

Sydney Water

9.11 Sydney Water

9.11.1 Stormwater Management and GPTs

Sydney Water (SW) owns and maintains a number of stormwater quality improvement devices within the study area catchment (Table 9-10).

Table 9-67. Sydney Water gross pollutant traps in the study area

GPT Types	Location	Catchment
Trash Rack	Belmore Park, North Parramatta	Upper Parramatta River
Sediment Trap/Trash Rack	Grose Street, Parramatta	Upper Parramatta River
ECOSol Unit	Ringrose Park, Wentworthville	Upper Parramatta River
Rocla Cleansall	Elizabeth Street, Guildford	Duck River
Rocla Cleansall	O'Neil Park, Yagoona	Duck River
Rocla Cleansall	Hume Park, Silverwater	Duck River
CDS Unit	Philips Park, Lidcombe	Haslams Creek, Homebush Bay
ECOSol Unit	Wyatt Park, Lidcombe	Haslams Creek, Homebush Bay
Boom with a central net	Saleyard Creek, Homebush	Powells Creek, Homebush Bay
Rocla Cleansall (2 units)	Gipps Street Concord	Hen and Chicken Bay
Bandalong Boom	Dobroyd Canal	Iron Cove Bay
Bandalong Boom	Hawthorne Canal	Iron Cove Bay

9.11.2 Canals

In Sydney, stormwater drainage services are shared among a number of agencies and groups. Stormwater generally flows into small street drains owned by local councils and then into much larger pipes, channels, or canals, called 'trunk drains', some of which are owned by Sydney Water. Canals in the study area that are managed by the Sydney Water are summarised in Table 9-2.

Table 9-68. Canals assessed within the study area

Asset Name	Catchment	Condition	Length (m)
HAW_E03	Iron Cove Bay	Good. Minor corrosion of concrete bed was observed.	542.7
HAW_E04	Iron Cove Bay	Good. Minor corrosion of concrete bed was observed.	133.0
HAW_W03	Iron Cove Bay	Good. Minor corrosion of concrete bed was observed	380.6
HAW_W04	Iron Cove Bay	Good. Cracking is present between concrete panels. Minor corrosion of concrete bed was observed.	45.3
HAW_W05	Iron Cove Bay	Good. Cracking is present on both concrete wall and bed. Minor corrosion of concrete bed was also observed.	116.4
HAW_W06	Iron Cove Bay	Good. Minor corrosion of concrete bed was observed.	133.1
DOB_E01	Iron Cove Bay	Good. With the exception of the older section at the entrance which is cracked and corroding.	324.1

Asset Name	Catchment	Condition	Length (m)
DOB_E02	Iron Cove Bay	Excellent. The canal is new	324.0
DOB_E03	Iron Cove Bay	Poor. The canal sides are cracking between the concrete panels. The concrete that forms both the sides and the bed is also weathered with aggregates visible.	262.7
DOB_E04	Iron Cove Bay	Poor. The canal wall is cracking between the concrete panels and also between the panels and the bed. The concrete that forms both the sides and the bed is also weathered with aggregates visible. The condition of the canal improves to the south east.	791.7
DOB_W01	Iron Cove Bay	Good. With the exception of the older section at the entrance which is cracked and corroding.	325.4
DOB_W02	Iron Cove Bay	Excellent. The canal is new	269.7
DOB_W03	Iron Cove Bay	Poor. The canal is cracking between the concrete panels. The concrete that forms both the sides and the bed is also weathered with aggregates visible.	297.9
DOB_W04	Iron Cove Bay	Poor. The canal wall is cracking between the concrete panels and also between the panels and the bed. The concrete that forms both the sides and the bed is also weathered with aggregates visible. Leachate is present from the wall. The condition of the canal im	810.8
BPE_E01	Hen and Chicken	Good	488.4
BPE_W01	Hen and Chicken	Good	496.8
BPW_E01	Hen and Chicken	Good	285.0
BPW_E02	Hen and Chicken	Poor. Concrete panels are cracked and weathered. Many have collapsed backwards due to a loss of fines from behind the wall. The concrete bed has corroded with aggregates visible.	649.9
BPW_E03	Hen and Chicken	Good	285.0
BPW_W01	Hen and Chicken	Good	303.5
BPW_W02	Hen and Chicken	Poor. Concrete panels are cracked and weathered. Many have collapsed backwards due to a loss of fines from behind the wall. The concrete bed has corroded with aggregates visible.	653.3
BPW_W03	Hen and Chicken	Good	284.5
POW_E01	Homebush Bay	Failed. The concrete panels that form the canal sides have cracked and failed along their lower half. The bed has also failed. Sinkholes are present behind the structure crest. Condition improves to the south.	838.8
POW_E02	Homebush Bay	Good. Concrete appears to be in good condition with only minor cracking observed. Similarly bed is in good condition with minor corrosion present along the environmental flow channel in the centre of the bed.	376.0
POW_E03	Homebush Bay	Good. Concrete appears to be in good condition with only minor cracking observed. Similarly bed is in good condition with minor corrosion present along the environmental flow channel in the centre of the bed.	117.8
POW_E04	Homebush Bay	Good. Bricks are in good condition as is the concrete bed with minor corrosion present along the environmental flow channel in the centre of the bed.	344.2
POW_W01	Homebush Bay	Good. Cracks between the concrete panels have been re-grouted.	100.6

Asset Name	Catchment	Condition	Length (m)
POW_W02	Homebush Bay	Poor. The concrete panels that form the canal sides have cracked and along their lower half. The bed is also cracking. Sinkholes are present behind the structure crest. The conditions improves to the south.	744.9
POW_W03	Homebush Bay	Good. Concrete appears to be in good condition with only minor cracking observed. Similarly bed is in good condition with minor corrosion present along the environmental flow channel in the centre of the bed.	375.6
POW_W04	Homebush Bay	Good. Concrete appears to be in good condition with only minor cracking observed. Similarly bed is in good condition with minor corrosion present along the environmental flow channel in the centre of the bed.	117.1
POW_W05	Homebush Bay	Good. Bricks are in good condition as is the concrete bed with minor corrosion present along the environmental flow channel in the centre of the bed.	342.2
PCT_E01	Homebush Bay	Good	959.5
PCT_W01	Homebush Bay	Good	960.3
HAS_E07	Homebush Bay	Poor. Minor cracking and weathering of concrete observed. Cracks are particularly evident between concrete panels. The wall is cracking beneath the eastern abutment of Parramatta Road.	340.9
HAS_E08	Homebush Bay	Poor. Minor cracking and weathering of concrete observed. Cracks are particularly evident between concrete panels. Condition worsens to the south.	255.8
HAS_W04*	Homebush Bay	Poor. Minor cracking and weathering of concrete observed. Cracks are particularly evident between concrete panels. Sinkholes were observed behind the structure crest.	390.6
HAS_W05	Homebush Bay	Poor. Minor cracking and weathering of concrete observed. Cracks are particularly evident between concrete panels. Condition worsens to the south.	242.6
* partially owned by Sydney Water, downstream of M4 owned by SOPA/Auburn Council			

9.11.3 Management Recommendations:

Management recommendations include:

Stormwater Management:

In conjunction with Ashfield, Leichhardt and City of Canada Bay Councils undertake a critical review of existing stormwater management practices in catchments draining to Iron Cove Bay, to determine:

- The efficacy of maintenance regimes of existing gross pollutant trapping;
- Better understand the various sources of gross pollutants that are impacting on seagrass habitat in the southern areas of Iron Cove Bay; and
- Determine where additional gross pollutant trapping or other stormwater management incentives may be warranted.

Canals:

- Ongoing monitoring of the structural condition of canal walls in poor condition (DOB_E03, HAS_E07, HAS_E08, HAS_W05, POW_W02 BPW_W02); Investigate sinkholes present behind the wall indicating a loss of material from behind (HAW_W01, HAW_E01)

- Investigate sinkholes present behind the wall indicating a loss of material from behind (HAW_W01, HAW_E01), and potential 'fall from height' hazards identified adjacent canals where fencing or other barricades are lacking (e.g. HAW_W01, BPE_E01, BPE_W01);
- Sydney Water, in conjunction with Strathfield Council and City of Canada Bay Council is considering options for the renewal and potential naturalisation of Powell's Creek (SoE 2007-08). This is supported and should be considered where canal walls may require repairs or replacement (e.g. POW_E01).

Appendix 10: Field Assessment Sheets for Priority Sites

SITES IN ORDER OF PRIORITY

All assessment sites are detailed within the project GIS database.

ABBREVIATIONS

Level: metres AHD (m)

Co-ords (MGA): Coordinates Map Grid of Australia

E: easting

N: northing

Condition:

Excellent	<ul style="list-style-type: none">• No defects observed• Structure is functioning as intended
Good	<ul style="list-style-type: none">• Minor defects observed• Generally good condition• Structure is functioning as intended
Poor	<ul style="list-style-type: none">• Major defects observed• Structure is at risk of failure without remedial action• Reduced functionality
Failed	<ul style="list-style-type: none">• Major defects observed• Structure is no longer functioning as intended• Structure has collapsed

Canal Inspection Record - POW_E01

Date 2/09/09 Locality Powells Creek East Bank, Concord West Level 0.68m LGA
Time 11:17 Tide Low-Mid Canada Bay



Co-Ords (MGA)
Start
E 322550
N 6252694
End
E 322782
N 6251892

Facility Details (Usage, Material, Const. Method, Type):
Concrete lined drainage canal with sloping sides. A steel fence is present along the length of the canal. Drainage is present at wall mid-height.

Condition Assessment:
The concrete panels that form the canal sides have cracked and failed along their lower half. The bed has also failed. Sinkholes are present behind the structure crest. The conditions improves to the south.

Excellent
Good
Poor
Failed X

Assets:
Fence prevents public access. The canal acts as a storm water control measure and is important for the surrounding infrastructure. A footbridges spans the canal.

Comments:
Saltmarsh is present in cracks between concrete panels and on the wall crest. Photos of structure are POW_E01-01 to POW_E01-14.

Photo 1
Typical condition of northern section of canal showing failure of sloping concrete wall.



Photo 2
Typical section of southern section of canal showing cracking of canal wall.



Canal Inspection Record

- POW_W02

Date	2/09/09	Locality	Powells Creek West Bank, Homebush	Level	0.68m	LGA	Strathfield
Time	11:27			Tide	Low-Mid		



Co-Ords (MGA)

Start
E 322562
N 6252590

End
E 322769
N 6251884

Facility Details (Usage, Material, Const. Method, Type):
Concrete lined drainage canal with sloping sides. A steel fence is present along the length of the canal. Drainage is present at wall mid-height.

Condition Assessment:
The concrete panels that form the canal sides have cracked and along their lower half. The bed is also cracking.
Sinkholes are present behind the structure crest. The conditions improves to the south.

Excellent
Good
Poor
Failed

X

Assets
Fence prevents public access. The canal acts as a storm water control measure and is important for the surrounding infrastructure. A footbridges spans the canal.

Comments:
Saltmarsh is present in cracks between concrete panels and on the wall crest. Photos of structure are POW_W02-01 to POW_W02-09.

Photo 1
Cracking and loss of concrete where sloping side meets bed.



Photo 2
Southern section of canal. Condition is better than at northern section.



Canal Inspection Record

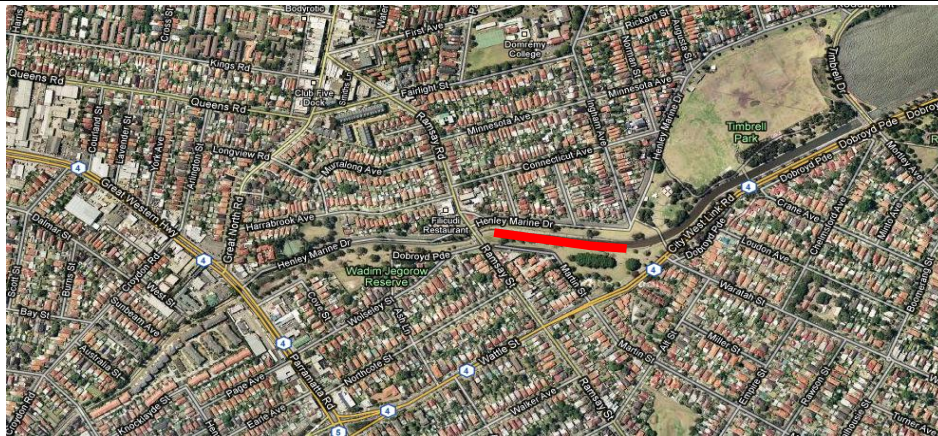
- DOB_E03

Date 1/09/09
Time 11:55

Locality Haberfield

Level 0.55
Tide Low

LGA Ashfield



Co-Ords (MGA)

Start

E 327611
N 6250326

End

E 327351
N 6250358

Facility Details (Usage, Material, Const. Method, Type):

Concrete lined canal with sloping concrete panel sides. The canal is fenced. Drainage is present at the toe of the wall.

Condition Assessment:

The canal sides are cracking between the concrete panels. The concrete that forms both the sides and the bed is also weathered with aggregates visible.

Excellent

Good

Poor

Failed

X

Assets:

The canal is fenced preventing public access. No other assets are supported by the structure.

Comments:

Photos of structure are DOB_E03-01 to DOB_E03-08.

Photo 1

View of canal.

Photo 2

Cracking and weathering of concrete.



Canal Inspection Record - DOB_E04

Date 1/09/09 Locality Haberfield Level 0.55m LGA Ashfield
Time 12:15 Tide Low



Co-Ords (MGA)

Start
E 327351
N 6250358
End
E 326648
N 6250074

Facility Details (Usage, Material, Const. Method, Type):
Concrete lined canal with vertical concrete panel sides. The canal is fenced where public access is available. The Southern extent of the canal is not accessible. Drainage is present at the toe of the wall.

Condition Assessment:

The canal wall is cracking between the concrete panels and also between the panels and the bed. The concrete that forms both the sides and the bed is also weathered with aggregates visible. The condition of the canal improves to the south east.

Excellent
Good
Poor
Failed

X

Assets:

The canal is fenced or public access is not available. The banks support bridge abutments for Ramsay St and the M4.

Comments:

Photos of structure are DOB_E04-01 to DOB_E04-25.

Photo 1

View of southern western extent of canal.



Photo 2

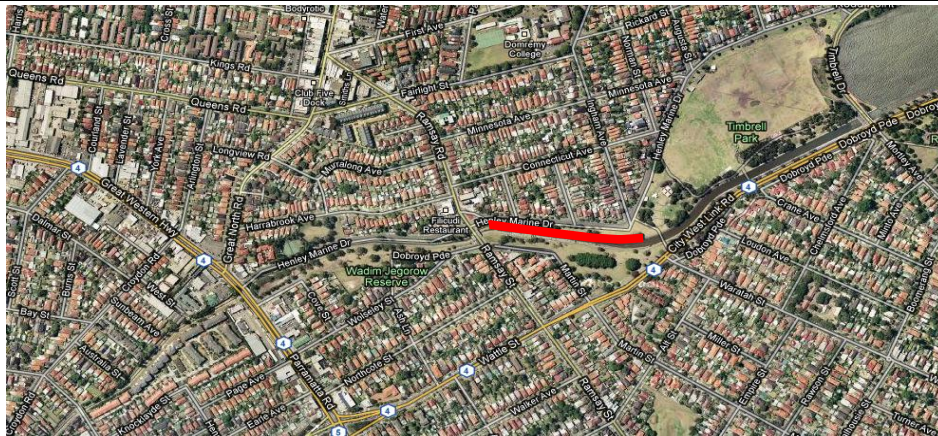
Cracking and weathering of concrete between sides and bed at north eastern extent.



Canal Inspection Record

- DOB_W03

Date	1/09/09	Locality	Five Dock	Level	0.55m	LGA	Canada Bay
Time	11:55			Tide	Low		



Co-Ords (MGA)

Start

E 327654
N 6250350

End

E 327358
N 6250374

Facility Details (Usage, Material, Const. Method, Type):

Concrete lined canal with sloping concrete panel sides. The canal is fenced. Drainage is present at the toe of the wall.

Condition Assessment:

The canal is cracking between the concrete panels. The concrete that forms both the sides and the bed is also weathered with aggregates visible.

Excellent
Good
Poor
Failed

X

Assets:

The canal is fenced preventing public access. No other assets are supported by the structure.

Comments:

Photos of structure are DOB_W03-01 to DOB_W03-04.

Photo 1

View of canal.

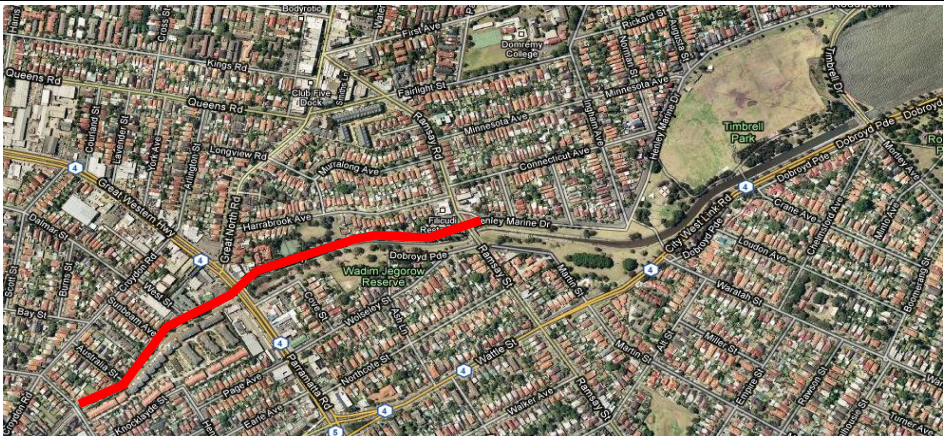
Photo 2

Cracking and weathering of concrete.



Canal Inspection Record - DOB_W04

Date 1/09/09 Locality Haberfield Level 0.55 LGA Ashfield
Time 12:20 Tide Low



Co-Ords (MGA)
Start
E 327358
N 6250374
End
E 326648
N 6250074

Facility Details (Usage, Material, Const. Method, Type):
Concrete lined canal with vertical concrete panel sides. The canal is fenced where public access is available. The Southern extent of the canal is not accessible. Drainage is present at the toe of the wall.

Condition Assessment:
The canal wall is cracking between the concrete panels and also between the panels and the bed. The concrete that forms both the sides and the bed is also weathered with aggregates visible. Leachate is present from the wall.
The condition of the canal improves to the south east.

Excellent
Good
Poor X
Failed

Assets:
The canal is fenced or public access is not available. The banks support bridge abutments for Ramsay St and the M4.

Comments:
Photos of structure are DOB_W04-01 to DOB_W04-24.

Photo 1
View of southern western extent of canal.

Photo 2
Corrosion of concrete with leachate shown.



Canal Inspection Record

- BPW_E02

Date	<u>1/09/09</u>	Locality	<u>Cintra Park, Concord</u>	Level	<u>1.06m</u>	LGA	<u>Canada Bay</u>
Time	<u>14:25</u>			Tide	<u>Mid</u>		



Co-Ords (MGA)

Start

E 325495

N 6251607

End

E 325280

N 6250994

Facility Details (Usage, Material, Const. Method, Type):

Concrete lined canal with sloping concrete panel sides. The canal is fenced and a public footpath is present adjacent.

Condition Assessment:

Concrete panels are cracked and weathered. Many have collapsed backwards due to a loss of fines from behind the wall. The concrete bed has corroded with aggregates visible.

Excellent

Good

Poor

Failed

X

Assets:

Fence prevents public access. The canal supports Lyons Road at its north western extent and a footbridge at its southern extent although there are no issues relating to these at present.

Comments:

Photos of structure are BPW_E02-01 to BPW_E02-013.

Photo 1

Typical view of structure.

Photo 2

Collapsed concrete panels.



Canal Inspection Record

- BPW_W02

Date	1/09/09	Locality	Cintra Park, Concord	Level	1.06m	LGA	Concord
Time	14:25			Tide	Mid		Canada Bay



Co-Ords (MGA)

Start

E 325485

N 6251613

End

E 325273

N 6250995

Facility Details (Usage, Material, Const. Method, Type):

Concrete lined canal with sloping concrete panel sides. The canal is fenced and a public footpath is present adjacent.

Condition Assessment:

Concrete panels are cracked and weathered. Many have collapsed backwards due to a loss of fines from behind the wall. The concrete bed has corroded with aggregates visible.

Excellent

Good

Poor

Failed

X

Assets:

Fence prevents public access. The canal supports Lyons Road at its north western extent and a footbridge at its southern extent although there are no issues relating to these at present.

Comments:

Photos of structure are BPW_W02-01 to BPW_W02-022.

Photo 1

Typical view of structure.

Photo 2

Collapsed concrete panels.



Canal Inspection Record

- HAS_E07

Date2/09/09Time14:30

LocalityUpstream & Downstream of M4

Level0.77mTideLow-Mid

LGA

Auburn



Co-Ords (MGA)

Start

E319738

N6253093

End

E319419

N6252983

Facility Details (Usage, Material, Const. Method, Type):

Concrete lined canal with concrete bed and sloping concrete panel sides. No public access is available. Industrial warehouses are present beyond the structure.

Condition Assessment:

Minor cracking and weathering of concrete observed. Cracks are particularly evident between concrete panels.

The wall is cracking beneath the eastern abutment of Parramatta Road.

Excellent

Good

Poor

Failed

X

Assets:

The bank supports abutments for two road bridges and is cracking beneath one.

Comments:

Photos of structure are HAS_E07-01 to HAS_E07-09.

Photo 1

Cracking between concrete panels.

Photo 2

Cracks beneath eastern abutment of Parramatta Road.



Canal Inspection Record - HAS_E08

Date 2/09/09 Locality Sydney Olympic Park Level 0.77m
Time 14:23 Tide Low-Mid LGA Auburn



Co-Ords (MGA)
Start
E 319419
N 6252983
End
E 319188
N 6252978

Facility Details (Usage, Material, Const. Method, Type):
Concrete lined canal with concrete bed and vertical concrete panel sides. No public access is available.

Condition Assessment:
Minor cracking and weathering of concrete observed. Cracks are particularly evident between concrete panels.
Condition worsens to the south.

Excellent	
Good	
Poor	X
Failed	

Assets:
The bank supports abutments for Parramatta Road however no issues relating to this at present

Comments:
Photos of structure are HAS_E08-01 to HAS_E08-06.

Photo 1
Typical view of concrete canal.

Photo 2
Cracking and weathering of vertical concrete wall between panels.



Canal Inspection Record

- HAS_W05

Date2/09/09Time14:15

LocalityParramatta Road, Lidcombe

Level0.77mTideLow-Mid

LGA
Auburn



Co-Ords (MGA)

Start

E319188

N6252978

End

E319409

N6252989

Facility Details (Usage, Material, Const. Method, Type):

Concrete lined canal with concrete bed and vertical concrete panel sides. No public access is available.

Condition Assessment:

Minor cracking and weathering of concrete observed. Cracks are particularly evident between concrete panels.

Condition worsens to the south.

Excellent

Good

Poor

Failed

X

Assets:

The bank supports abutments for Parramatta Road

Comments:

Photos of structure are HAS_W05-01 to HAS_W05-04.

Photo 1

Typical view of concrete canal.

Photo 2

Minor cracking and weathering of vertical concrete wall.

