

Ashfield LGA



9.3 Ashfield LGA

9.3.1 General Description

The Ashfield LGA lies within two catchment areas, the Cooks River and Parramatta River. Approximately 777 ha of the LGA contribute stormwater runoff to the Parramatta River via the Iron Cove Bay catchment. Land use is predominantly residential, with smaller areas of light industry, commercial land use, and arterial roads. The majority of stormwater runoff from the LGA drains to Iron Cove Bay via Hawthorne Canal and Dobroyd Canal. A small area of foreshore land comprising reserves and residences drains directly to Iron Cove Bay (downstream of Iron Cove Bridge).

9.3.2 Stormwater Management and GPTs

Both Hawthorne and Dobroyd Canals are tidally influenced open concrete channels which are designed to rapidly deliver high volumes of runoff to the estuary. Sydney Water (SW) is responsible for all of Dobroyd Canal, and Hawthorne Canal to the downstream limit at Marion Street, Leichhardt.

Sydney Water maintains two litter booms to collect litter and other gross pollutants from Dobroyd and Hawthorne Canals. Table 9-10 summarises the amount of litter collected from these booms each year.

Table 9-10. Waste collected from Sydney Water litter booms

Waste collected (cubic metres)				
Canal	2004/05	2005/06	2006/07	2007/08
Dobroyd Canal	23.1	29.2	9.7	9.4
Hawthorne Canal	51.0	27.1	35.1	36.6

Historically, both Hawthorne and Dobroyd Canals have been shown to convey heavy loads of gross pollutants and oils as well as dissolved and suspended contaminants (Woodlots and Wetlands, 1999). During field investigations by Earth Tech in 2008 and by AECOM for this study (2009), excessive sedimentation, organic matter, and litter were observed immediately downstream of both canals.

Forty seven stormwater outlets were identified which discharge directly to Hawthorne Canal, Dobroyd Canal, Iron Cove Bay or the river. The sub-catchments which drain to at least six of these outlets should be investigated to determine whether gross pollution control is required. Three outlets are located in Dobroyd Canal (Dobroyd_Canal_005; Dobroyd_Canal_010; and Dobroyd_Canal_013) and three in Hawthorne Canal (Hawthorne_Canal_015; Hawthorne_Canal_022; Hawthorne_Canal_029). Two stormwater outlets in Iron Cove Bay require maintenance repairs (Iron_Cove_040 and Iron_Cove_041). All stormwater outlets are illustrated in Figure 9-2.

9.3.3 Seawalls

The LGA contains approximately 991 m of seawall, which extends from Hawthorne Canal to Dobroyd Canal along the foreshore of Iron Cove Bay. This length of seawall has been assessed as three separate seawall sections (Table 9-10).

Table 9-11. Seawalls assessed within the Ashfield LGA

Asset	Length (m)	Location	Condition
ASH_S01	154	Adjacent City West Link, Hawthorne Canal	Good
ASH_S02	285	Dobroyd Parade to UTS Rowing Club	Good
ASH_S03	552	UTS Rowing Club to Dobroyd Canal	Poor

In terms of environmental values, the seawalls provide cavities and habitat for oysters on the lower parts of the wall sections. ASH_S03 may provide potential habitat area in which the extent of mangroves in the bay could be increased. Earth Tech (2008) found scattered mangrove trees establishing adjacent a section of seawall to the northwest of ASH_S03 (adjacent Timbrell Park) with similar recommendations made.

All seawall sections have potential for additional artificial reef habitat creation.

9.3.4 Estuarine Vegetation

Estuarine vegetation previously mapped within the Ashfield LGA foreshore consists of seagrass habitat, with *Casuarina glauca* and other tree plantings in open space areas adjacent to the foreshore.

Approximately 1,580.8m² of seagrass previously mapped (West *et al.* 2004 and West and Williams 2008) were unable to be verified during this study. Mapped patches ranged in size from 38.2 m² to 516.0 m².

9.3.5 Summary of Management Recommendations for the LGA

Stormwater Management:

- Ashfield Council in conjunction with Sydney Water, Leichhardt and City of Canada Bay Councils should undertake a critical review of existing stormwater management practices to determine:
 - The efficacy of maintenance regimes of existing GPTs, and
 - Where additional gross pollutant trapping is required. This should include a review of current street sweeping activities in catchment areas draining to Iron Cove Bay – given that the dominant gross pollutant evident is leaf litter (refer Section 7.4.5.1).
- Update existing stormwater drainage GIS layer to include stormwater outlets located in seawall sections ASH_S02 and S03; and
- Repair stormwater outlets located in seawall section ASH_S03 (photos: 9.1(a) and (b)).



Seawalls:

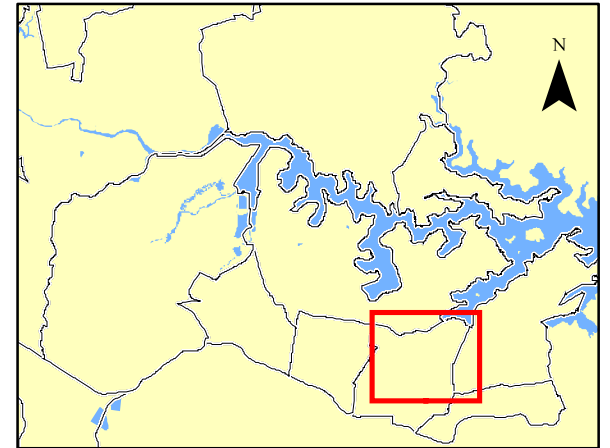
- Continue to monitor ASH_S03 for any decrease in structural stability – data collected for all seawalls including referenced site photographs are provided in the project GIS database and should be used as a reference benchmark for ongoing monitoring;
- Eventual repair and / or replacement to include intertidal habitat function such as artificial reef habitat.

Estuarine Vegetation:

- Potential to extend mangroves in the bay in front of seawall sections ASH_S01 to S03;
- Confirm whether previously mapped seagrass still remains adjacent ASH_S02 and S03 and update project GIS database accordingly; and
- Installation of seagrass friendly moorings in conjunction with management of gross pollutants (particularly organic materials). The location of potential seagrass friendly moorings is shown on Figure 9.2.



SITE LOCATION



- Stormwater outlet
- Existing GPT
- Potential GPT site

Seawalls

- ASH_S01
- ASH_S02
- ASH_S03

Seagrass & Moorings

- High priority
- Medium priority
- Low priority
- ⚓ Moorings
- ▨ Foreshore reserves

Source:

Seagrass base plan: Industry & Investment NSW (2003)
 Seagrass ground truthed: AECOM (2009)
 Vegetation base mapping: SMCMA (2007)
 Other: refer study section 8.0 (2010)

Coordinate System:

GDA94 MGA Zone 56

Appendix 2: 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

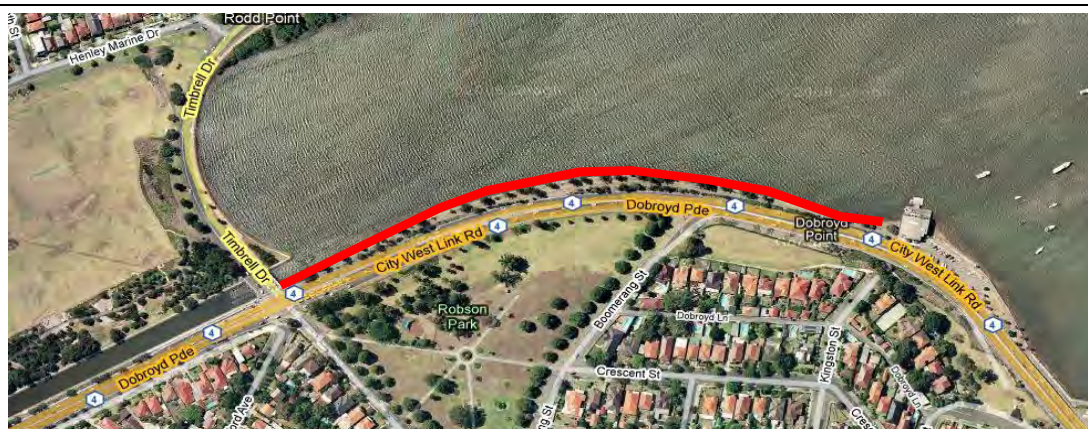
N: northing

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

Seawall Inspection Record - ASH_S03

Date	<u>6/08/09</u>	Locality	<u>Dobroyd Point, Iron Cove Bay</u>	Level	<u>1.10m</u>	LGA	<u>Ashfield</u>
Time	<u>10:03</u>			Tide	<u>Mid-High</u>		



Co-Ords (MGA)

Start

E	<u>328686</u>
N	<u>6250700</u>

End

E	<u>328159</u>
N	<u>6250647</u>

Seawall Details (Slope, Material, Const. Method, Type):

Medium size grouted sandstone block revetment backed by newer vertical medium sized grouted wall. Sandstone sea stairs and a number of stormwater outlets were also observed.

Condition Assessment (Slope, Crest, Toe, Backfill):

Sandstone seawall is missing grout, slumping and showing signs of weathering on both the sloping and vertical sections. Numerous local block failures were observed. Sea stairs are in good condition, cracking of the stormwater outlets was observed.

Excellent	<input type="checkbox"/>
Good	<input type="checkbox"/>
Poor	<input checked="" type="checkbox"/>
Failed	<input type="checkbox"/>

Assets

No fence or obstruction to delineate the seawall edge. Footpath heavily utilised by the public. No major assets are situated atop the structure.

Comments:

Photos ASH_S03-01 to ASH_S03-11.

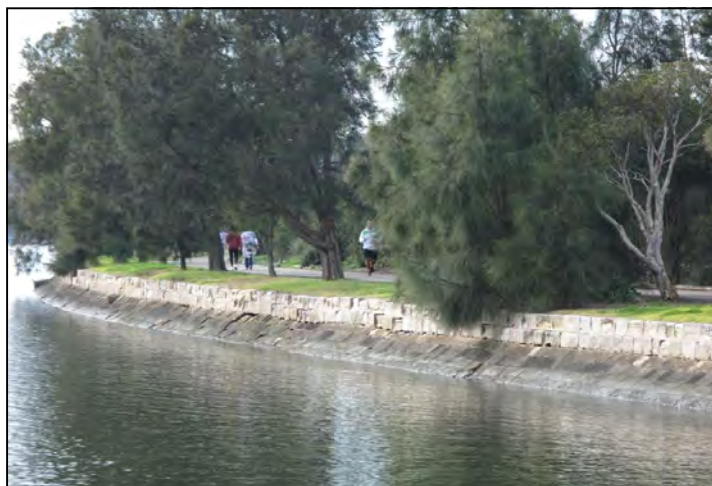
Photo 1

Typical view of revetment with block failures, slumping, weathering and loss of grout evident.



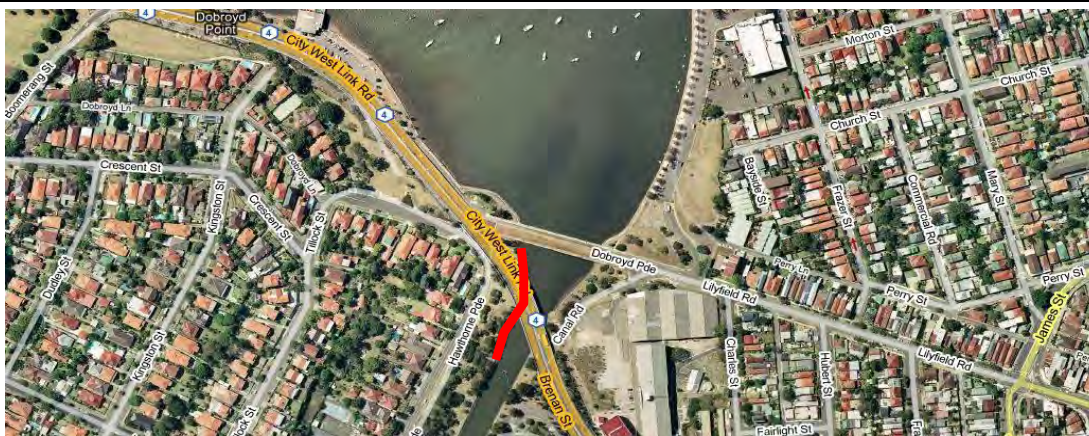
Photo 2

SW section of revetment showing weathering and slumping of sandstone blocks.



Seawall Inspection Record - ASH_S01

Date	<u>1/09/09</u>	Locality	<u>Adjacent City West Link</u>	Level	<u>0.87m</u>	LGA	<u>Ashfield</u>
Time	<u>9:20</u>			Tide	<u>Mid</u>		



Co-Ords (MGA)

Start
 E 328877
 N 6250351

End
 E 328899
 N 6250499

Seawall Details (Slope, Material, Const. Method, Type):

Shotcrete revetment possibly covering older sandstone blocks or rubble structure. A single layer of medium sized sandstone blocks runs long the crest. The revetment links Hawthorne Canal to the Ashfield foreshore.

Condition Assessment (Slope, Crest, Toe, Backfill):

Generally good condition. Shotcrete is showing signs of weathering. Minor weathering and loss of grout of new sandstone blocks at crest.

Excellent
 Good
 Poor
 Failed

X

Assets

Public footpath runs along crest and no barrier at wall edge. The revetment does not support any other structures.

Comments:

Photos ASH_S01-01 to ASH_S01-05.

Photo 1

Typical section of revetment.

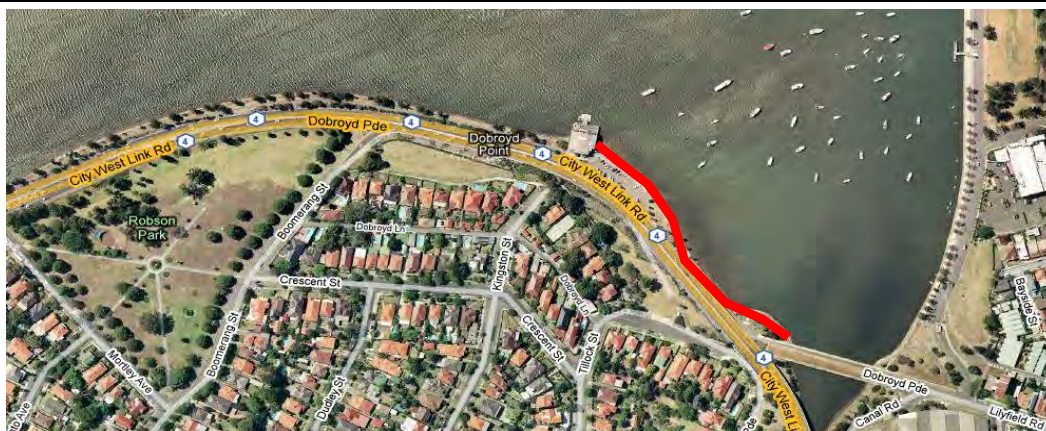
Photo 2

Transition of revetment into Hawthorne Canal.



Seawall Inspection Record - ASH_S02

Date 4/08/09 Locality Dobroyd Pt, M4 to UTS Rowing Club house Level 0.82m LGA Ashfield
 Time 14:30 Tide Low-Mid



Co-Ords (MGA)

Start
 E 328899
 N 6250499

End
 E 328711
 N 6250693

Seawall Details (Slope, Material, Const. Method, Type):

Medium sized sandstone block grouted revetment backed by newer vertical medium sized grouted wall. Two sections of the original seawall have been replaced with sea stairs, one concrete approx. 50m from the M4 and one sandstone adjacent to the UTS Rowing Club house.

Condition Assessment (Slope, Crest, Toe, Backfill):

Sandstone seawall is missing grout, slumping and showing signs of weathering on both the sloping and vertical sections. Both sets of sea stairs are in good condition.

Excellent
 Good
 Poor
 Failed

X

Assets

A safety fence ruins along the length of the original sandstone seawall. There is no safety fence along both sets of sea stairs. No major assets are supported by the seawall.

Comments:

Photos ASH_S02-01 to ASH_S02-07.

Photo 1

Sloping and vertical sandstone blocks and concrete sea stairs sections of the seawall.



Photo 2

Sandstone sea stairs adjacent to the UTS Rowing Club house.

