

Source: Longwall Layout: Austar Coal Mine, Aerial Photography: AAM Hatch 2006  
 Note: Dwellings only shown for flood model extent

0 300 600 900 m  
 1:18 000

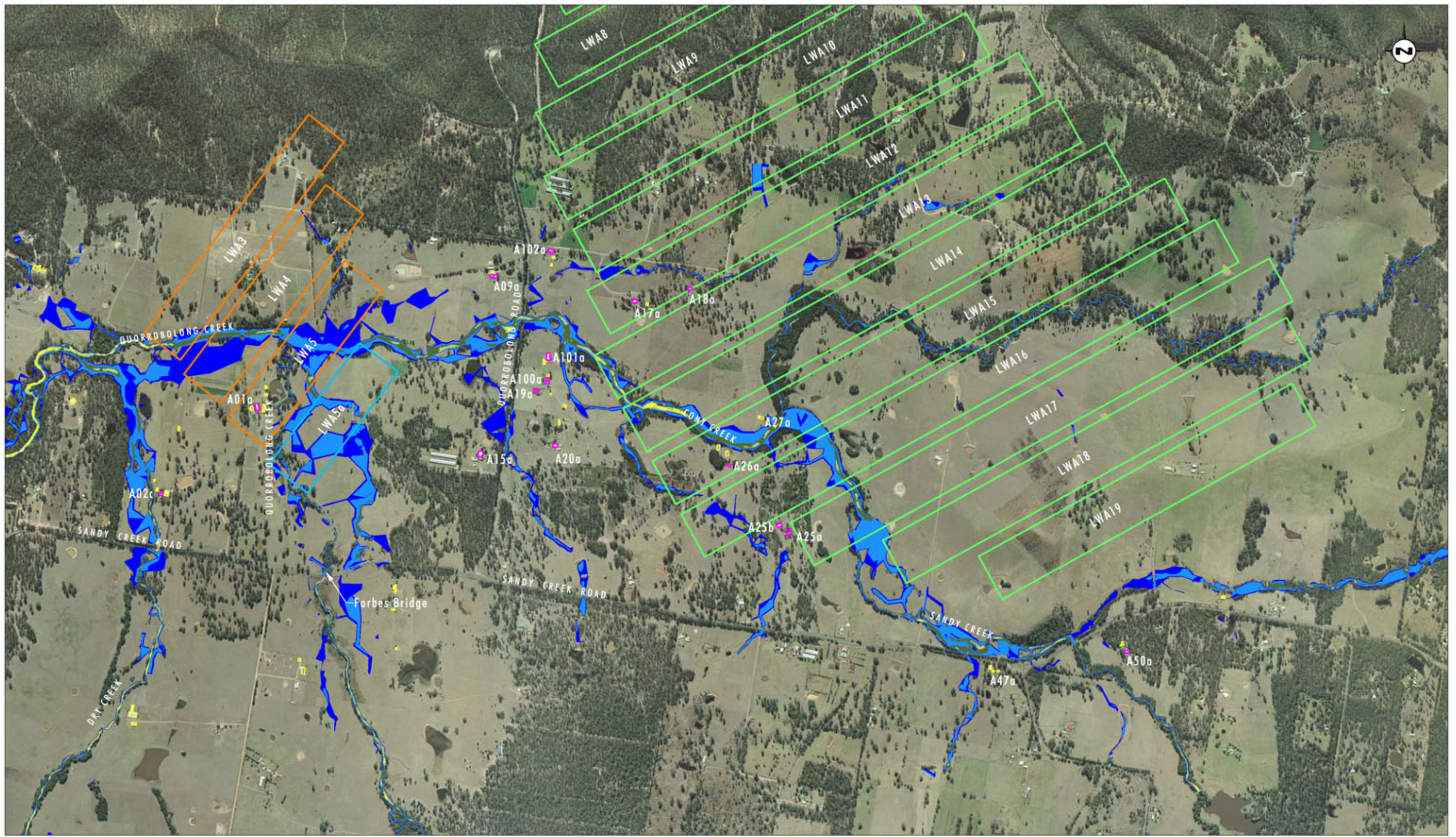
**Legend**

- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Layout for Proposed Stage 3 Modification Longwall Panels
- Building
- Dwelling
- A01a Dwelling Reference Number

Water Depth (m)	
	Range [0.001 : 0.100]
	Range [0.100 : 0.300]
	Range [0.300 : 0.500]
	Range [0.500 : 0.700]
	Range [0.700 : 0.900]
	Range [0.900 : 1.100]
	Range [1.100 : 1.300]
	Range [1.300 : 1.500]
	Range [1.500 : 1.700]
	Range [1.700 : 1.900]
	Range [> 1.900]

FIGURE 1.7

1 year ARI Storm: Maximum Modelled Water Depths for Pre Stage 2 Mining



Source: Longwall Layout: Astar Coal Mine, Aerial Photography: AAM Hatch 2006

Note: Dwellings only shown for flood model extent

0 300 600 900m  
1:18 000

**Legend**

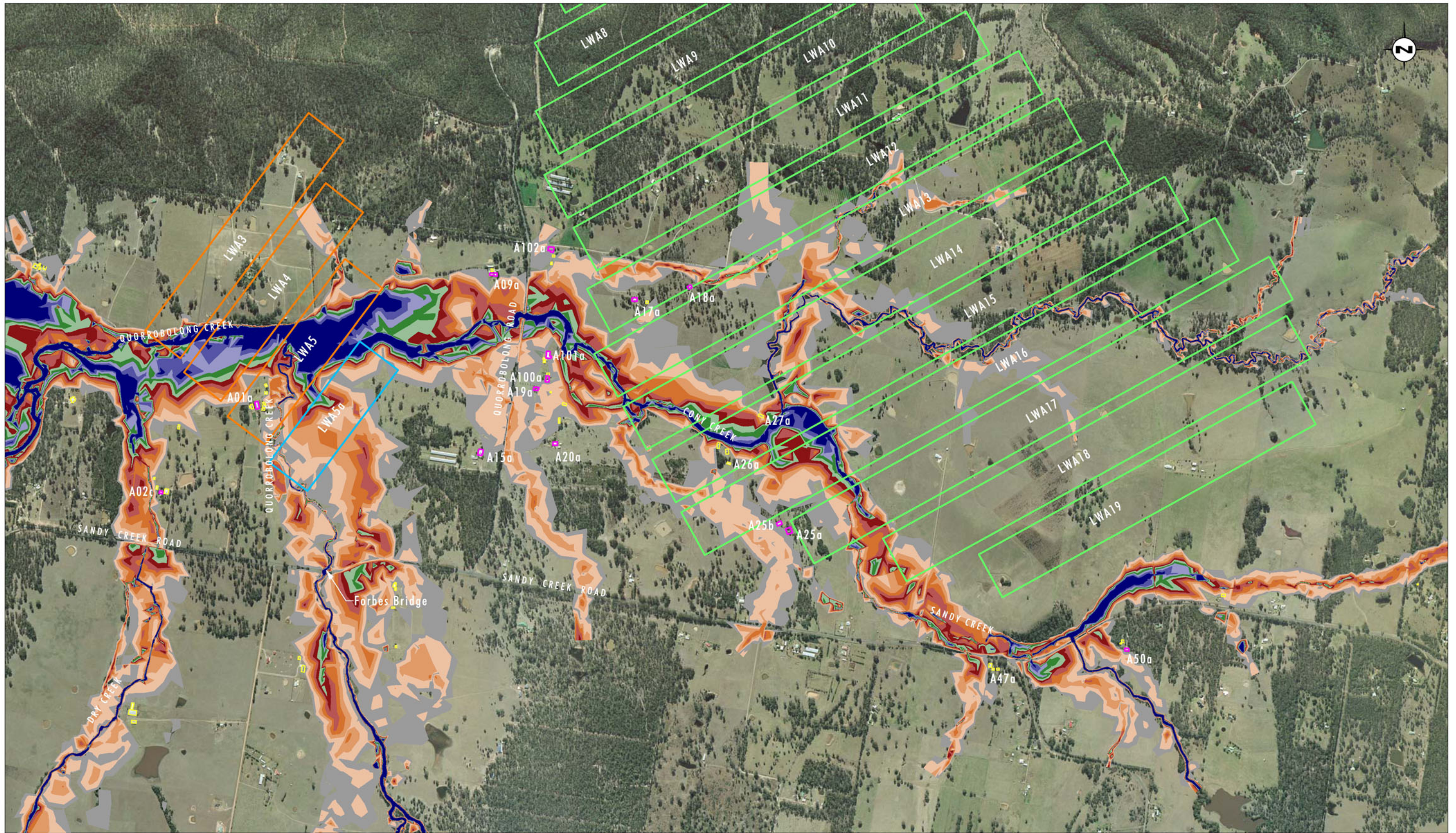
- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Layout for Proposed Stage 3 Modification Longwall Panels
- Building
- Dwelling
- A01a Dwelling Reference Number

**Velocity (m/s)**

- |   |  |   |   |   |  |   |  |  |   |
|---|--|---|---|---|--|---|--|--|---|
| <span style="background-color: blue; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.100 : 0.250] | <span style="background-color: lightblue; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.250 : 0.500] | <span style="background-color: darkblue; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.500 : 0.750] | <span style="background-color: lightgreen; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.750 : 1.000] | <span style="background-color: yellow; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.000 : 1.250] | <span style="background-color: lightpink; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.250 : 1.500] | <span style="background-color: orange; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.500 : 1.750] | <span style="background-color: red; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.750 : 2.000] | <span style="background-color: darkred; width: 15px; height: 10px; margin-right: 5px;"></span> Range [2.000 : 2.250] | <span style="background-color: purple; width: 15px; height: 10px; margin-right: 5px;"></span> Range [2.250 : 3.500] |
|---|--|---|---|---|--|---|--|--|---|

FIGURE 1.8

1 year ARI Storm: Maximum Modelled Water Velocities for Pre Stage 2 Mining



Source: Longwall Layout: Astar Coal Mine, Aerial Photography: AAM Hatch 2006  
 Note: Dwellings only shown for flood model extent

0 300 600 900m  
 1:18 000

**Legend**

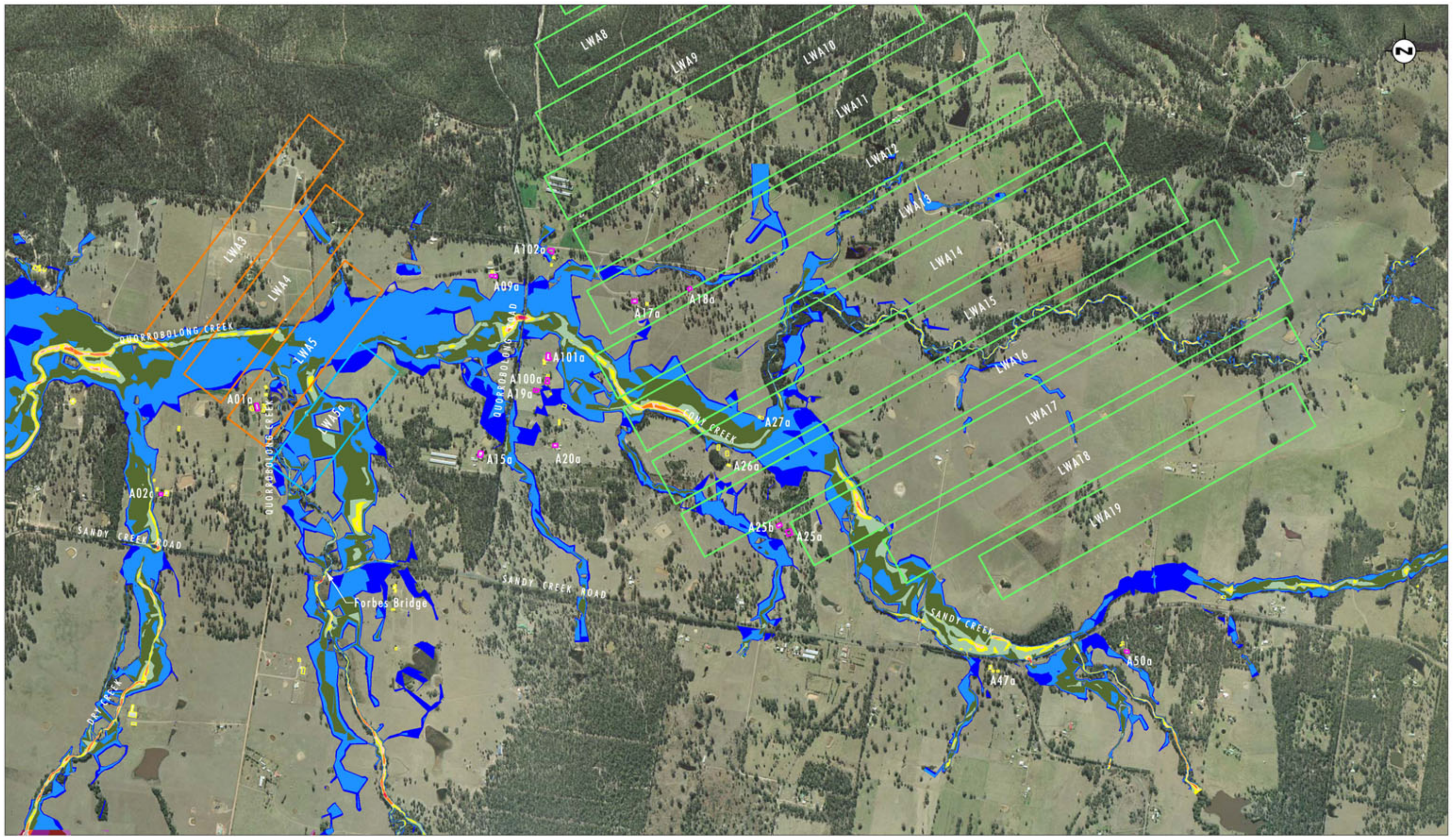
- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Layout for Proposed Stage 3 Modification Longwall Panels
- Building
- Dwelling
- A01a Dwelling Reference Number

**Water Depth (m)**

<span style="background-color: grey; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.001 : 0.100]	<span style="background-color: lightgreen; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.100 : 1.300]
<span style="background-color: lightorange; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.100 : 0.300]	<span style="background-color: green; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.300 : 1.500]
<span style="background-color: orange; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.300 : 0.500]	<span style="background-color: purple; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.500 : 1.700]
<span style="background-color: darkorange; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.500 : 0.700]	<span style="background-color: darkblue; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.700 : 1.900]
<span style="background-color: red; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.700 : 0.900]	<span style="background-color: darkblue; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [ $>1.900$ ]

FIGURE 1.9

**100 year ARI Storm:  
 Maximum Modelled Water Depths for  
 Maximum Predicted Subsidence (Approved Stage 3)**



Source: Longwall Layout: Astar Coal Mine, Aerial Photography: AAM Hatch 2006  
 Note: Dwellings only shown for flood model extent

0 300 600 900m  
 1:18 000

**Legend**

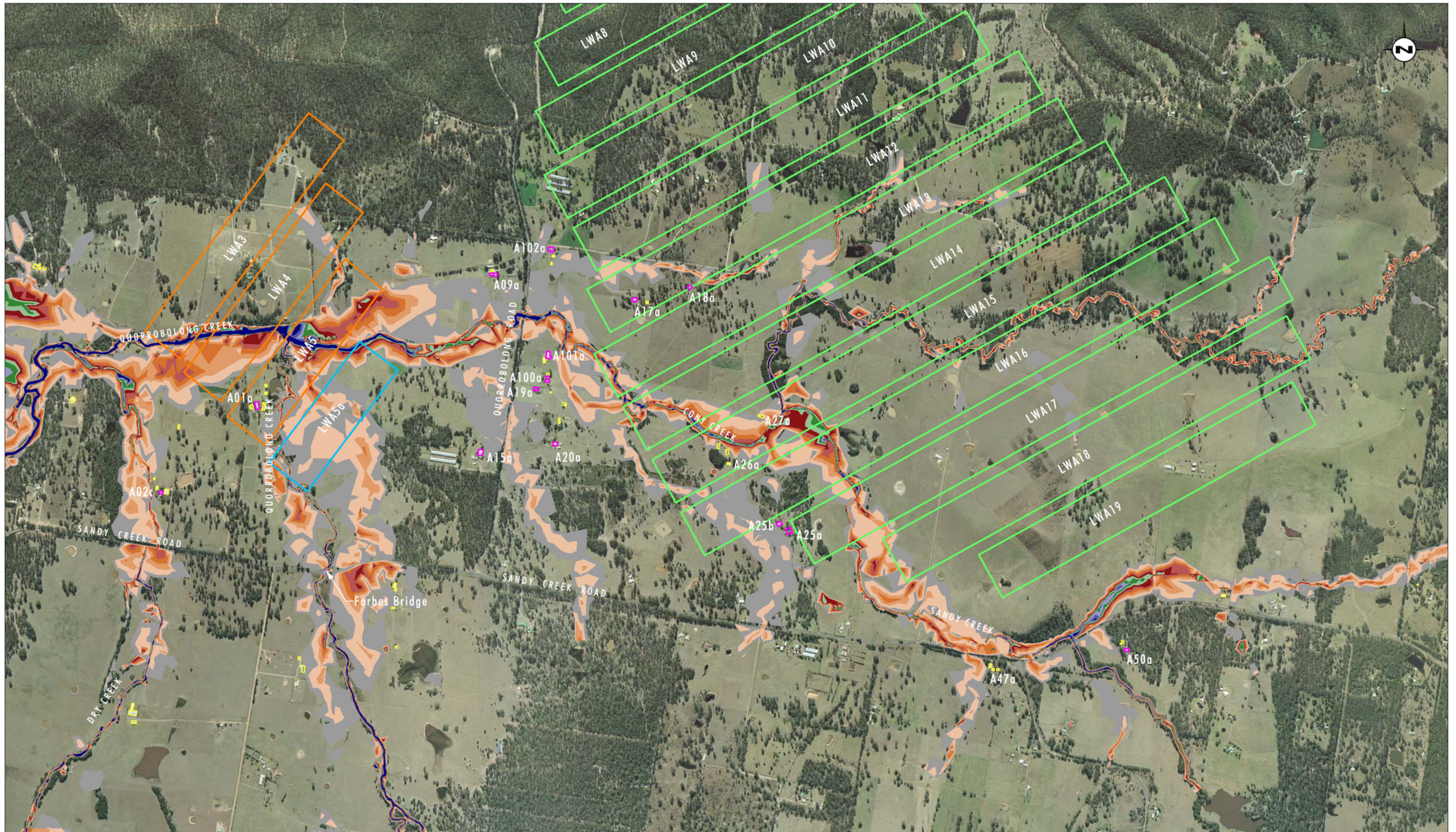
- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Layout for Proposed Stage 3 Modification Longwall Panels
- Building
- Dwelling
- A01a Dwelling Reference Number

**Velocity (m/s)**

- |  |  |
|--|--|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: blue; margin-right: 5px;"></span> Range [0.100 : 0.250]       | <span style="display: inline-block; width: 15px; height: 10px; background-color: lightpink; margin-right: 5px;"></span> Range [1.250 : 1.500]  |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: cyan; margin-right: 5px;"></span> Range [0.250 : 0.500]       | <span style="display: inline-block; width: 15px; height: 10px; background-color: orange; margin-right: 5px;"></span> Range [1.500 : 1.750]     |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: darkgreen; margin-right: 5px;"></span> Range [0.500 : 0.750]  | <span style="display: inline-block; width: 15px; height: 10px; background-color: lightcoral; margin-right: 5px;"></span> Range [1.750 : 2.000] |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: lightgreen; margin-right: 5px;"></span> Range [0.750 : 1.000] | <span style="display: inline-block; width: 15px; height: 10px; background-color: red; margin-right: 5px;"></span> Range [2.000 : 2.250]        |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; margin-right: 5px;"></span> Range [1.000 : 1.250]     | <span style="display: inline-block; width: 15px; height: 10px; background-color: magenta; margin-right: 5px;"></span> Range [2.250 : 3.500]    |

FIGURE 1.10

100 year ARI Storm:  
 Maximum Modelled Water Velocities for  
 Maximum Predicted Subsidence (Approved Stage 3)



Source: Longwall Layout: Astar Coal Mine, Aerial Photography: AAM Hatch 2006  
 Note: Dwellings only shown for flood model extent

0 300 600 900m  
 1:18 000

**Legend**

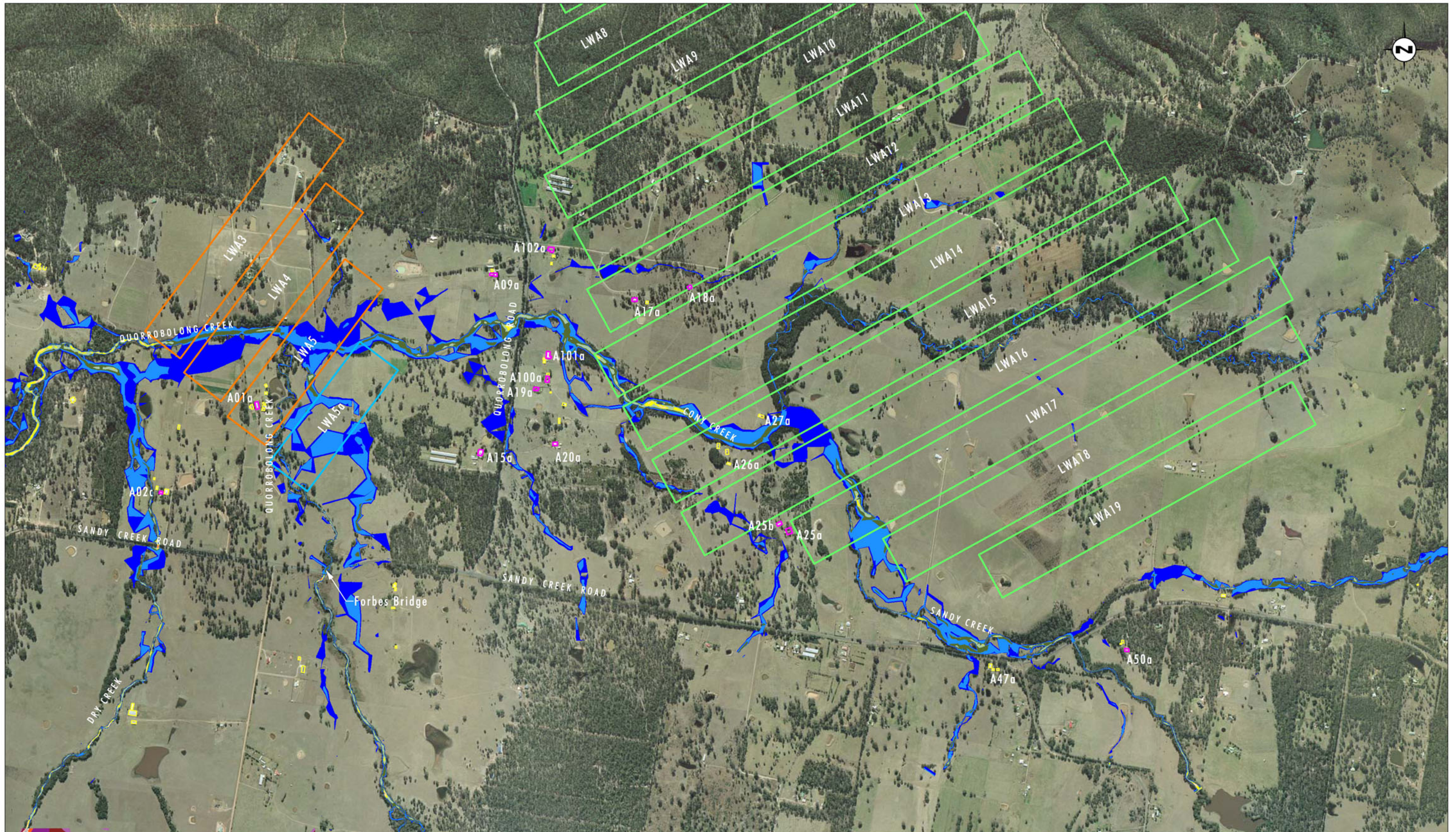
- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Layout for Proposed Stage 3 Modification Longwall Panels
- Building
- Dwelling
- A01a Dwelling Reference Number

**Water Depth (m)**

- |  |  |
|--|--|
| <span style="background-color: #ffffcc; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.001 : 0.100] | <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.100 : 1.300] |
| <span style="background-color: #fff2cc; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.100 : 0.300] | <span style="background-color: #32cd32; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.300 : 1.500] |
| <span style="background-color: #ffe4b5; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.300 : 0.500] | <span style="background-color: #6a5acd; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.500 : 1.700] |
| <span style="background-color: #ffcc99; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.500 : 0.700] | <span style="background-color: #00008b; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.700 : 1.900] |
| <span style="background-color: #ff9966; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.700 : 0.900] | <span style="background-color: #000000; border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [>1.900]        |

FIGURE 1.11

1 year ARI Storm: Maximum Modelled Water Depths for Maximum Predicted Subsidence (Approved Stage 3)



Source: Longwall Layout: Astar Coal Mine, Aerial Photography: AAM Hatch 2006  
 Note: Dwellings only shown for flood model extent

0 300 600 900m  
 1:18 000

**Legend**

- Layout for Stage 2 Longwall Panels
- Layout for Stage 2 Extension Longwall Panel
- Layout for Proposed Stage 3 Modification Longwall Panels
- Building
- Dwelling
- A01a Dwelling Reference Number

**Velocity (m/s)**

- |  |   |
|--|---|
| <span style="background-color: blue; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.100 : 0.250]     | <span style="background-color: lightblue; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.250 : 1.500]   |
| <span style="background-color: cyan; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.250 : 0.500]     | <span style="background-color: orange; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.500 : 1.750]      |
| <span style="background-color: darkblue; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.500 : 0.750] | <span style="background-color: lightorange; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.750 : 2.000] |
| <span style="background-color: teal; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [0.750 : 1.000]     | <span style="background-color: red; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [2.000 : 2.250]         |
| <span style="background-color: yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [1.000 : 1.250]   | <span style="background-color: magenta; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Range [2.250 : 3.500]     |

FIGURE 1.12

1 year ARI Storm: Maximum Modelled Water Velocities for Maximum Predicted Subsidence (Approved Stage 3)