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N

DATUM GDA 1994, PROJECTION MGA ZONE 56

0 2,500 5,000 10,000

metres

1:160,000 (when printed at A3)

Legend

- Waterways
- Mining Lease - ML 7024
- Receiving Environment Study Area
- Investigation Areas

1. Andoom HEQ, 2. Evans Landing and Evans Landing Landfill,
3. Lorim Point and Railway Workshop, 4. Weipa Airport,
5. East Weipa HEQ

PROJECT SAM - WEIPA

REGIONAL OVERVIEW

PROJECT ID	60588844
CREATED BY	JB
LAST MODIFIED	JB - 27 Mar 2019
VERSION:	1

Figure F1

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\60588844_ProjectSamWeipa_F1_RegionalOverview_v2_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

2,000 1,000 0 2,000

metres

1:70,000 (when printed at A3)

LEGEND

Source Type

- Potential Source Area
- Primary Source Area
- Secondary Source Area

Data sources:
Aerial Photography - QLD Gov
Data, Golder Associates (2017)
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

POTENTIAL SOURCE AREAS

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	JB - 02 Apr 2019
VERSION:	1

Figure F2

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F2_PotentialSources_A3.mxd

A3 size

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ASB MW13
ASB MW06
ASB MW05
ASB MW07
Sediment Trap
ASB MW01
Service Bay
ASB MW15
ASB MW17
ASB MW12
ASB MW02
Triple Interceptor
ASB MW08
Outlet
ASB MW22
ASB MW09
Diesel AST
ASB MW11
ASB MW04
ASB MW03
ASB MW16
ASB MW19
ASB MW23
ASB MW14
ASB MW10
ASB MW18
AHEQ MW01
AHEQ_SS06
AHEQ MW02
AHEQ_SS07
AHEQ_SS05
AHEQ Workshop
AHEQ_SS01
AHEQ_SS02
AHEQ_SS04
Oil/Water Seperator
Outlet
Humeceptor Discharge
Washbay
PR/AND/WS
ASB MW21
PR/AND/WS
AHEQ_SS03
AHEQ MW04
Laydown Yard
AHEQ MW03
PR/AND/WS/DOS
PR/AND/WS/DOS
AHEQ MW05
AHEQ MW07
AHEQ MW11
AHEQ MW08
AHEQ MW06
AHEQ MW09
AHEQ MW10

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N

DATUM GDA 1994, PROJECTION MGA ZONE XX

0 62.5 125 250

Metres

1:5,000 (when printed at A3)

LEGEND

- Existing Groundwater Monitoring Wells
- New Groundwater Monitoring Wells
- Surface Water Sampling Location
- Soil Bores
- Sediment Sampling Location
- Monitoring wells sampled by AECOM in 2018



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SAMPLING LOCATIONS:
Andoom Heavy Equipment Workshop (AHEQ)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	28-Mar-2019
VERSION	<version number>

Figure F3

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\DRAFT B\60588844_ProjectSamWeipa_F3_SamplingLocationsAndoomHeavyEquipmentWorkshop_v2_A3.mxd

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ELN MW30
ELN MW01
ELN_SS01
ELN_SS02
ELN MW10
ELN MW04
ELN MW09
ELS_SS01
ELN MW02
Fuel Depot
ELS MW29
SES Fire
Rescue Building
ELS_SS02
ELN MW03
ELN_SS03
ELS MW28
ELN MW05
ELN MW06
ELN MW07
ELS MW18
ELN MW08
ELS MW27
ELL MW29
ELL MW32
ELS MW02a
Former Fuel
Depot
ELS MW20
ELS MW21
ELS RW03
ELS MW17
EMB/EV/NSA
EMB/EV/NSA
ELS_SS03
ELS RW04
ELS_SS04
ELS MW26
ELL MW28
ELS MW31
ELS RW01
ELS MW19
ELS MW03a
ELS MW22
ELS_SS05
ELS MW25
ELS MW24
EMB/EV/NSB
EMB/EV/NSB
ELS MW23
EMB/EV/OSA
EMB/EV/NSC
EMB/EV/NSC
EMB/EV/OSB
EMB/EV/OSC

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N

DATUM GDA 1994, PROJECTION MGA ZONE XX

0 30 60 120

Metres

1:2,500 (when printed at A3)

LEGEND

- Existing Groundwater Monitoring Wells
- New Groundwater Monitoring Wells
- Surface Water Sampling Location
- Soil Bores
- Sediment Sampling Location
- Monitoring wells sampled by AECOM in 2018



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SAMPLING LOCATIONS:
Evans Landing
(ELN)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	28-Mar-2019
VERSION	<version number>

Figure F4

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\DRAFT B\60588844_ProjectSamWeipa_F4_SamplingLocations_EvansLanding_v2_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE XX

0 45 90 180

Metres

1:3,700 (when printed at A3)

LEGEND

- Existing Groundwater Monitoring Wells
- Monitoring wells sampled by AECOM in 2018



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SAMPLING LOCATIONS:
Evans Landing Landfill (ELN)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	28-Mar-2019
VERSION	<version number>

Figure F5

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\DRAFT B\60588844_ProjectSamWeipa_F5_SamplingLocations_EvansLandingLandfill_v2_A3.mxd

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 45 90 180

Metres

1:3,700 (when printed at A3)

LEGEND

- Existing Groundwater Monitoring Wells
- New Groundwater Monitoring Wells
- Abstraction Bores
- Soil Bores
- Monitoring wells sampled by AECOM in 2018



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SAMPLING LOCATIONS:
Railway Workshop
(RWW)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F6

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F6_SamplingLocations_RailwayWorkshop_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 70 140 280

Metres

1:5,889 (when printed at A3)

LEGEND

- Existing Groundwater Monitoring Wells
- New Groundwater Monitoring Wells
- Abstraction Bores
- Surface Water Sampling Location
- Soil Bores
- Sediment Sampling Location
- Monitoring wells sampled by AECOM in 2018



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SAMPLING LOCATIONS:
Lorim Point
(LP)

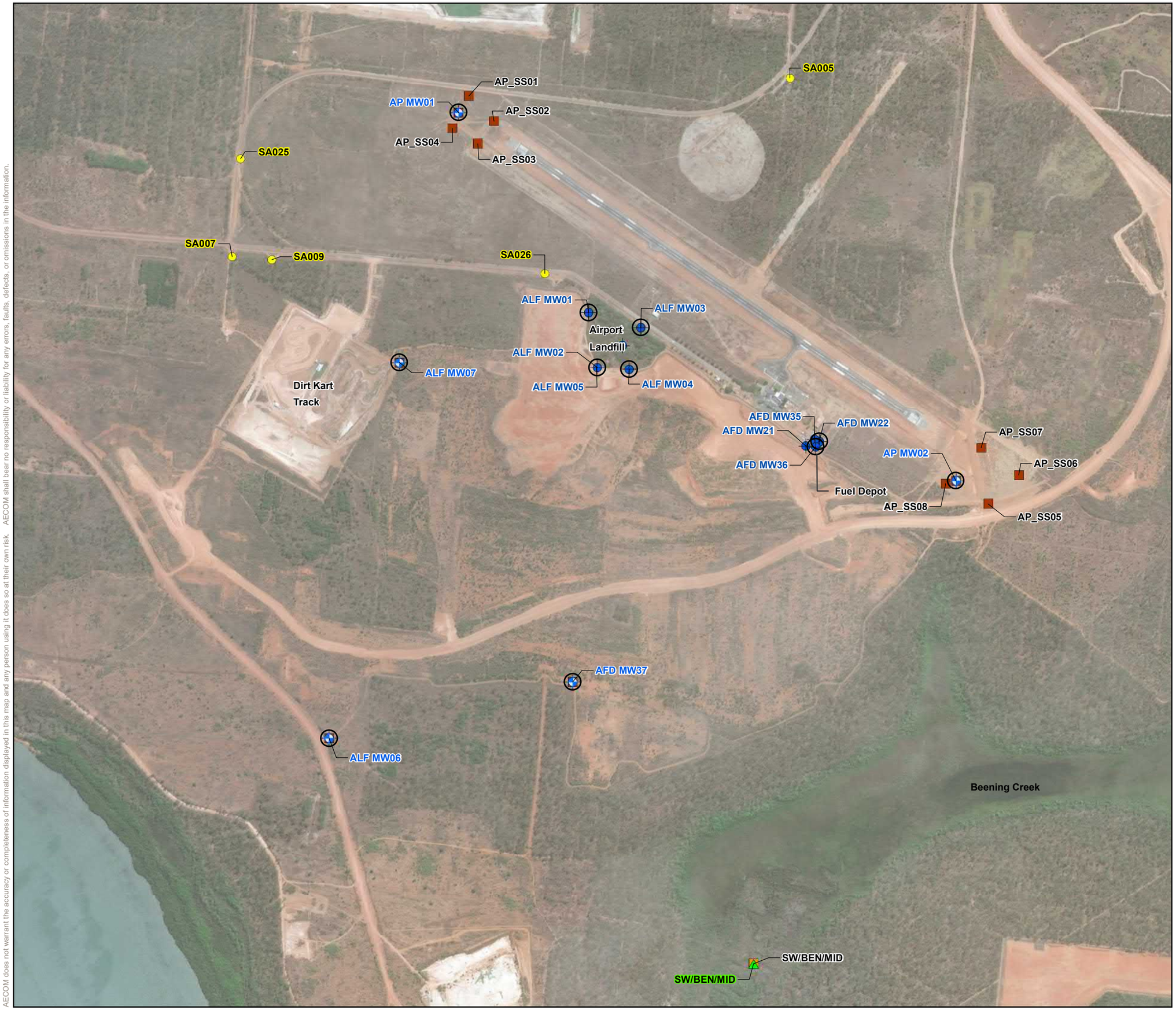
PROJECT ID	60588844
CREATED BY	muellerg
LAST MODIFIED	08-Apr-2019
VERSION	<version number>

Figure F7

A3 size

Filename: \\aubne1fp003\Projects\605X\60588844\900_CAD_GIS\920_GIS\02_MXDs\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F7_SamplingLocations_LorimPoint_A3.mxd

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 150 300 600

Metres

1:12,000 (when printed at A3)

LEGEND

- Existing Groundwater Monitoring Wells
- New Groundwater Monitoring Wells
- Abstraction Bores
- Surface Water Sampling Location
- Soil Bores
- Sediment Sampling Location
- Monitoring wells sampled by AECOM in 2018



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SAMPLING LOCATIONS:
Weipa Airport - Overview (AP)

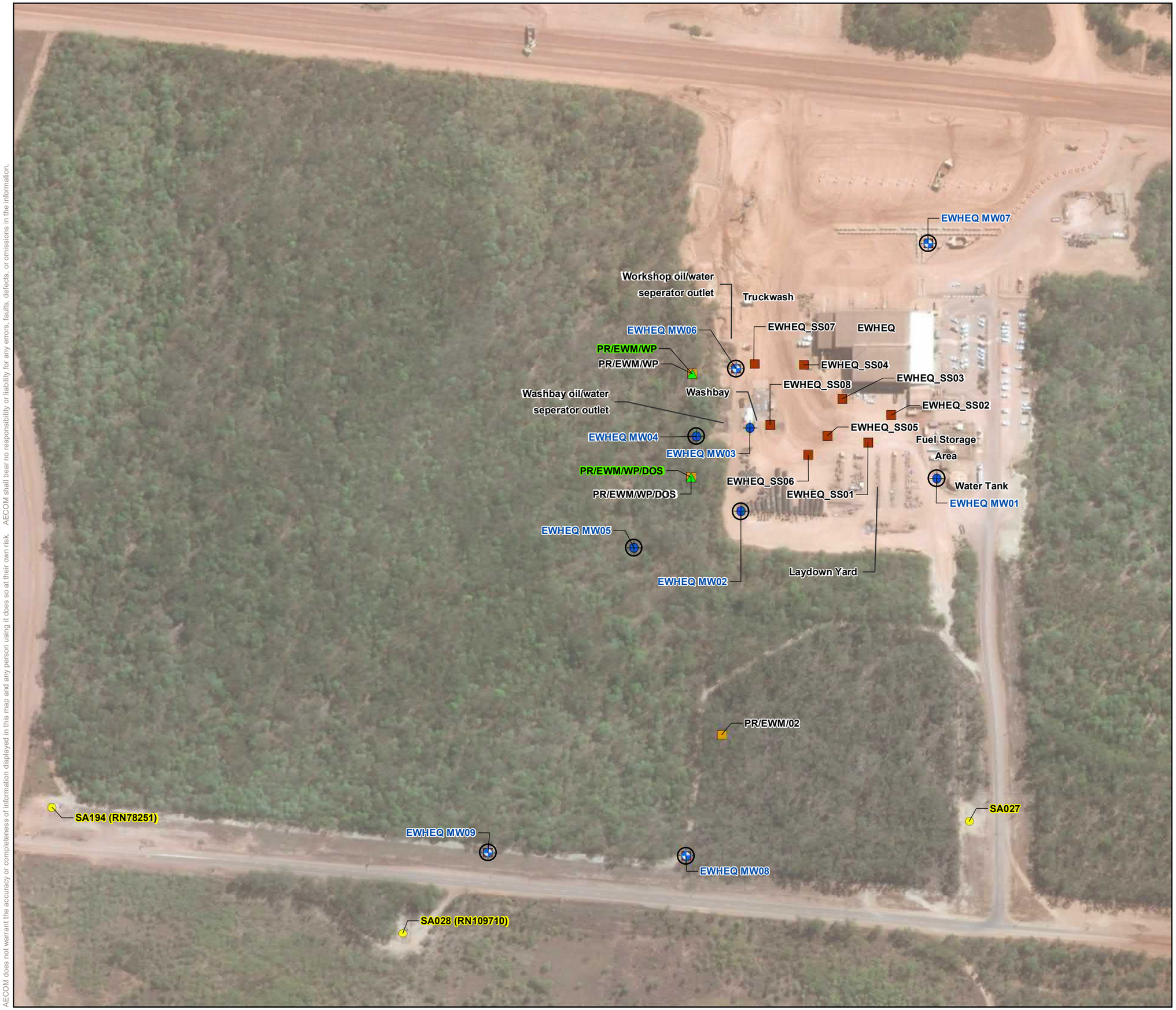
PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F8

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F8A_SamplingLocations_WeipaAirport_A3.mxd

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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 30 60 120

Metres

1:2,500 (when printed at A3)

LEGEND

- Existing Groundwater Monitoring Wells
- New Groundwater Monitoring Wells
- Abstraction Bores
- Surface Water Sampling Location
- Soil Bores
- Sediment Sampling Location
- Monitoring wells sampled by AECOM in 2018



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SAMPLING LOCATIONS:
East Weipa Heavy Equipment Workshop (EWHEQ)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F9

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F9_SamplingLocations_EWHEQ_A3.mxd

A3 size



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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

150 75 0 150

metres

1:4,500 (when printed at A3)

LEGEND

- New Groundwater Monitoring Wells
- Existing Groundwater Monitoring Wells
- Contours 0.2m (Dry)
- Inferred groundwater flow direction

Data sources:
Aerial Photography - QLD Gov Data, Golder Associates (2017)
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

ANDOOM HEQ INFERRED GROUNDWATER CONTOURS, NOVEMBER 2018 (DRY SEASON)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	JB - 02 Apr 2019
VERSION:	1

Figure F10A

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F10A_AndoomMiningArea_GW_Contours_DrySeason_A3.mxd

A3 size



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DATUM GDA 1994, PROJECTION MGA ZONE 54

150 75 0 150

metres

1:4,500 (when printed at A3)

LEGEND

- New Groundwater Monitoring Wells
- Existing Groundwater Monitoring Wells
- Contours 0.1m (Wet)
- Inferred groundwater flow direction

Data sources:
Aerial Photography - QLD Gov Data, Golder Associates (2017)
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

ANDOOM HEQ INFERRED GROUNDWATER CONTOURS, NOVEMBER 2018 (WET SEASON)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	JB - 04 Apr 2019
VERSION:	1

Figure F10B

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F10B_AndoomMiningArea_GW_Contours_WetSeason_A3.mxd



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Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F11A_EWMiningArea_GW_Contours_DrySeason_A3.mxd

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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 400 800 1,600

Metres

1:32,500 (when printed at A3)

LEGEND

- New Groundwater Monitoring Wells
- Existing Groundwater Monitoring Wells
- Contours 0.5m (Dry)
- Inferred groundwater flow direction

Note: Areas include; EWHEQ, Airport, Lorim Point, Railway Workshop, Evans Landing and Evans Landing Landfill

Data sources:
Base Data: AECOM(c) 2018, New Groundwater Monitoring Wells.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

EAST WEIPA HEQ INFERRED GROUNDWATER CONTOURS, NOVEMBER 2018 (DRY SEASON)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure 11A

A3 size



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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 460 920 1,840

Metres

1:37,000 (when printed at A3)

LEGEND

- New Groundwater Monitoring Wells
- Existing Groundwater Monitoring Wells
- Contours 0.5m (Wet)
- Inferred groundwater flow direction

Note: Areas include; EWHEQ, Airport, Lorim Point, Railway Workshop, Evans Landing and Evans Landing Landfill

Data sources:
Base Data: AECOM(c) 2018, New Groundwater Monitoring Wells.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

WEIPA
INFERRED GROUNDWATER CONTOURS, NOVEMBER 2018 (WET SEASON)

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure 11B

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F11B_EWMiningArea_GW_Contours_WetSeason_A3.mxd

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AHEQ_SS06
0.158

AHEQ_SS07
0.053

AHEQ_SS05
0.0396

AHEQ_SS01
0.147

AHEQ_SS02
0.0185

AHEQ_SS04
1.14

AHEQ_SS03
0.0012

AHEQ MW07
0.0076

AHEQ MW11
<0.0002

AHEQ MW08
0.0004

AHEQ MW09
<0.0002

AHEQ MW10
<0.0002

AECOM
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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 62.5 125 250

Metres

1:5,000 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS Concentrations (mg/kg) in Soil (all depths), November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL RESULTS:
Andoom Heavy Equipment Workshop
AHEQ

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F12

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F12_SoilAnalytialResultsAndoomHeavyEquipmentWorkshop_A3.mxd



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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 40 80 160

Metres

1:3,500 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS Concentrations (mg/kg) in Soil (all depths), November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL RESULTS:
Evans Landing

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	08-Apr-2019
VERSION	<version number>

Figure F13

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F13_SoilAnalytialResults_ELN_EvansLanding_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 25 50 100
Metres

1:2,000 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS Concentrations (mg/kg) in Soil (all depths), November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL RESULTS:
Railway Workshop RWW

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	08-Apr-2019
VERSION	<version number>

Figure F14

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F14_SoilAnalytialResults_RWW_RailwayWorkshop_A3.mxd



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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 40 80 160
Metres

1:3,273 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS Concentrations (mg/kg) in Soil (all depths), November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL RESULTS: Lorim Point LP

PROJECT ID	60588844
CREATED BY	muellerg
LAST MODIFIED	08-Apr-2019
VERSION	<version number>

Figure F15

A3 size

Filename: \\aubne1fp003\Projects\605X\60588844\900_CAD_GIS\920_GIS\02_MXDs\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F15_SoilAnalytialResults_LP_Lorim Point_A3.mxd

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 112.5 225 450

Metres

1:9,000 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS Concentrations (mg/kg) in Soil (all depths), November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL RESULTS: Weipa Airport

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F16

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F16_SoilAnalytialResults_Airport_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 30 60 120

Metres

1:2,500 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS Concentrations (mg/kg) in Soil (all depths), November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL RESULTS:
East Weipa Heavy Equipment Workshop
EWHEQ

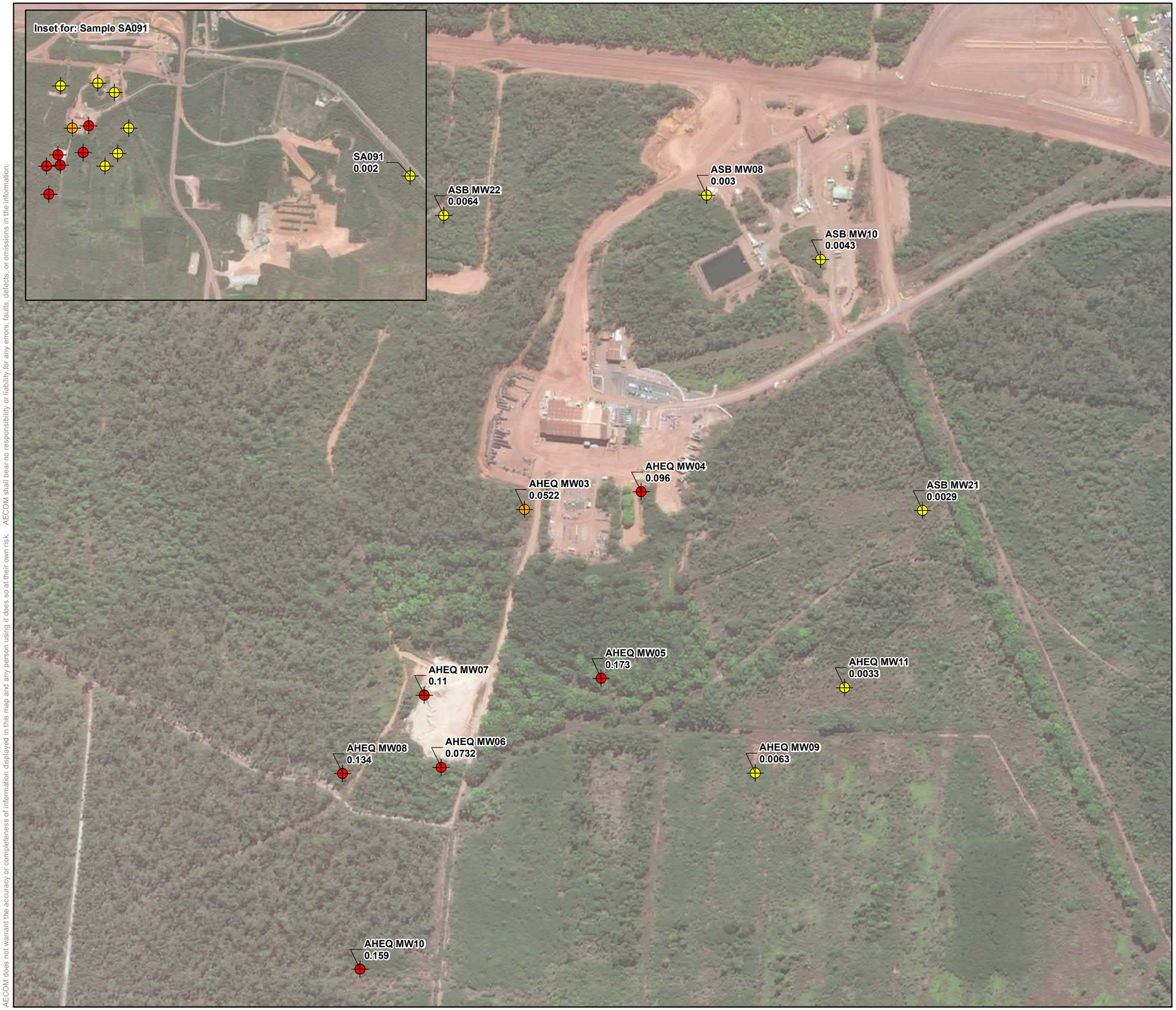
PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F17

A3 size

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Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F17_SoilAnalytialResults_EWHEQ_EastWeipa_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 62.5 125 250

Metres

1:5,000 (when printed at A3)

LEGEND

PFHxS+PFOS Concentrations (µg/L):

November 2018 / February 2019

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

GROUNDWATER ANALYTICAL RESULTS:
PFHxS+PFOS Concentrations:
Andoom Heavy Equipment Workshop

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F18

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F18_GroundaterAnalyticalResults_AHEQ_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 75 150 300
Metres

1:6,000 (when printed at A3)

LEGEND

PFHxS+PFOS Concentrations (µg/L) :

November 2018 / February 2019

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

GROUNDWATER ANALYTICAL RESULTS:
PFHxS+PFOS Concentrations:
Evans Landing and Evans Landing Landfill

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F19

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F19_GroundWaterAnalyticalResults_ELN_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 75 150 300
Metres

1:6,000 (when printed at A3)

LEGEND

PFHxS+PFOS Concentrations (µg/L):

November 2018 / February 2019

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

GROUNDWATER ANALYTICAL RESULTS:
PFHxS+PFOS Concentrations:
Railway workshop and Lorim Point

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F20

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F20_GroundWaterAnalyticalResults_RWW_LorimPoint_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 112.5 225 450

Metres

1:9,000 (when printed at A3)

LEGEND

PFHxS+PFOS Concentrations (µg/L):

November 2018 / February 2019

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

GROUNDWATER ANALYTICAL RESULTS:
PFHxS+PFOS Concentrations:
Weipa Airport

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F21

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F21_GroundWaterAnalyticalResults_WeipaAirport_A3.mxd

A3 size



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 40 80 160

Metres

1:3,500 (when printed at A3)

LEGEND

PFHxS+PFOS Concentrations (µg/L):

November 2018 / February 2019

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

GROUNDWATER ANALYTICAL RESULTS:
PFHxS+PFOS Concentrations:
East Weipa Heavy Equipment Workshop

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F22

A3 size

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Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F22_GroundWaterAnalyticalResults_EWHEQ_A3.mxd

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SA38
0.0006

SA88
0

SA41
0.0008

SA350
<0.0003

SA39
0.0259

SA37
<0.0003

SA36
0.0006

SA351
0.0009

SA349
<0.0003

SA107
0.0012

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 137.5 275 550

Metres

1:11,000 (when printed at A3)

LEGEND

PFHxS+PFOS Concentrations (µg/L):

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

GROUNDWATER ANALYTICAL RESULTS:
PFHxS+PFOS Concentrations:
Weipa Township

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	08-Apr-2019
VERSION	<version number>

Figure F23

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F23_GroundWaterAnalyticalResults_WeipaTownship_A3.mxd

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Sum of PFAS	Surface water (µg/L)		Sediment (mg/kg)
Sample ID / date	23/11/18	20/2/19	27/11/18
PR/AND/WS	**1.06**	**0.632**	**0.0135**

PR/AND/WS

Sum of PFAS	Surface water (µg/L)		Sediment (mg/kg)	
Sample ID / date	23/11/18	21/2/19	27/11/18	19/2/19
PR/AND/WS/DOS	**3.85**	**1.24**	**0.0328**	**0.0173**

PR/AND/WS/DOS

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 25 50 100

Metres

1:2,000 (when printed at A3)



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

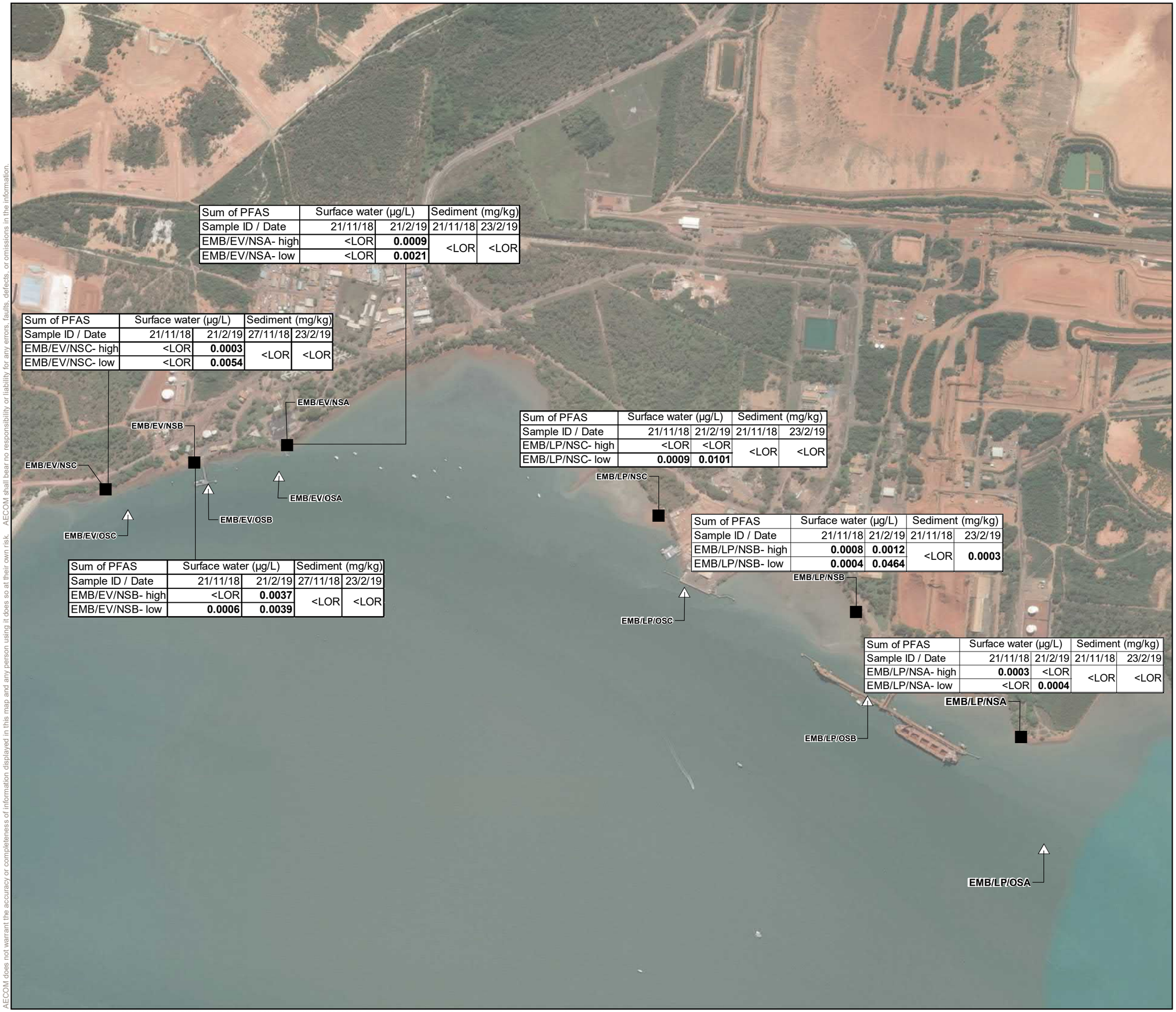
SEDIMENT AND SURFACE WATER ANALYTICAL RESULTS:
PFAS Concentrations - Andoom AHEQ

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure
F24

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F26_SamplingLocations_SurfacewaterSediment_Andoom_AHEQ_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 150 300 600
Metres

1:12,000 (when printed at A3)

LEGEND

Surface Water Samples / Sediment Samples

△ PFAS not detected

■ PFAS detected



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

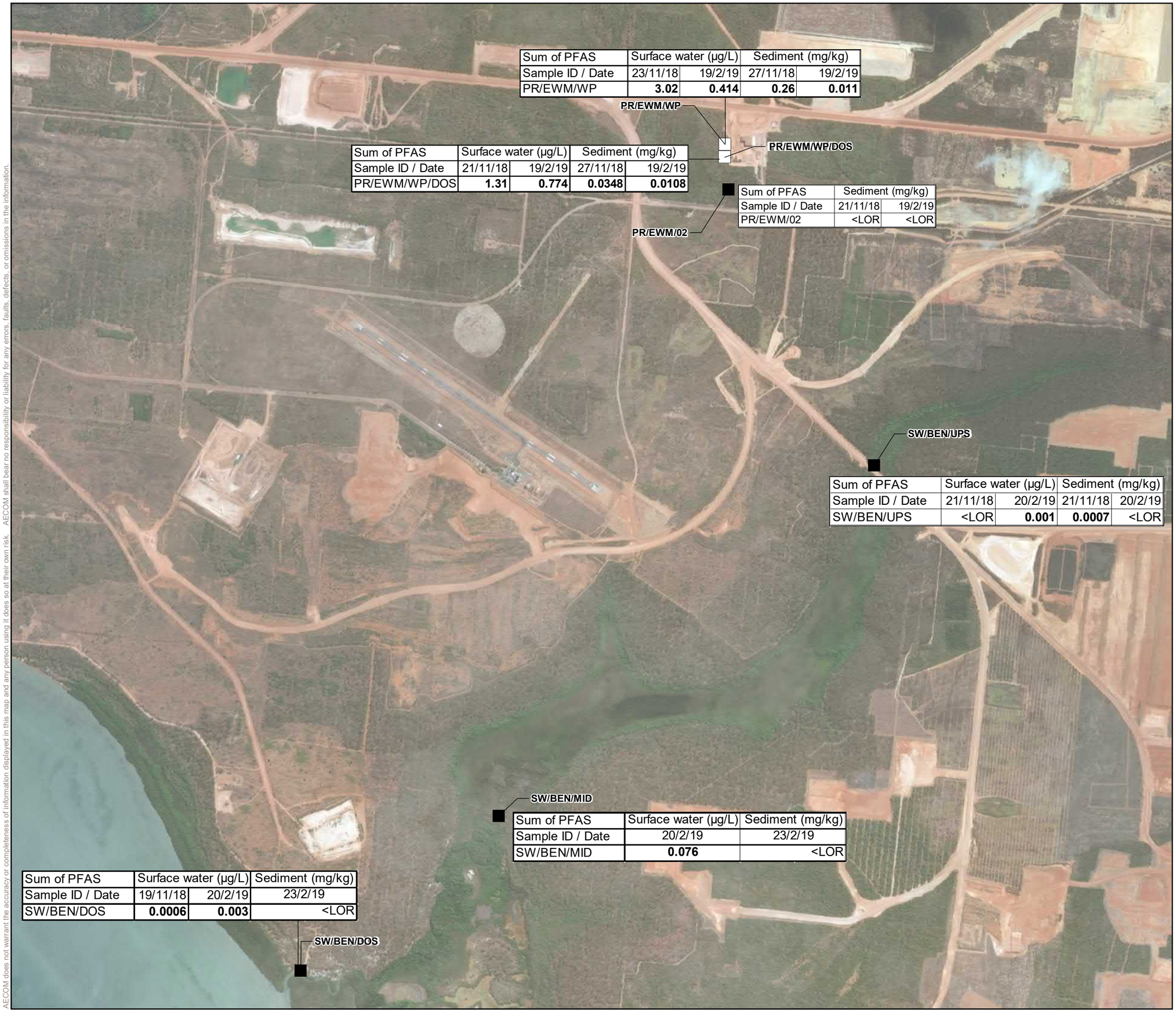
SEDIMENT AND SURFACE WATER ANALYTICAL RESULTS: PFAS Concentrations - Weipa

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F25

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F24_SamplingLocations_SurfacewaterSediment_Weipa_A3.mxd



Sum of PFAS	Surface water (µg/L)		Sediment (mg/kg)	
Sample ID / Date	23/11/18	19/2/19	27/11/18	19/2/19
PR/EWM/WP	**3.02**	**0.414**	**0.26**	**0.011**

Sum of PFAS	Surface water (µg/L)		Sediment (mg/kg)	
Sample ID / Date	21/11/18	19/2/19	27/11/18	19/2/19
PR/EWM/WP/DOS	**1.31**	**0.774**	**0.0348**	**0.0108**

Sum of PFAS	Sediment (mg/kg)	
Sample ID / Date	21/11/18	19/2/19
PR/EWM/02	<LOR	<LOR

Sum of PFAS	Surface water (µg/L)		Sediment (mg/kg)	
Sample ID / Date	21/11/18	20/2/19	21/11/18	20/2/19
SW/BEN/UPS	<LOR	**0.001**	**0.0007**	<LOR

Sum of PFAS	Surface water (µg/L)	Sediment (mg/kg)
Sample ID / Date	20/2/19	23/2/19
SW/BEN/MID	**0.076**	<LOR

Sum of PFAS	Surface water (µg/L)		Sediment (mg/kg)
Sample ID / Date	19/11/18	20/2/19	23/2/19
SW/BEN/DOS	**0.0006**	**0.003**	<LOR

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 245 490 980

Metres

1:20,000 (when printed at A3)



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SEDIMENT AND SURFACE WATER ANALYTICAL RESULTS:
PFAS Concentrations - Weipa East

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F26

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F25_SamplingLocations_SurfacewaterSediment_WeipaeEAST_A3.mxd

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AHEQ_SS06
0.158

AHEQ SS15 0.0072

AHEQ_SS07
0.053

AHEQ_SS05
0.0396

AHEQ_SS01
0.147

AHEQ_SS04 1.14

AHEQ SS13 0.0008

AHEQ_SS02
0.0185

AHEQ SS14
0.0059

AHEQ_SS03
0.0012

AHEQ SS12
0.0006

AHEQ MW07
0.0076

AHEQ MW11
<0.0002

AHEQ MW08
0.0004

AHEQ MW09
<0.0002

AHEQ MW10
<0.0002

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 62.5 125 250

Metres

1:5,000 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS concentrations (mg/kg) in Soil (all depths): October 2017 and November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10

Note: Andoom HEQ – PFHxS+PFOS results from the 2018 investigation and PFHxS+PFOS results for bores advanced from the historical investigations



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks. (c) Site Investigation Exceedance & Location Types, Golder 2017.
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL AND HISTORICAL RESULTS:
Andoom Heavy Equipment Workshop AHEQ

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	03-Apr-2019
VERSION	<version number>

Figure F27

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F28_SoilAnalytialResultsAndoomHeavyEquipmentWorkshop_Historical_A3.mxd

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LPI MW32
0.0002

LP_SS01
0.0061

LP_SS02
0.0381

LPI MW25
0.003

LP_SS03
0.053

FR SS11
0.0187

FR TP12
2.45

FR SS07
0.0454

LPI MW28
<0.0002

FR TP10
0.75

LPI MW27
0.105

FR SS10
0.0058

FR SS08
0.056

FR TP11
0.709

LP_SS04
0.0243

FR TP13
0.0844

LPI MW29
0.0004

FR SS09
0.0234

FR TP14
0.0457

LP_SS05
0.0621

LP_SS08
0.0043

LP_SS06
0.0186

LP_SS07
0.31

LPI MW26
0.0003

LPI MW30
<0.0002

LPI MW31
<0.0002

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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 40 80 160

Metres

1:3,321 (when printed at A3)

LEGEND

Maximum PFHxS+PFOS concentrations (mg/kg) in Soil (all depths): October 2017 and November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks. Golder 2017, Historical Site Investigations and Location Type.
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL AND HISTORICAL RESULTS: Lorim Point (LP)

PROJECT ID	60588844
CREATED BY	muellerg
LAST MODIFIED	08-Apr-2019
VERSION	<version number>

Figure F28

A3 size

Filename: \\aubne1fp003\Projects\605X\60588844\900_CAD_GIS\920_GIS\02_MXDs\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F29_SoilAnalytialResults_LP_Lorim Point_Historical_A3.mxd



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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 30 60 120

Metres

1:2,500 (when printed at A3)

LEGEND

Soil Sample

Maximum PFHxS+PFOS concentrations (mg/kg) in Soil (all depths): October 2017 and November 2018

- <LOR
- LOR - 0.001
- 0.001 - 0.01
- 0.01 - 0.1
- 0.1 - 1.0
- 1.0 - 10



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

SOIL ANALYTICAL AND HISTORICAL RESULTS:
East Weipa Heavy Equipment Workshop EWHEQ

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	03-Apr-2019
VERSION	<version number>

Figure F29

A3 size

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Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F30_SoilAnalytialResults_EWHEQ_EastWeipa_Historical_A3.mxd

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ELN MW30
0.0025

ELN MW04
0.0214

ELN MW02
0.067

ELN MW09
0.38

ELN MW10
0.028

ELS MW29
0.037

ELN MW06
0.002

ELN MW07
0.178

ELS MW18
0.71

ELS MW28
0.02

ELL MW32
0.038

ELS MW20
0.39

ELS MW21
0.038

ELS MW19
0.23

ELS RW01
0.347

ELS MW25
0.022

ELS MW23
0.076

ELS MW24
0.13

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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 20 40 80

Metres

1:1,700 (when printed at A3)

LEGEND

- 0.07 mg/L PFHxS+PFOS contour
- Groundwater flow direction

Maximum PFHxS+PFOS concentration (µg/L):

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

Interpretation of PFHxS+PFOS in groundwater at Evans Landing

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	03-Apr-2019
VERSION	<version number>

Figure F30

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs - FINAL_Hand over to BNE server\60588844_ProjectSamWeipa_F33_GroundWaterPFHSxS_PFOS_ELN_A3.mxd

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DATUM GDA 1994, PROJECTION MGA ZONE 54

0 65 130 260

Metres

1:5,400 (when printed at A3)

LEGEND

- 0.07mg/L PFHxS PFOS contour
- Groundwater flow direction

MaximumPFHxS+PFOS concentration (µg/L):

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

Interpretation of PFHxS+PFOS in groundwater at Lorim Point

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	02-Apr-2019
VERSION	<version number>

Figure F31

A3 size

Filename: G:\TSV_GIS\Projects\60588844\4.99_GIS\02_MXDs\Project_SAM_Figures\MXDs\60588844_ProjectSamWeipa_F31_GroundWaterPFASxS_PFOS_LorimPoint_A3.mxd

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EWHEQ MW07
0.014

EWHEQ MW06
0.04

EWHEQ MW03
0.033

EWHEQ MW04
0.082

EWHEQ MW01
0.016

EWHEQ MW05
0.38

EWHEQ MW02
0.071

?

RN78251
0.16

EWHEQ MW09
0.641

SA027
0.015

EWHEQ MW08
0.073

RN109710
0.11

SA005
0.066

?

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N

DATUM GDA 1994, PROJECTION MGA ZONE 54

0 55 110 220

Metres

1:4,500 (when printed at A3)

LEGEND

- 0.07 mg/L PFHxS+PFOS contour
- Groundwater flow direction

MaximumPFHxS+PFOS Concentration (µg/L):

- <LOR
- LOR - 0.007
- 0.007 - 0.07
- 0.07 - 0.7
- 0.7 - 7.0



Data sources:
Base Data: (c) 2018, Aecom.
2019, QLD Gov, Cadastral Boundary, Watercourse, Baseline Roadds and Tracks.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PROJECT SAM - WEIPA

Interpretation of PFHxS+PFOS in groundwater at East Weipa HEQ

PROJECT ID	60588844
CREATED BY	bathurstj
LAST MODIFIED	03-Apr-2019
VERSION	<version number>

Figure F32

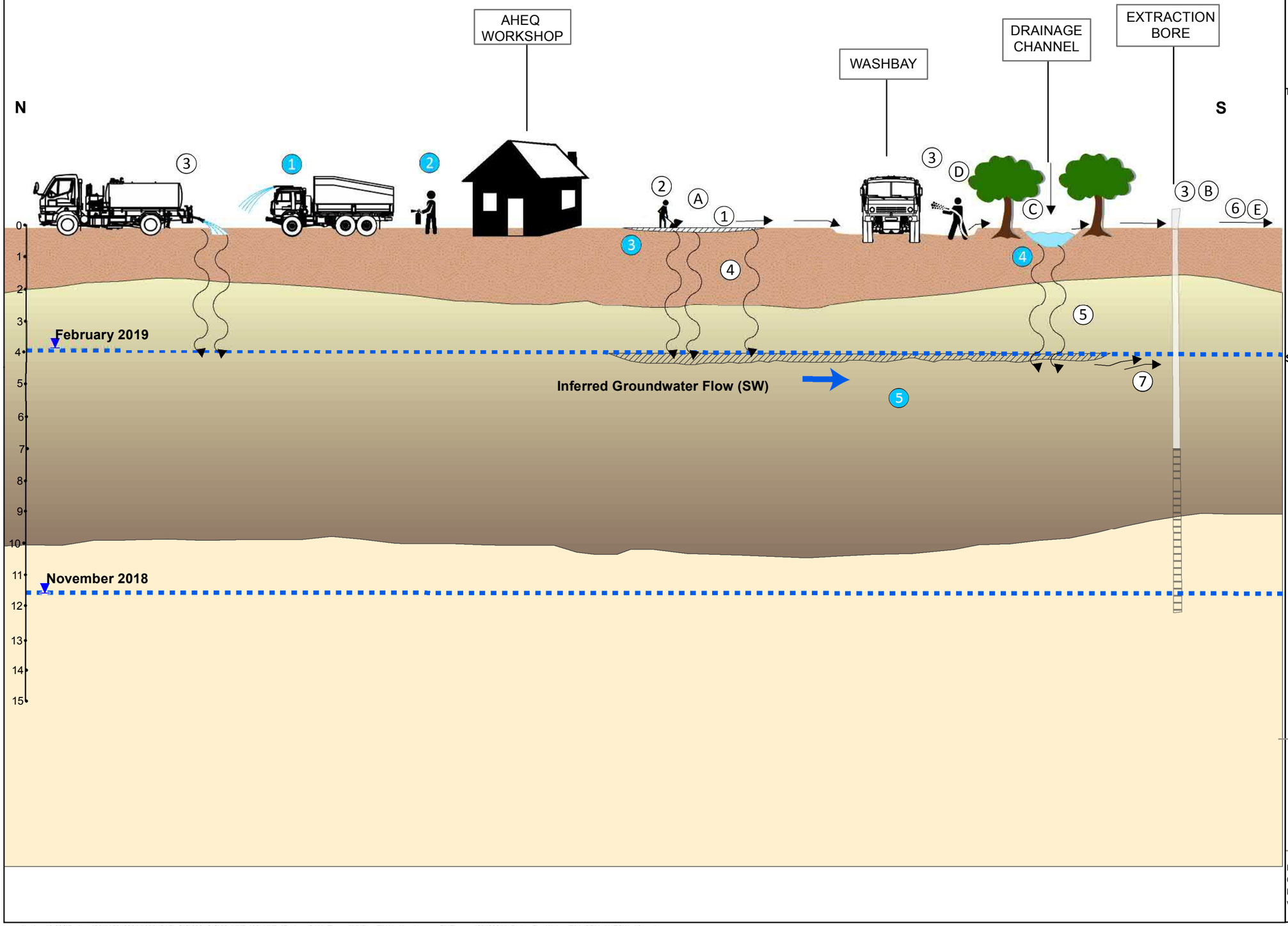
A3 size

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Legend

Clay | Sandy Clay | Water

Clayey Gravel | PFAS Shallow soil



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Legend

RECEPTORS AND EXPOSURE PATHWAYS:

- A — Commercial/industrial workers - direct contact/incidental ingestion (soil)
- B — Consumption of groundwater by humans
- C — Ecological - direct contact (soil/surface water)
- D — Commercial/industrial workers - direct contact (groundwater)
- E — Offsite recreational users - direct contact (groundwater)

TRANSPORT MECHANISM:

1. Water erosion of sediment/leaching from soil to surface water
2. Excavation and relocation of soil
3. Extraction and use of groundwater for commercial use
4. Vertical migration through soil profile
5. Infiltration and leaching from sediments and surface water to groundwater
6. Surface water transport and discharge to Mission River
7. Movement down gradient in groundwater

SOURCES

1. Accidental release from HEQ fire suppression systems
2. Discharge of AFFF to ground
3. Residual PFAS in soil
4. Residual PFAS in surface water and sediment
5. Residual PFAS in groundwater

Note:
Features have been exaggerated and are not spatially accurate

Data sources:

Base Data: (c) 20XX (data source) (additional data)

NOT TO SCALE

PROJECT SAM - WEIPA

CSM - ANDOOM HEAVY EQUIPMENT WORKSHOP

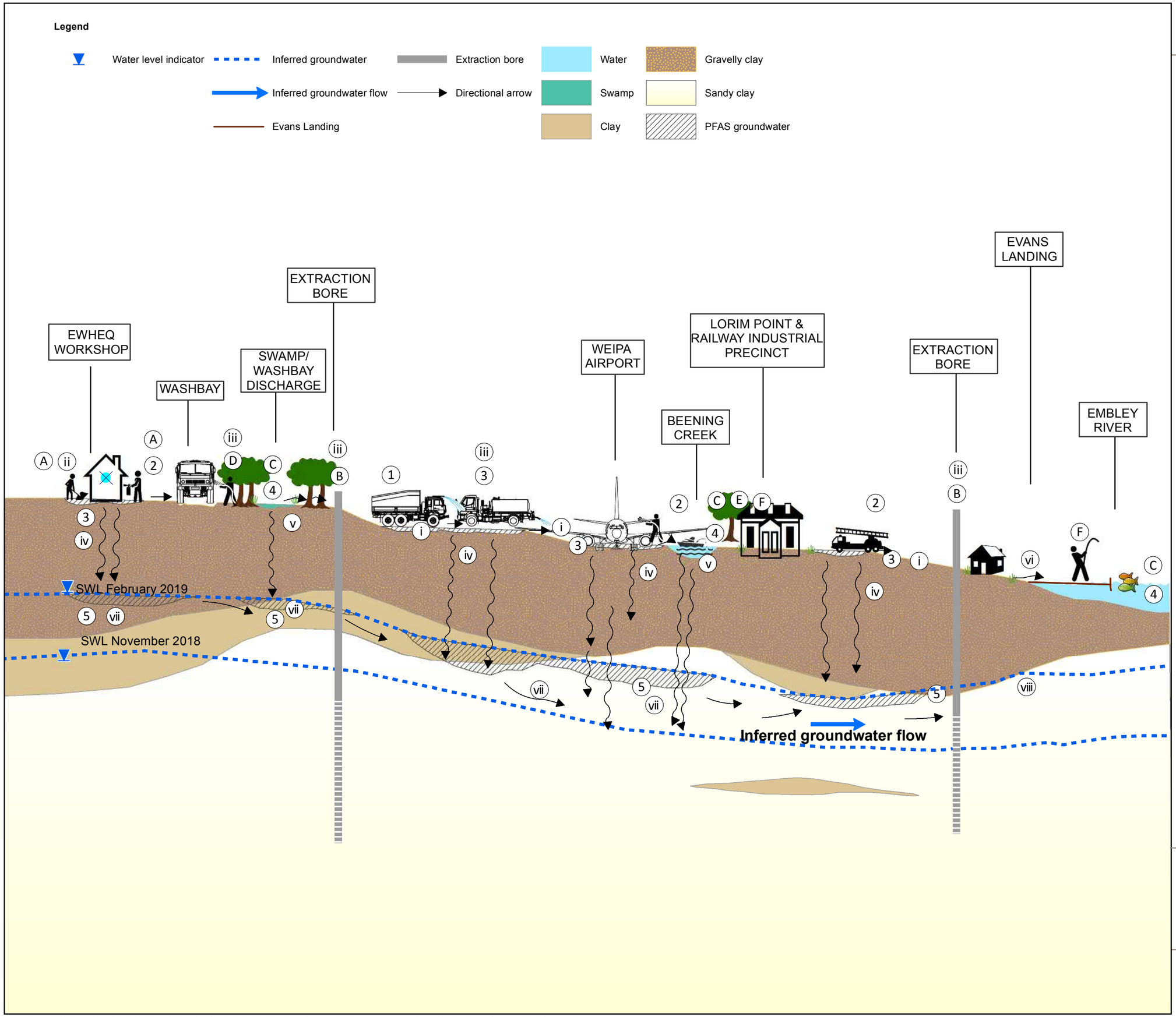
PROJECT ID	60588844
CREATED BY	muellerg
LAST MODIFIED	05-Apr-2019
VERSION	<version number>

Figure 33

A3 size

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NOT TO SCALE

Legend

TRANSPORT MECHANISM

- (i) Water erosion of sediment/leaching from soil to surface water
- (ii) Excavation and relocation of soil
- (iii) Extraction and use of groundwater for commercial/residential use
- (iv) Vertical migration through soil profile
- (v) Infiltration and leaching from sediments and surface water to groundwater
- (vi) Surface water transport and discharge to Embley River / Beening Creek
- (vii) Movement down gradient in groundwater
- (viii) Uptake of impacted sediment/surface water by flora/fauna and subsequent harvesting via humans

RECEPTORS

- (A) Commercial/industrial workers - direct contact / incidental ingestion (soil)
- (B) Consumption of groundwater by humans
- (C) Ecological -direct contact (soil/surface water)
- (D) Direct contact with groundwater - on and off site users
- (E) Offsite recreational users - surface water
- (F) Ingestion of flora/fauna impacted from surface water/ sediment/ groundwater

SOURCES

- (1) Accidental release from HEQ fire suppression systems
- (2) Discharge of AFFF to ground
- (3) Residual PFAS in soil
- (4) Residual PFAS in surface water and sediment
- (5) Residual PFAS in groundwater

PROJECT SAM - WEIPA

CSM - WEIPA PENNINSULA

PROJECT ID	60588844
CREATED BY	muellerg
LAST MODIFIED	05-Apr-2019
VERSION	<version number>

Figure 34

A3 size

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