







## WSA assessment

Date: <b>06/07/2020</b>	Contract No: <b>GLA003-001</b>	Asset Owner: <b>Sydney Water</b>	Operator : <b>S. Kimber</b>	Section number: <b>1</b>	Pipe Asset Id: <b>Line 1</b>
Time of inspection:	Cleaning: <b>not cleaned</b>	Standard: <b>WSA 05-2008 2.2</b>	LRP <b>Inside Face of the Wall</b>	Conduit Unit Length	Method of Inspection <b>Television Camera</b>

Town: Suburb: <b>Frenchs Forest</b> Street: <b>Arden Place</b> Asset Location <b>Reserve, park, public area</b>	Catchment: Asset Owner: <b>Gladys Forest Pty Ltd</b> Precipitation.: Flow control <b>No measures</b>	US MH: <b>SPP01246</b> Survey Dir: <b>upstream</b> DS MH: <b>SPP01246</b> Inspect Length : <b>2.92 m</b>
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Purpose of inspection : <b>Routine Inspection</b>	Shape : <b>Circular</b>
Use of Conduit: <b>Drain</b>	Dia/Height: <b>525 mm</b>
Type of Conduit: <b>Storm water drain</b>	Start Depth To Invert:
Pipe Material: <b>Reinforced concrete</b>	End Depth To Invert:

Remarks :

1:50	Position	Observation	
	<p><b>SPP01246</b></p> <p>0.00</p> <p>2.64</p> <p>2.92</p>	<p>Start node, maintenance hole, Nodename: SPP01246</p> <p>Joint displaced radially, radial displacement 5-10mm , at 12 o'clock</p> <p>Inspection (survey) abandoned, Build up of leaves from pit</p>	<div style="text-align: center;">  <p>0 m</p> </div> <div style="text-align: center;">  <p>2.64 m</p> </div> <div style="text-align: center;">  <p>2.64 m</p> </div> <div style="text-align: center;">  <p>2.92 m</p> </div>

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	2	0.68	2	2	1	40	13.7	40	5

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>1</b>	Sewer Ref.: <b>Line 1</b>
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Photo: 4\_1A  
0m, Start node, maintenance hole, Nodename: SPP01246



Photo: 4\_2A  
2.64m, Joint displaced radially, radial displacement 5-10mm , at 12 o'clock



Photo: 4\_2B  
2.64m, Joint displaced radially, radial displacement 5-10mm , at 12 o'clock



Photo: 4\_3A  
2.92m, Inspection (survey) abandoned, Build up of leaves from pit



## WSA assessment

Date: <b>06/07/2020</b>	Contract No: <b>GLA003-001</b>	Asset Owner: <b>Sydney Water</b>	Operator : <b>S. Kimber</b>	Section number: <b>2</b>	Pipe Asset Id: <b>Line 2</b>
Time of inspection:	Cleaning: <b>not cleaned</b>	Standard: <b>WSA 05-2008 2.2</b>	LRP <b>Inside Face of the Wall</b>	Conduit Unit Length	Method of Inspection <b>Television Camera</b>

Town: Suburb: <b>Frenchs Forest</b> Street: <b>Arden Place</b> Asset Location <b>Reserve, park, public area</b>	Catchment: Asset Owner: <b>Gladys Forest Pty Ltd</b> Precipitation.: Flow control <b>No measures</b>	US MH: <b>SPP01246</b> Survey Dir: <b>downstream</b> DS MH: <b>SPP01594</b> Inspect Length : <b>12.63 m</b>
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Purpose of inspection : <b>Routine Inspection</b>	Shape : <b>Circular</b>
Use of Conduit: <b>Drain</b>	Dia/Height: <b>525 mm</b>
Type of Conduit: <b>Storm water drain</b>	Start Depth To Invert:
Pipe Material: <b>Reinforced concrete</b>	End Depth To Invert:

Remarks :

1:105 Position	Observation																					
	<p>Start node, maintenance hole, Nodename: SPP01246</p> <p>Connection, good workmanship, connection appears to be open, height 50mm , at 2 o'clock</p> <p>Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 12 to 12 o'clock</p> <p>Connection, good workmanship, connection appears to be open, height 50mm , at 1 o'clock</p> <p>Tap roots, reduction in cross sectional area , Obstruction: &lt;5% , at 1 o'clock</p> <p>Soil visible through defect , Hole in the pipe</p> <p>Infiltration, sweating, at joint , from 3 to 7 o'clock</p> <p>Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 12 to 12 o'clock</p> <p>Connection, poor workmanship, connection appears to be open , height 50mm</p> <p>Some coarse aggregate is visible , Obstruction: &lt;5% , at 1 o'clock</p> <p>Finish node, maintenance hole, Nodename: SPP01594</p>	 0 m  1.26 m  1.66 m  3.25 m  3.25 m																				
<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <td>STR no def</td> <td>STR peak</td> <td>STR mean</td> <td>STR total</td> <td>STR grade</td> <td>SER no def</td> <td>SER peak</td> <td>SER mean</td> <td>SER total</td> <td>SER grade</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">50</td> <td style="text-align: center;">7.92</td> <td style="text-align: center;">100</td> <td style="text-align: center;">5</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1</td> </tr> </table>	STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade	2	50	7.92	100	5	0	0	0	0	1		
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade													
2	50	7.92	100	5	0	0	0	0	1													

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>2</b>	Sewer Ref.: <b>Line 2</b>
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Photo: 2\_1A  
0m, Start node, maintenance hole, Nodename: SPP01246



Photo: 2\_2A  
1.26m, Connection, good workmanship, connection appears to be open, height 50mm , at 2 o'clock



Photo: 2\_3A  
1.66m, Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 12 to 12 o'clock



Photo: 2\_4A  
3.25m, Connection, good workmanship, connection appears to be open, height 50mm , at 1 o'clock

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>2</b>	Sewer Ref.: <b>Line 2</b>
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Photo: 2\_4B  
3.25m, Connection, good workmanship, connection appears to be open, height 50mm , at 1 o'clock



Photo: 2\_7A  
5.53m, Infiltration, sweating, at joint , from 3 to 7 o'clock



Photo: 2\_7B  
5.53m, Infiltration, sweating, at joint , from 3 to 7 o'clock



Photo: 2\_7A  
9.29m, Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 12 to 12 o'clock

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>2</b>	Sewer Ref.: <b>Line 2</b>
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Photo: 2\_7B  
9.29m, Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 12 to 12 o'clock



Photo: 2\_9A  
9.78m, Connection, poor workmanship, connection appears to be open , height 50mm



Photo: 2\_9B  
9.78m, Connection, poor workmanship, connection appears to be open , height 50mm



Photo: 2\_8A  
10.99m, Some coarse aggregate is visible , Obstruction: <5% , at 1 o'clock

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>2</b>	Sewer Ref.: <b>Line 2</b>
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Photo: 2\_8B  
10.99m, Some coarse aggregate is visible , Obstruction: <5% ,  
at 1 o'clock



Photo: 2\_9A  
12.63m, Finish node, maintenance hole, Nodename: SPP01594



## WSA assessment

Date: <b>06/07/2020</b>	Contract No: <b>GLA003-001</b>	Asset Owner: <b>Sydney Water</b>	Operator : <b>S. Kimber</b>	Section number: <b>3</b>	Pipe Asset Id: <b>Line 3</b>
Time of inspection:	Cleaning: <b>not cleaned</b>	Standard: <b>WSA 05-2008 2.2</b>	LRP <b>Inside Face of the Wall</b>	Conduit Unit Length	Method of Inspection <b>Television Camera</b>

Town: Suburb: <b>Frenchs Forest</b> Street: <b>Arden Place</b> Asset Location <b>Reserve, park, public area</b>	Catchment: Asset Owner: <b>Gladys Forest Pty Ltd</b> Precipitation.: Flow control <b>No measures</b>	US MH: <b>SPP01247</b> Survey Dir: <b>upstream</b> DS MH: <b>SPP04649</b> Inspect Length : <b>23.21 m</b>
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Purpose of inspection : <b>Routine Inspection</b>	Shape : <b>Circular</b>
Use of Conduit: <b>Drain</b>	Dia/Height: <b>525 mm</b>
Type of Conduit: <b>Storm water drain</b>	Start Depth To Invert:
Pipe Material: <b>Reinforced concrete</b>	End Depth To Invert:

Remarks :

1:195 Position	Position	Observation	
	0.00	Start node, maintenance hole, Nodename: SPP04649	
	0.09	Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , at 10 o'clock	0 m
	2.88	Infiltration, sweating, at joint , from 12 to 12 o'clock	
	4.72	Infiltration, sweating , at 1 o'clock	0.09 m
	6.71	Deposits in the invert, other material Branch , Obstruction: <5% , at 6 o'clock	
	8.51	Hole in wall , Obstruction: <5% , at 12 o'clock	0.09 m
	10.41	Joint displaced radially, radial displacement 11-20mm , at 1 o'clock	
	13.78	Intruding connection, magnitude of intrusion: >75% , at 11 o'clock	2.88 m
	14.16	Infiltration, sweating, at joint , from 3 to 10 o'clock	
	17.77	Infiltration, sweating, at joint , at 10 o'clock	2.88 m
	19.19	Infiltration, sweating , at 1 o'clock	
	21.48	Hard or compacted material in the invert, at joint, Obstruction: <5% , from 7 to 8 o'clock	4.72 m
	23.21	Finish node, maintenance hole, Nodename: SPP01247	
			4.72 m

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
2	50	2.37	55	4	7	60	3.02	70	5



## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>3</b>	Sewer Ref.: <b>Line 3</b>
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Photo: 6\_1A  
0m, Start node, maintenance hole, Nodename: SPP04649



Photo: 6\_2A  
0.09m, Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , at 10 o'clock



Photo: 6\_3A  
2.88m, Infiltration, sweating, at joint , from 12 to 12 o'clock



Photo: 6\_4A  
4.72m, Infiltration, sweating , at 1 o'clock

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>3</b>	Sewer Ref.: <b>Line 3</b>
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Photo: 6\_4B  
4.72m, Infiltration, sweating , at 1 o'clock

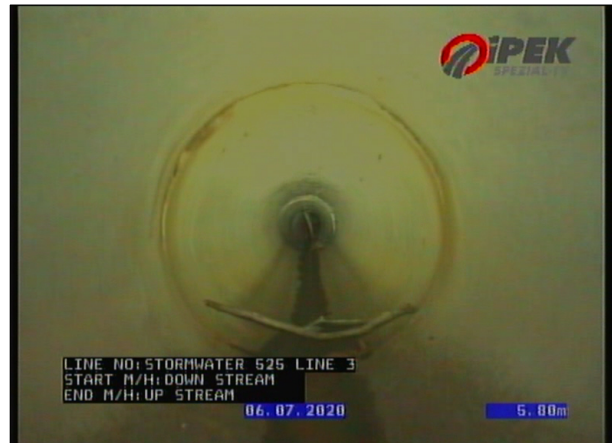


Photo: 6\_4A  
6.71m, Deposits in the invert, other material Branch ,  
Obstruction: <5% , at 6 o'clock



Photo: 3\_6A  
8.51m, Hole in wall , Obstruction: <5% , at 12 o'clock



Photo: 6\_5A  
10.41m, Joint displaced radially, radial displacement 11-20mm ,  
at 1 o'clock

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>3</b>	Sewer Ref.: <b>Line 3</b>
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Photo: 6\_6A  
13.78m, Intruding connection, magnitude of intrusion: >75% , at 11 o'clock



Photo: 6\_6B  
13.78m, Intruding connection, magnitude of intrusion: >75% , at 11 o'clock



Photo: 6\_8A  
17.77m, Infiltration, sweating, at joint , at 10 o'clock



Photo: 6\_9A  
19.19m, Infiltration, sweating , at 1 o'clock

## Inspection Pictures

Location/Street  
**Arden Place**

Town or suburb:

Date :  
**06/07/2020**

Section number:  
**3**

Sewer Ref.:  
**Line 3**



Photo: 6\_9B  
19.19m, Infiltration, sweating , at 1 o'clock



Photo: 6\_10A  
21.48m, Hard or compacted material in the invert, at joint,  
Obstruction: <5% , from 7 to 8 o'clock



Photo: 6\_11A  
23.21m, Finish node, maintenance hole, Nodename: SPP01247



## WSA assessment

Date: <b>06/07/2020</b>	Contract No: <b>GLA003-001</b>	Asset Owner: <b>Sydney Water</b>	Operator : <b>S. Kimber</b>	Section number: <b>4</b>	Pipe Asset Id: <b>Line 4</b>
Time of inspection:	Cleaning: <b>not cleaned</b>	Standard: <b>WSA 05-2008 2.2</b>	LRP <b>Inside Face of the Wall</b>	Conduit Unit Length	Method of Inspection <b>Television Camera</b>

Town: Suburb: <b>Frenchs Forest</b> Street: <b>Arden Place</b> Asset Location <b>Reserve, park, public area</b>	Catchment: Asset Owner: <b>Gladys Forest Pty Ltd</b> Precipitation.: Flow control <b>No measures</b>	US MH: <b>SPP04649</b> Survey Dir: <b>downstream</b> DS MH: <b>SPP04650</b> Inspect Length : <b>15.88 m</b>
Purpose of inspection : <b>Routine Inspection</b>		Shape : <b>Circular</b>
Use of Conduit: <b>Drain</b>	Dia/Height: <b>600 mm</b>	
Type of Conduit: <b>Storm water drain</b>	Start Depth To Invert:	
Pipe Material: <b>Reinforced concrete</b>	End Depth To Invert:	

Remarks :

	1:135 Position	Observation	
	0.00	Start node, maintenance hole, Nodename: SPP04649	 0 m
	4.86	Some coarse aggregate is visible , Obstruction: <5% , at 11 o'clock	 4.86 m
	7.91	Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 10 to 1 o'clock	 4.86 m
	15.42	Joint displaced radially, radial displacement 5-10mm , at 1 o'clock	 7.91 m
	15.88	Inspection (survey) abandoned, Buildup of leaves	 7.91 m

STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
2	2	0.25	4	1	0	0	0	0	1

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>4</b>	Sewer Ref.: <b>Line 4</b>
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Photo: 4\_1A  
0m, Start node, maintenance hole, Nodename: SPP04649



Photo: 4\_2A  
4.86m, Some coarse aggregate is visible , Obstruction: <5% , at 11 o'clock



Photo: 4\_2B  
4.86m, Some coarse aggregate is visible , Obstruction: <5% , at 11 o'clock



Photo: 4\_3A  
7.91m, Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 10 to 1 o'clock

## Inspection Pictures

Location/Street <b>Arden Place</b>	Town or suburb:	Date : <b>06/07/2020</b>	Section number: <b>4</b>	Sewer Ref.: <b>Line 4</b>
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Photo: 4\_3B  
7.91m, Breaking, all pieces are present but some of them are visibly displaced from position, length of break 100 , from 10 to 1 o'clock



Photo: 4\_3A  
15.42m, Joint displaced radially, radial displacement 5-10mm , at 1 o'clock



Photo: 4\_4A  
15.88m, Inspection (survey) abandoned, Buildup of leaves