ensure a floodway minimum width of 110 metres is maintained
8. Ensure a floodway minimum width of 110 metres is maintained
9. Existing Floodway width in accordance with 1978/82 Guidelines
10. Design Peak Flow: 28,700 MLD

Area where Flood control works are deemed to be complying works s.3.2.6 (Approval of flood control works are subject to the determination process s.3.2.4)
Figure A-6
Ardoch/Nellyvale Area Floodways (RHAC-F)

Legend

- Cross Section with Design Flood Level (mAHD)
  (= Maximum Levee Height Upstream of Warren)
- Requested Development Area
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non complying s.3.2.7)
- MDBC Draft Irrigation Areas 2002

Area where Flood control works are deemed to be complying works s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)

- Marebone Weir
- Proposed Development Area 'A' will increase flood levels in the Macquarie River. Landholder will require supporting information to address any increase in flood levels
- Proposed Development Area 'B' will increase flood levels in the Macquarie River. Landholder will require supporting information to address any increase in flood levels
- Proposed Development Area 'C' will increase flood levels in the Macquarie River. Landholder will require supporting information to address any increase in flood levels

Design Peak Flow: 30,000 MLD
- Design Peak Flow: 20,400 MLD
- Design Peak Flow: 55,300 MLD

Direction of Flow

Requested Development Area

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Area where Flood control works are deemed to be complying works s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)
Figure A-7
Marebone Creek Area
Floodways (RHAC-G)

Legend
- Cross Section with Design Flood Level (mAHD)
  (= Maximum Levee Height Upstream of Warren)
- Requested Development Area
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non-complying s.3.2.7)
- MDB Draft Irrigation Areas 2002
- Direction of Flow
- Area where Flood control works are deemed to be complying works s.3.2.6 (Approval of flood control works are subject to the determination process s.3.2.4)

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Figure A-8
Gradgery Lane Area
Floodways (RHAC-H)

Legend
- Cross Section with Design Flood Level (mAHID) (= Maximum Levee Height Upstream of Warren)
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non complying s.3.2.7)
- MDBC Draft Irrigation Areas 2002
- Direction of Flow
  - Area where Flood control works are deemed to be complying works s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)
- Localised flooding only

Back Swamp
Gradgery Lane
"Flintrock"
Existing Reservoir
Floodway 'A'
Floodway 'B'
Floodway 'C'

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Design Peak Flow: 4,500 MLD
Minimum width of 500 metres to be maintained
Entrance to Floodway 'C' to be straightened and a minimum width of 100 metres to be maintained
Entrance to Floodway 'C' to be straightened and a minimum width of 500 metres to be provided

F3
Floodway minimum width of 500 metres to be provided
Minimum width of 500 metres to be maintained

Road Network
Floodways (Flood control works within floodways are deemed to be non complying s.3.2.7)
MDBC Draft Irrigation Areas 2002
Direction of Flow
Area where Flood control works are deemed to be complying works s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)
Localised flooding only
Figure A-9

‘Buttabone’ Floodways (RHAC-I)

Legend

- Cross Section with Design Flood Level (mAHD)
- Maximum Levee Height (Upstream of Warren)
- Direction of Flow
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non complying s.3.2.7)
- MDU Draft Irrigation Areas 2002
- Area where Flood control works are deemed to be complying works s.3.2.6 (Approval of flood control works are subject to the determination process s.3.2.4)

- Increment in flood level up to 0.8m expected if the New Floodway along Middle Creek is not provided
- New floodway with a minimum width of 200 metres to be provided or Landowner to provide alternative scheme to increase floodway capacity
- Middle Creek blocked by irrigation development
- Design Peak Flow: 4,000 MLD

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Figure A-10
Bellevue Floodways (RHAC-J)

Legend
- Cross Section with Design Flood Level (mAHD)
- 1978/82 Guideline Floodway
- 1978/82 Guideline Floodway
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non-complying s 3.2.7)
- MDBC Draft Irrigation Areas 2002
- MDBC Draft Irrigation Areas 2002
- Direction of Flow
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Floodways (Flood control works within floodways are deemed to be non complying s 3.2.7)

Area where Flood control works are deemed to be complying works s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)

Minimum floodway width 1,500m

Critical that this part of floodway to remain open

No further development to be allowed which might reduce floodway capacity

Flood levels to be monitored in major flood events

Design Peak Flow 55,300 MLD

Figure A-11
Five Mile Cowal Area Floodways (RHAC-K)

Legend
- Cross Section with Design Flood Level (mAHD) (= Maximum Levee Height Upstream of Warren)
- Direction of Flow
- Road Network
- Creeks
- Rivers
- Floodways
- Area where Flood control works are deemed to be complying s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)
- Flood levels to be monitored in major flood events
- Floodways (Flood control works within floodways are deemed to be non complying s 3.2.7)

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Design Peak Flow: 55,300 MLD

Yinga

Spoil Mounds in this section

Marthugay Scheme Pumping Station

Marthugay Intake Channel

Marthugay Irrigation Channel

Pig Island

'Drungalear'

'Marthugay Irrigation Channel'

Critical that this part of floodway to remain open

Flood levels to be monitored in major flood events

Flooding generally confined to Creeks and Cowals

No further development to be allowed which might reduce floodway capacity

Minimum floodway width 1,500m

'Kang.ta'

Spoil Mounds in this section

Macquarie River

Five Mile Cowal

Creeks

Rivers

F1

Five Mile Cowal Area
Flooding generally confined to Creeks and Cowals

F1

Figure A-11
Five Mile Cowal Area Floodways (RHAC-K)
Figure A-12
Five Mile Cowal Upstream Area Floodways (RHAC-L)

Legend
- Cross Section with Design Flood Level (mAHD) (= Maximum Levee Height Upstream of Warren)
- Direction of Flow
- Creeks
- Rivers
- Road Network
- Floodways (Flood control works within floodways are deemed to be non complying s.3.2.7)
- MDIC Draft Irrigation Areas 2002

Area where Flood control works are deemed to be complying works s.3.2.6 (Approval of flood control works are subject to the determination process s.3.2.4)
- Flooding generally confined to Creeks and Cowals

Design Peak Flow: 56,800 MLD

Existing Reservoir

Existing Width of Floodway 50 m

Drungalea

Boomanulla

Macquarie River

Existing Reservoir

F1

Flooding generally confined to Creeks and Cowals

F1

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Figure A-13
Twenty-Stone Floodways (RHAC-M)

Legend
- Creea Section with Design Flood Level (mAHD)
  (= Maximum Levee Height Upstream of Warren)
- Direction of Flow
- Roads
- Floodways (Flood control works within floodways are deemed to be non complying s 3.2.7)
- MDBC Draft Irrigation Areas 2002

Area where Flood control works are deemed to be complying works s 3.2.6 (Approval of flood control works are subject to the determination process s 3.2.4)

Floodway with minimum width 110 metres to be provided

Design Peak Flow: 20,600 MLD

Floodway with minimum width 110 metres to be provided

Required minimum width of Floodway 110 metres

Existing minimum width of Floodway approx 25 metres

Floodway Detail

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