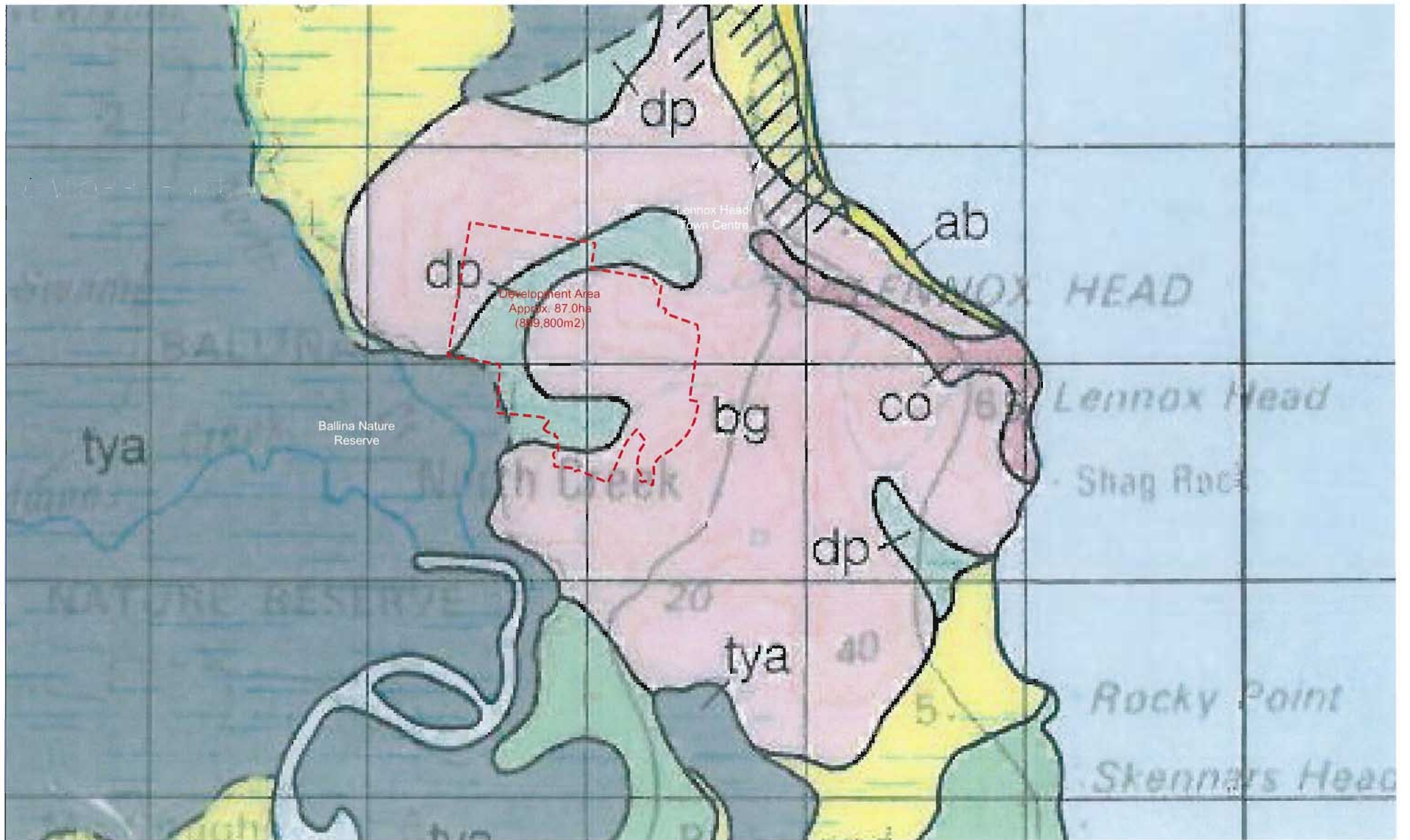




ORIENTATION
NORTH

SCALE
1:16 000 @ A3
200 400 600 800
metres

LEGEND

bg Bangalow
dp Disputed plain

--- Site boundary

PROJECT

PACIFIC PINES
LENNOX HEAD
NSW

CLIENT

DELFIN LEND
LEASE

DRAWING

SOIL LANDSCAPE
MAP

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SCALE
1:16 000 @ A3

DATE
14/12/2012

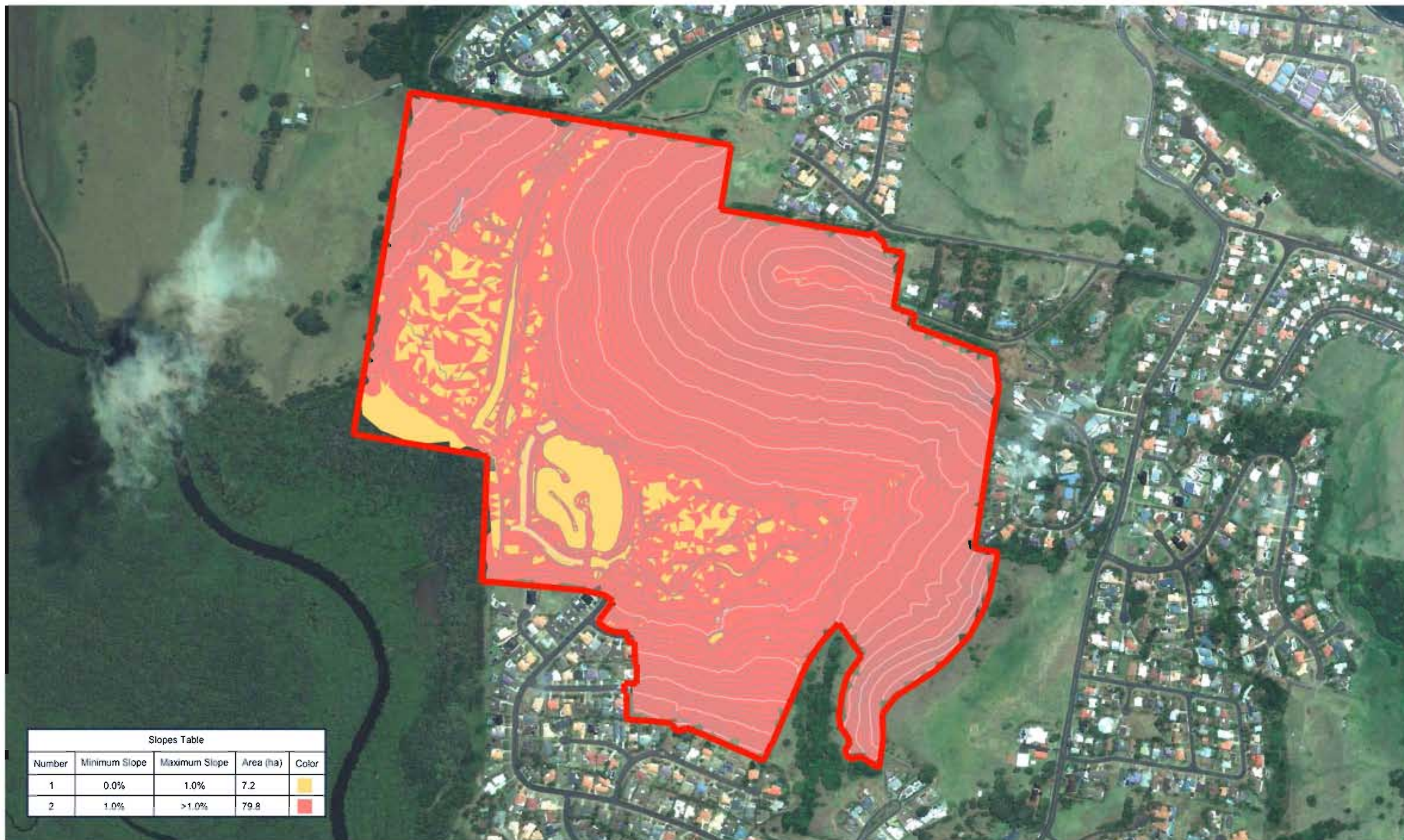
DRAWN
DUY/KLS

CHECKED
PLM

PROJECT NO
10734

DRAWING NO
06

CAIRNS
KAWANA
BRISBANE
MELBOURNE
**+GILBERT
SUTHERLAND**
AGRICULTURE WATER ENVIRONMENT



ORIENTATION
NORTH

SCALE
1:6 250 @ A3
50 100 150 200 250 300
metres

LEGEND

- Site boundary
- Major contours (5m intervals)
- Minor contours (1m intervals)

SOURCES

Base Image: Google Earth Pro, 2012

PROJECT

PACIFIC PINES
LENNOX HEAD
NSW

CLIENT

LEND LEASE

DRAWING

SLOPE CLASSES

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GILBERT SUTHERLAND
AGRICULTURE WATER ENVIRONMENT

SCALE
1:6 250 @ A3

DATE
10/08/2012

DRAWN
DJF

CHECKED
PLM

PROJECT NO
10734

DRAWING NO
07



ORIENTATION
 NORTH

SCALE
 1:6 250 @ A3
 50 100 150 200 250 300
 metres

LEGEND

--- Site boundary
 SS Side slope
 HS Hillwash/
 foot slope
 DP Drainage plain
 HT Hilltop

SOURCES
 Google Earth Pro, 2012

PROJECT
 PACIFIC PINES
 LENNOX HEAD
 NSW

CLIENT
 LEND LEASE

DRAWING
 TERRAIN UNITS

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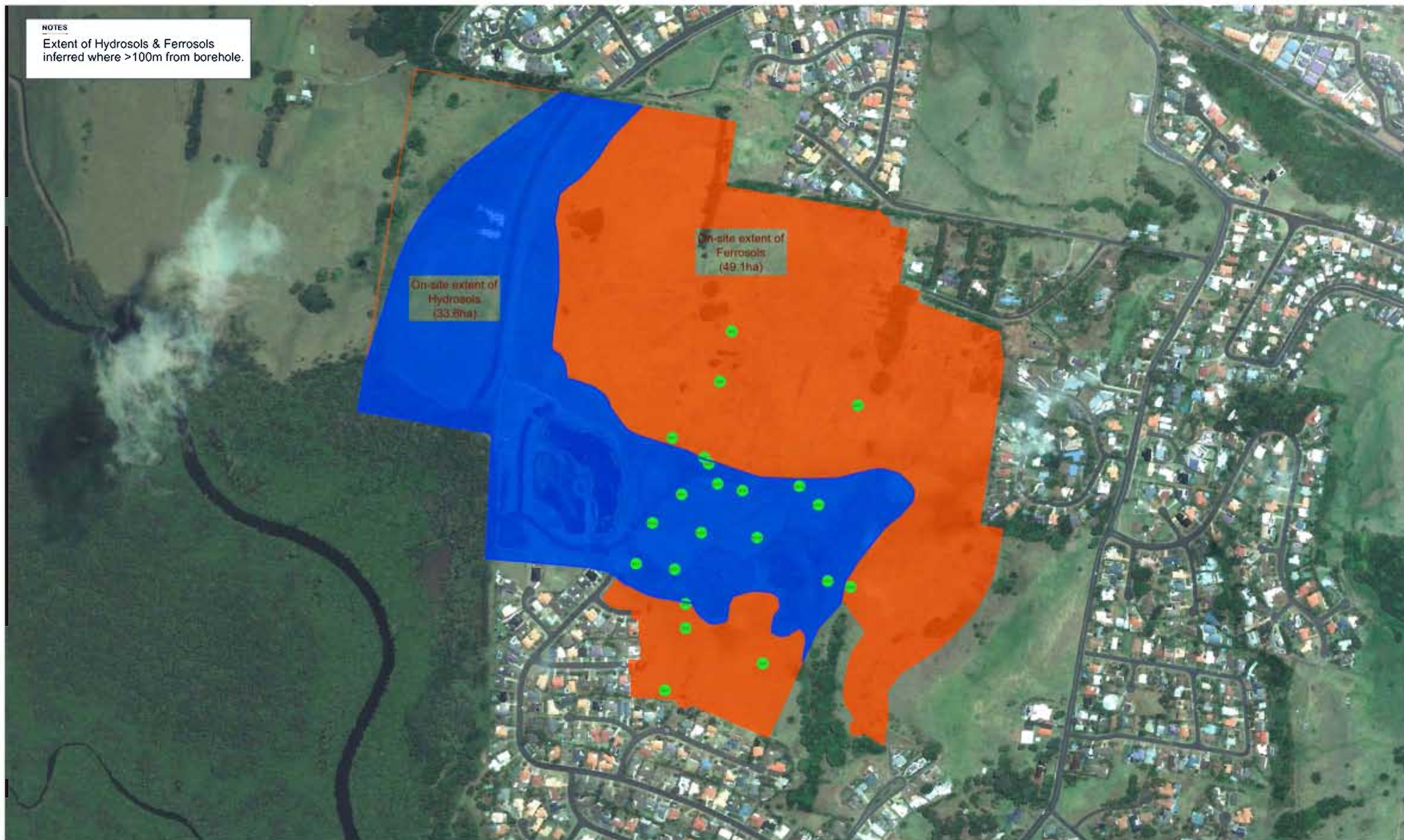
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GILBERT
 SUTHERLAND
 AGRICULTURE WATER ENVIRONMENT

SCALE 1:6 250 @ A3 DATE 10/09/2012 DRAWN D.J.F. CHECKED PLM PROJECT NO 10734 DRAWING NO 08

NOTES

Extent of Hydrosols & Ferrosols inferred where >100m from borehole.



ORIENTATION
NORTH

SCALE
1:6 250 @ A3
50 100 150 200 250 300
metres

LEGEND

Hydrosol/Ferrosol boundary
Site boundary

Borehole
Extent of Hydrosols
Extent of Ferrosols

SOURCE

Google Earth Pro, 2012

PROJECT

PACIFIC PINES
LENNOX HEAD
NSW

CLIENT

LEND LEASE

DRAWING

SOIL
CLASSIFICATION

ROBINA

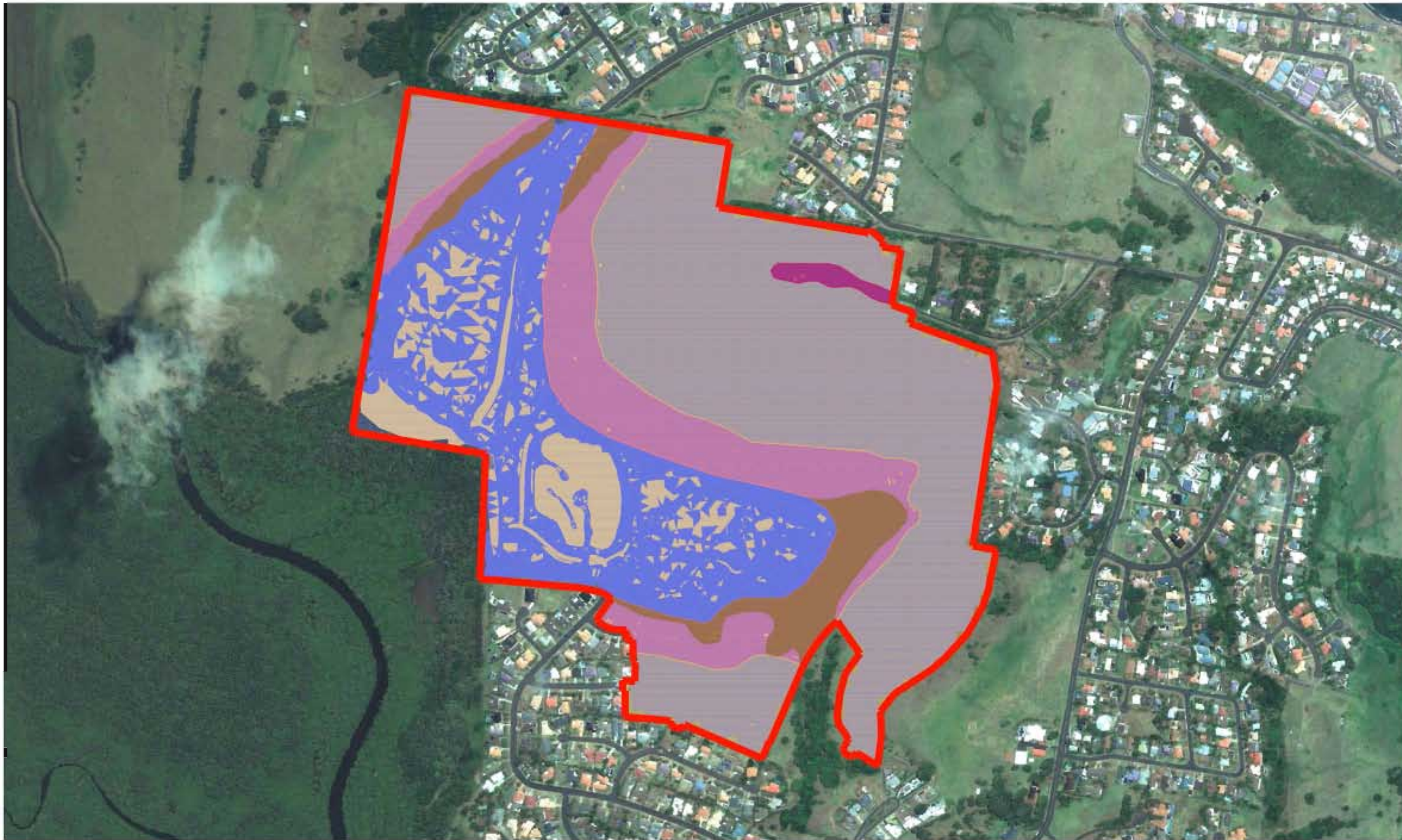
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SCALE 1:6 250 @ A3 DATE 10/09/2012 DRAWN DJF CHECKED PLM PROJECT NO 10734 DRAWING NO 09



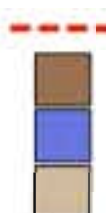
 **ORIENTATION**
 NORTH

SCALE
 1:6 250 @ A3


LEGEND



UMA 1
 UMA 2
 UMA 3



Site boundary
 UMA 4
 UMA 5
 UMA 6

SOURCES

Google Earth Pro, 2012

PROJECT

PACIFIC PINES
 LENNOX HEAD
 NSW

CLIENT

LEND LEASE

DRAWING

Unique Mapping
 Areas (UMA)

SCALE
1:6 250 @ A3

DATE
10/09/2012

DRAWN
DJF

CHECKED
PLM

PROJECT NO
10734

DRAWING NO
10

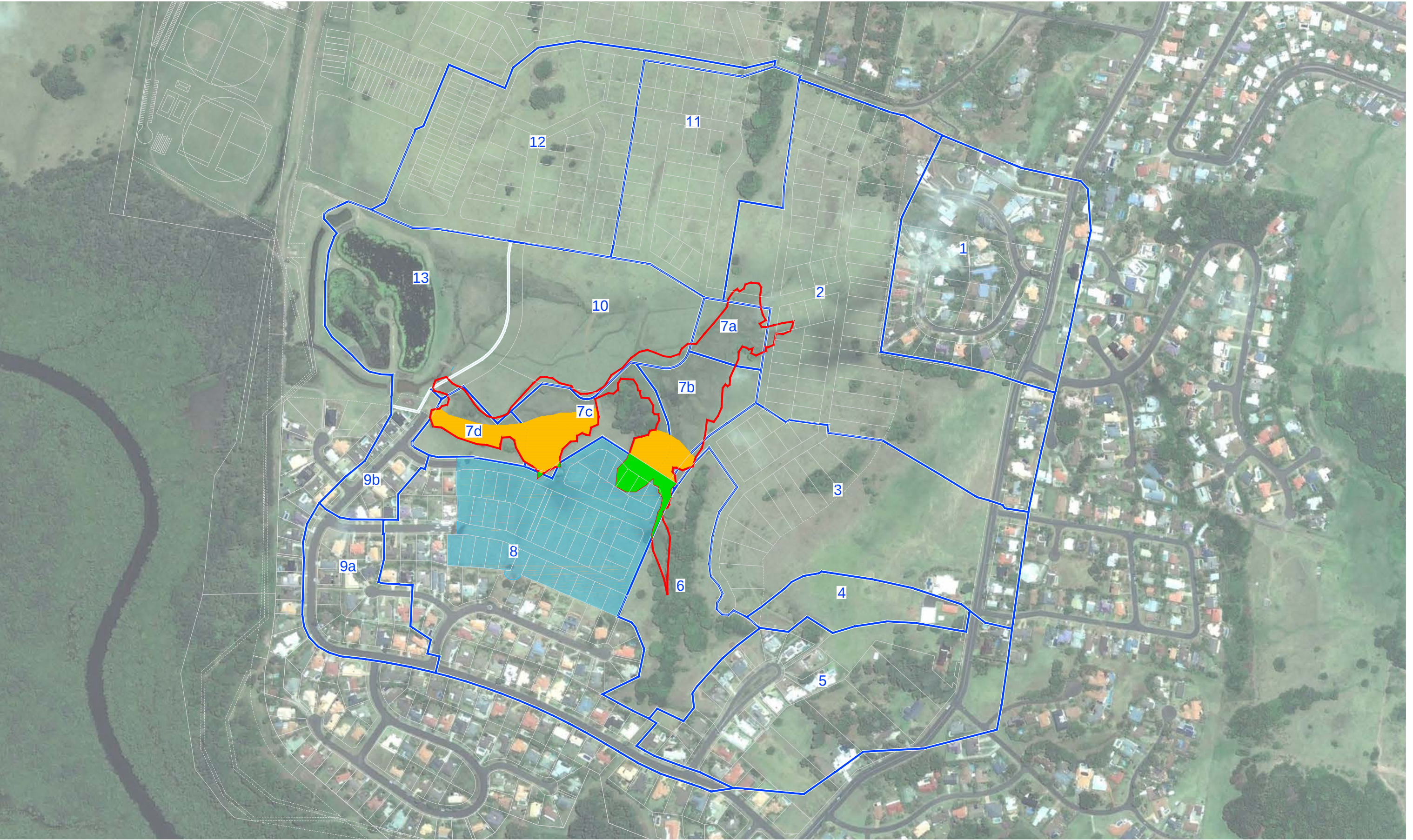
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ORIENTATION
NORTH

SCALE

50

100

150

200

250

metres

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LEGEND

 Target Seepage Area For Recharge from 1A (1.6ha)

 Catchment Boundaries (91ha)

 Seepage Zone Bounadry

 Development Stage 1A

 Urbanised Seepage Area

SOURCES

Image base: Google Earth Pro 2012

PROJECT

PACIFIC PINES
LENNOX HEAD
NSW

SCALE

1:5 000@A3

DATE

18/12/2012

CLIENT

DELFIN LEND
LEASE

DRAWN

BWS

CHECKED

PLM

DRAWING

SEEPAGE ZONES &
TARGET WETLAND
AREA FOR STAGE 1
DEVELOPMENT

PROJECT NO

10734

DRAWING NO

11

Brisbane Sydney Melbourne and regions


Agriculture. Water. Environment.

50 100 150 200 250
metres

SCALE
1:5 000

ORIENTATION
NORTH

LEGEND

- Pacific Pines Estate
Balance Boundary
- WBNM developed case
catchment boundary
- Freshwater EEC
model reporting location

SOURCES

Contours and proposed layout supplied by
Kennedy Surveying and SMEC Urban

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AGRICULTURE WATER ENVIRONMENT



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PROJECT
PACIFIC PINES ESTATE
LENNOX HEAD, NSW

CLIENT
LEND LEASE

DRAWING
FRESHWATER EEC MODEL
REPORTING LOCATIONS

DATE
24/09/2012

SCALE
1:5 000

PROJECT NO
10734

DRAWN
BWS

CHECKED
CMA

REVISION
B

DRAWING NO
12

10 20 30 40 50 60

SCALE

Basin plan 1:1 250
Location plan and detail NTS



ORIENTATION

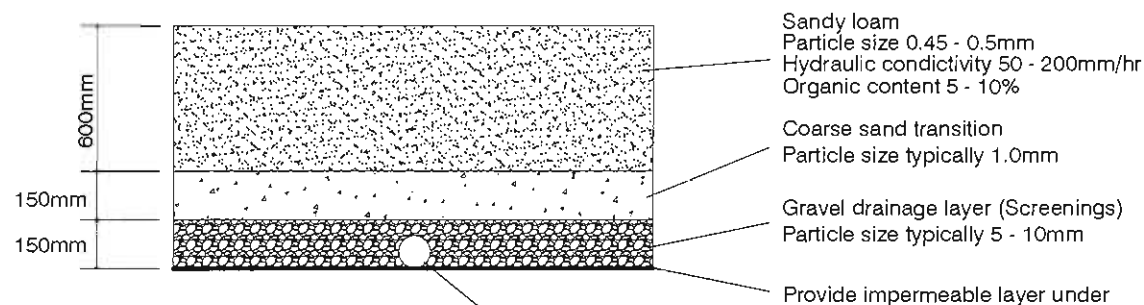
NORTH

LEGEND

Pacific Pine Estate Balance boundary

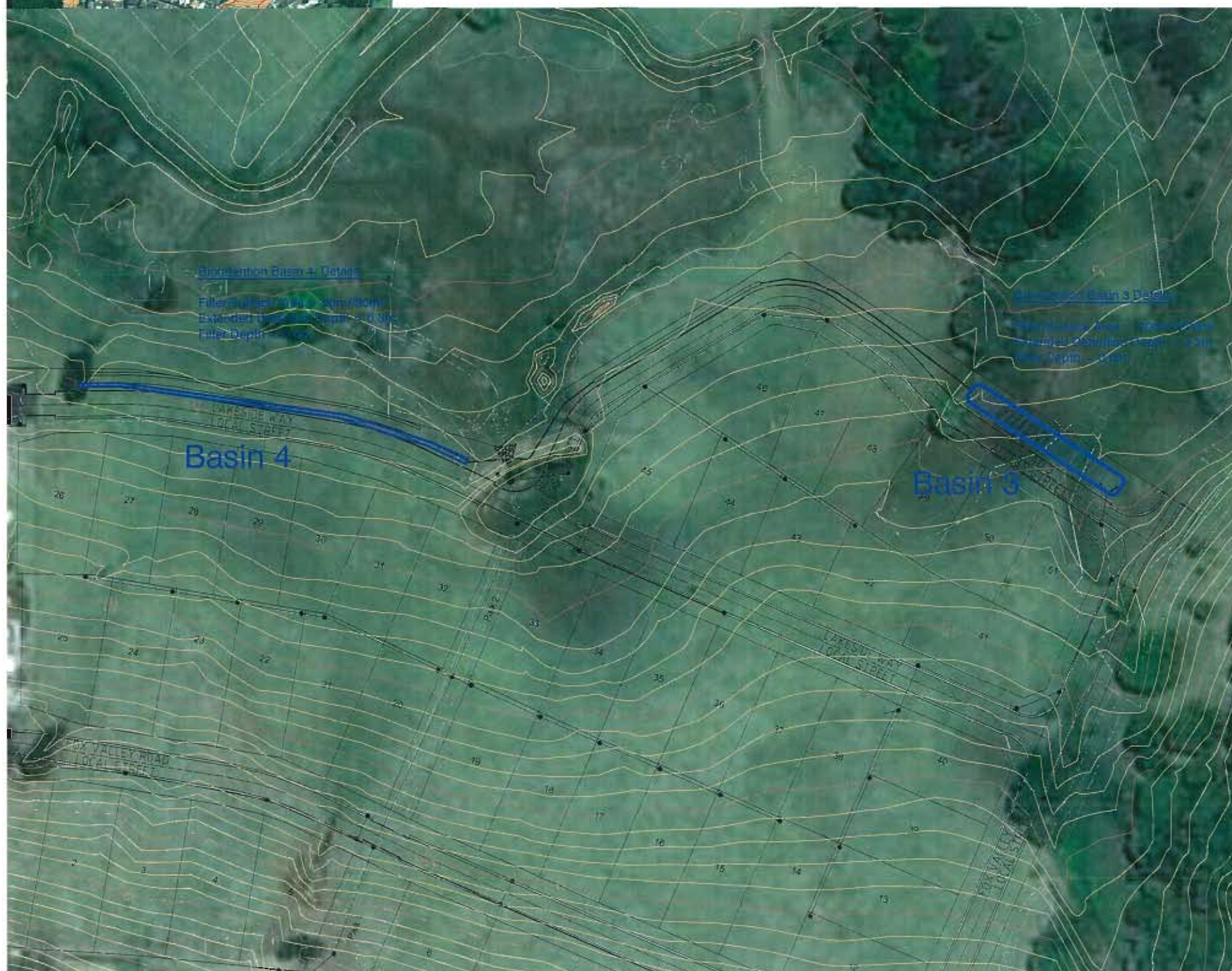
SOURCES

Contours and proposed layout supplied by
Kennedy Surveying and SMEC Urban



Notes
Filter conductivity to be measured in
accordance with AS4419:2003.
Filter organic content to be measured
in accordance with AS1289 4.1.1.

TYPICAL BIORETENTION BASIN FILTER ZONE DETAIL



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AGRICULTURE WATER ENVIRONMENT

**GILBERT
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PROJECT
PACIFIC PINES ESTATE
LENNOX HEAD, NSW

CLIENT
LEND LEASE

DRAWING
BIORETENTION BASIN
DETAILS

DATE 24/08/2012	DRAWN BWS
SCALE 1:1 250 & NTS	CHECKED CMA
PROJECT NO 10734	REVISION B

50 100 150 200 250
metres

SCALE
1:5 000



ORIENTATION
NORTH

LEGEND

- Pacific Pines Estate
Balance Boundary
- WQCP Device
- Bioretention Device
- Infiltration Device
- WBNM Developed case
catchment boundary
- GPT

SOURCES

Contours and proposed layout supplied by
Kennedy Surveying and SMEC Urban
The location of basin 1 & 2 is conceptual
only, subject to site constraints and detailed
design.

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AGRICULTURE WATER ENVIRONMENT



**GILBERT
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PROJECT
PACIFIC PINES ESTATE
LENNOX HEAD, NSW

CLIENT
LEND LEASE

DRAWING
STORMWATER MANAGEMENT
MEASURES LAYOUT

DATE
18/12/2012

SCALE
1:5 000

PROJECT NO
10734

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BWS

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CMA

REVISION
C