



AGENDA

FOR ENVIRONMENTAL SUSTAINABILITY AND TREES SUB COMMITTEE MEETING TO BE HELD ON

8 JULY 2024 AT 6.30 PM

**IN WITTBER & DR RUBY DAVY ROOMS, SALISBURY COMMUNITY HUB,
34 CHURCH STREET, SALISBURY**

MEMBERS

Cr L Brug (Chairman)
Mayor G Aldridge (ex officio)
Deputy Mayor, Cr C Buchanan
Cr J Chewparsad
Cr P Jensen
Cr S McKell (Deputy Chairman)
Cr S Ouk

REQUIRED STAFF

Chief Executive Officer, Mr J Harry
General Manager City Infrastructure, Mr J Devine
Deputy Chief Executive Officer, Mr C Mansueto
General Manager Community Development, Mrs A Pokoney Cramey
General Manager City Development, Ms M English
Manager Governance, Mr R Deco

APOLOGIES

LEAVE OF ABSENCE

PRESENTATION OF MINUTES

Presentation of the Minutes of the Environmental Sustainability and Trees Sub Committee Meeting held on 13 May 2024.

REPORTS

ESATS1 Future Reports for the Environmental Sustainability and Trees Sub
Committee 7

ESATS2 Tree Removal Requests - April and May 2024..... 9

ESATS3 Appeals Report - Tree Removal Requests - Various Locations for April and
May 2024..... 29

ESATS4 Urban Tree Canopy Data and Reporting 37

QUESTIONS ON NOTICE

There are no Questions on Notice

MOTIONS ON NOTICE

There are no Motions on Notice

OTHER BUSINESS

(Motions Without Notice, Questions Without Notice, CEO Updates)

CLOSE



**MINUTES OF ENVIRONMENTAL SUSTAINABILITY AND TREES SUB COMMITTEE
MEETING HELD IN LITTLE PARA CONFERENCE ROOMS,
SALISBURY COMMUNITY HUB, 34 CHURCH STREET, SALISBURY ON**

13 MAY 2024

MEMBERS PRESENT

Cr L Brug (Chairman)
Deputy Mayor, Cr C Buchanan
Cr J Chewparsad
Cr S Ouk

OBSERVERS

Cr D Hood
Cr B Brug
Cr A Graham

STAFF

Chief Executive Officer, Mr J Harry
General Manager City Infrastructure, Mr J Devine
Deputy Chief Executive Officer, Mr C Mansueto
Acting General Manager City Development, Ms S Klein
Manager Governance, Mr R Deco
Manager Engineering Assets & Systems, Mr M Purdie
Team Leader Parks & Landscape, Mr N John
Personal Assistant - Executive Office, Ms M Healy

The meeting commenced at 7.24pm.

The Chairman welcomed the Elected Members, members of the public and staff to the meeting.

APOLOGIES

Apologies were received from Mayor G Aldridge, Cr P Jensen and Cr S McKell.

LEAVE OF ABSENCE

Nil.

PRESENTATION OF MINUTES

Moved Cr S Ouk
Seconded Cr J Chewparsad

The Minutes of the Environmental Sustainability and Trees Sub Committee Meeting held on 8 April 2024, be taken as read and confirmed.

CARRIED

REPORTS

ESATS1 Future Reports for the Environmental Sustainability and Trees Sub Committee

Moved Cr C Buchanan
Seconded Cr J Chewparsad

That Council:

1. Notes the report.

CARRIED

ESATS2 Tree Removal Requests - March 2024

Moved Cr C Buchanan
Seconded Cr S Ouk

That Council:

1. Notes the items within this report.
2. Notes that for Item 28 & 29 the Resident is to be advised that they can appeal the decision made by the Assessment Manager to the Environment Resources and Development Court (ERD).
3. Notes that the template for the Tree Appeals Outcome letter be updated to inform the Resident of their appeal rights through the ERD Court.

CARRIED

ESATS3 Appeals Report - Tree Removal Requests - Various Locations for February and March 2024

Moved Cr C Buchanan
Seconded Cr J Chewparsad

That Council:

1. Notes that, as part of the appeal process, the refused tree removal requests appealed during February and March 2024, as outlined in the report (Item ESATS3 Environmental Sustainability and Trees Sub Committee, 13 May 2024), are now presented to the Environmental Sustainability and Trees Sub Committee for consideration and/or recommendation to Council as per the Environmental Sustainability and Trees Sub Committee’s Terms of Reference.

That the Environmental Sustainability and Trees Sub Committee, using its delegated authority under its adopted Terms of Reference:

2. Approves the removal of the one (1) *Non-regulated or significant* tree located at 3 Bearing Road, Salisbury North applying tree removal criteria 6.1.12 of the Tree Removal Procedure in context of the specific health implications advised by the resident
3. Approves the removal of the one (1) *Non-regulated or significant* tree located at 13 Cavendish Terrace, Burton applying tree removal criteria 6.1.12 of the Tree Removal Procedure
4. Refuses the removal of the one (1) *Non regulated or significant* tree located at 7 Goldthorn Road, Salisbury Park
5. Refuses the removal of the one (1) *Non regulated or significant* tree located at 15 Dutton Drive, Para Hills.

CARRIED

QUESTIONS ON NOTICE

There were no Questions on Notice.

MOTIONS ON NOTICE

There were no Motions on Notice.

OTHER BUSINESS

(Questions Without Notice, Motions Without Notice, CEO Update)

Nil

QUESTION WITHOUT NOTICE

ESATS-QWON1 Verge Tree Removal Update

Cr S Ouk asked a question in relation to the current status of a verge tree removal application for 181 Burton Road, Paralowie.

The General Manager City Infrastructure took this question on notice.

CLOSE

The meeting closed at 7.40pm.

CHAIRMAN.....

DATE.....

INFORMATION ONLY

ITEM	ESATS1 ENVIRONMENTAL SUSTAINABILITY AND TREES SUB COMMITTEE
DATE	11 June 2024
HEADING	Future Reports for the Environmental Sustainability and Trees Sub Committee
AUTHOR	Corina Allen, City Infrastructure Administration Coordinator, City Infrastructure
CITY PLAN LINKS	4.2 We deliver quality outcomes that meet the needs of our community
SUMMARY	This item details reports to be presented to the Environmental Sustainability and Trees Sub Committee as a result of a previous Council resolution.

RECOMMENDATION

That Council:

1. Notes the report.

ATTACHMENTS

There are no attachments to this report.

1. BACKGROUND

- 1.1 A list of resolutions requiring a future report to Council is presented to each Sub Committee and standing Committee for noting.
- 1.2 If reports have been deferred to a subsequent month, this will be indicated, along with a reason for the deferral.

2. EXTERNAL CONSULTATION / COMMUNICATION

- 2.1 Nil.

3. DISCUSSION

- 3.1 The following table outlines reports to be presented to the Environmental Sustainability and Trees Sub Committee as a result of a previous Council resolution:

Meeting - Item	Heading and Resolution	Officer
18/12/23 ESATS3	<p>Sustainability Partnerships</p> <p>3. Approves pursuing establishment of a trial Regional Climate Partnership with the City of Playford, Town of Gawler, Local Government Association and Department for Environment and Water with a further report to be presented to Council with a Memorandum of Understanding.</p> <p>Due: December 2024</p>	Lara Daddow

CONCLUSION / PROPOSAL

- 4.1 Future reports for the Environmental Sustainability and Trees Sub Committee have been reviewed and are presented to Council for noting.

INFORMATION ONLY

ITEM	ESATS2 ENVIRONMENTAL SUSTAINABILITY AND TREES SUB COMMITTEE
DATE	08 July 2024
HEADING	Tree Removal Requests - April and May 2024
AUTHOR	Nigel John, Team Leader Parks & Landscape, City Infrastructure
CITY PLAN LINKS	1.1 Our City is attractive and well-maintained 4.1 Members of our community receive an exceptional experience when interacting with Council
SUMMARY	This monthly report provides Elected Members with an update on tree removal requests received from residents. Due to the changes in the PDI act the April report was deferred and is now presented with the May report.



RECOMMENDATION

That Council:

1. Notes the report.

ATTACHMENTS

This document should be read in conjunction with the following attachments:

1. Tree Removal - April 2024 [↓](#) 
2. Tree Removal - May 2024 [↓](#) 

1. BACKGROUND

- 1.1 At its meeting held on Tuesday, 27 April 2021 Council resolved:

“That a standing report be established for every meeting of the Tree Management Appeals Sub Committee to inform Council of every application received for tree removal and the outcome of that request.”

(Resolution No. 0916/2021)

- 1.2 Staff currently upload a monthly tree removal request information table to the Elected Members Portal. This document has been adapted to provide further information and will now be reported to each meeting of the Environmental Sustainability and Trees Sub Committee.

2. EXTERNAL CONSULTATION / COMMUNICATION

- 2.1 Various residents.

3. DISCUSSION

- 3.1 The attached table is a summary of requests for tree removals received and actioned by staff during the past month and have been provided on the Elected Member Portal for April and May 2024.
- 3.2 April 2024
- 3.2.1 Fifty-eight (58) tree removal requests were received in April 2024.
- 3.2.2 Of these requests, Fifty-two (52) were approved for removal including Fourteen(14) significant or regulated trees approved through development applications.
- 3.2.3 Six (6) requests were refused. Of these, Four (4) are related to significant or regulated trees under the *Planning Development and Infrastructure Act 2016*.
- 3.3 May 2024
- 3.3.1 Fifty-three (53) tree removal requests were received in May 2024.
- 3.3.2 Of these requests, Thirty-nine (39) were approved for removal including seventeen(17) significant or regulated trees approved through development applications.
- 3.3.3 Including Fifteen (15) were reassessed and classified as regulated under the new changes to the PDI act. These have removal supported and a DA outcome pending.
- 3.3.4 Fourteen (14) requests were refused including (1) one was not related to regulated or significant under the Planning Development and Infrastructure Act 2016
- 3.4 Tree removal requests often result in ongoing dialogue between the owner of the property and Council on the proposed tree removal and subsequent discussions around the species type and location of the new street tree.
- 3.5 It is important to note that through various annual programs Council plants 2,000 trees each year. These programs include the Street Tree Renewal Program, In-fill Planting Program, Tree Screen Renewal Program, Reserve Upgrade Program, Feature Landscape Renewal Program, Greening Program, School Tree Planting Program, Major Projects and ad-hoc planting requests. These tree renewal programs are cognisant of regulated, significant trees or those forming habitat corridors.

4. FINANCIAL OVERVIEW

- 4.1 The budget allocation for reactive tree removals for 2023/24 is \$363,000.
- 4.2 At its meeting held on Monday, 8 April 2024, item ESATS2, Council carried an additional \$150,000.00 non-discretionary budget allocation for reactive tree removals for the remaining 23/24 f/year.
- 4.3 As of 30 April 2024, the current spend is \$435,656.00
- 4.4 As of 31 May 2024, the current spend is \$474,534.00


5. CONCLUSION / PROPOSAL

- 5.1 It is proposed that the information contained in the report be noted.

TREE REMOVAL REQUESTS

MONTH: APRIL 2024

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria



ADDRESS		DATE	REFERENCE	APPROVED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
1	Brahma Lodge Res Baynes Green - cnr of log fence at intersection Manya Ave and Karong Ave - dead tree	Friday, 12 April 2024	E354907	Approved		
2	Brahma Lodge 25 Aberdeen Cres	Friday, 19 April 2024	E352534-Case 14183	Approved		
3	Cavan 5 Newcastle Crescent - dead tree	Wednesday, 17 April 2024	E355335-Case 17555	Approved		
4	Gulfview Heights 12 Lipson Reach Road	Friday, 5 April 2024	E350189-Case 11459	Approved		
5	Gulfview Heights 26 Carriage Way - tree nearest no. 24 boundary	Friday, 12 April 2024	E350411-Case 11738	D/A Approved - Regulated		
6	Gulfview Heights 4 Granada Avenue 	Monday, 15 April 2024	E352190-Case 13773			Preliminary planning advise concludes that a DA approval is not likely. Refused-Some minor reduction over the road and deadwood removal would be beneficial.
7	Ingle Farm 20B Coondoo Avenue	Friday, 12 April 2024	E350778-Case 12181	Approved		

Item ESA TS2 - Attachment 1 - Tree Removal- April 2024

TREE REMOVAL REQUESTS

MONTH: APRIL 2024

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS			DATE	REFERENCE	APPROVED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
8	Ingle Farm	26A Atlanta Avenue - Regulated - request for removal raised by resident at no. 26B 	Friday, 12 April 2024	E350366-Case 11676			Refused - Regulated. Preliminary planning advise concludes that a DA approval is not likely. New House built in 2020-2021 and Development number 361/1245/2018/LD &361/D122/18 notes the tree shall be protected at all times to reasonable satisfaction of council.
9	Ingle Farm	26B Atlanta Avenue 	Friday, 12 April 2024	E350366-Case 11676			Preliminary planning advise concludes that a DA approval is not likely, Refused-Koel paniculata, health and structure rating #2 and doesn't achieve criteria for removal

Item ESA TS2 - Attachment 1 - Tree Removal- April 2024

TREE REMOVAL REQUESTS

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria


ADDRESS			DATE	REFERENCE	APPROVED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
10	Mawson Lakes	16 Cygnet Street 	Wednesday, 3 April 2024	E350356-Case 11665		Refused-Celtis occidentalis. Health and structure rating 2 and doesn't achieve criteria for removal. Tree is relatively young and forming good shape.	
11	Mawson Lakes	5 Parsons Court	Friday, 5 April 2024	E348724-Case 9746	Approved		
12	Mawson Lakes	side 10 Greengate Lane - 2nd tree in reserve from the road	Monday, 8 April 2024	E348780-Case 9806	Approved		
13	Mawson Lakes	22 Pine Court - dead tree	Monday, 8 April 2024	E349932-Case 11146	Approved		
14	Mawson Lakes	Unit 1 / 32-36 Metro Parade - STREE-21175	Monday, 15 April 2024	E350317-Case 11613	Approved		
15	Mawson Lakes	Unit 1 / 32-36 Metro Parade - STREE-21170	Monday, 15 April 2024	E350317-Case 11613	Approved		
16	Mawson Lakes	Douglas Drive Reserve - side 54 Douglas Drive - removal of hibiscus	Wednesday, 17 April 2024	E353338-Case 12264	Approved		
17	Mawson Lakes	102 Isla Circuit	Friday, 19 April 2024	E349294-Case 10449	Approved		
18	Para Hills	Stock-Keeper Reserve opp 12B Pamela Drive - dead tree	Thursday, 4 April 2024	E354311-Case 16325	Approved		
19	Para Hills	side 7 Petite Court - Milne Road - dead tree	Thursday, 4 April 2024	E354310-Case 16324	Approved		

Item ESA TS2 - Attachment 1 - Tree Removal- April 2024

TREE REMOVAL REQUESTS

MONTH: APRIL 2024

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS		DATE	REFERENCE	APPROVED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
20	Para Hills 30 McGowan Road - Regulated	Wednesday, 10 April 2024	E340514	D/A Approved - Regulated		
21	Para Hills West Res The Paddocks Wetlands, adj Dog Park - Tree 1 - Regulated	Friday, 12 April 2024	E343681	D/A Approved - Regulated		
22	Para Hills West Res The Paddocks Wetlands, adj Dog Park - Tree 2 - Regulated	Friday, 12 April 2024	E343681	D/ Approved - Regulated		
23	Para Hills West 5 Moyes Court	Tuesday, 16 April 2024	E350965-Case 12392	Approved		
24	Para Hills West 18 Etuna Street - Regulated 	Friday, 12 April 2024	E350657-Case 12034			Refused - Regulated Euc leucoxylon. The tree has been assessed by CoS 2019, 2021 and 2024 and has had some pruning to reduce branch extension, but no obvious history of branch failure has been noted. The current structure and health rating is 2 (Fair) with no obvious flaws or health issues. In 2019 the tree was located at an acceptable distance from the driveway, however, around September of 2021 renovations were completed and the new driveway was constructed very close to the regulated tree, contrary to the approved plans. Preliminary planning advise concludes that a DA approval is not likely.

Item ESA TS2 - Attachment 1 - Tree Removal- April 2024

TREE REMOVAL REQUESTS


Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS			DATE	REFERENCE	APPROVED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
25	Para Vista	Williams Green Reserve - opposite 42 Charmaine Ave - Regulated - Retrospective (crown removed)	Monday, 22 April 2024	E350797	D/A Approved - Regulated - Retrospective		
26	Parafield Gardens	104 The Boulevard - dead tree	Thursday, 4 April 2024	E354322	Approved		
27	Parafield Gardens	130 The Boulevard - dead tree	Thursday, 4 April 2024	E354321	Approved		
28	Parafield Gardens	190 Shepherdson Road - dead tree	Friday, 5 April 2024	E354397	Approved		
29	Parafield Gardens	182 Shepherdson Road - dead tree	Friday, 5 April 2024	E354396	Approved		
30	Parafield Gardens	Holy Family Primary School - 71-91 Shepherdson Road - near gate	Thursday, 11 April 2024	E353641-Case 15463	Approved		
31	Parafield Gardens	32 Golden Circuit	Friday, 12 April 2024	E350420-Case 11751	Approved		
32	Parafield Gardens	5A Lavender Drive - tree furthest from drive	Monday, 15 April 2024	E349903-Case 11104	Approved		
33	Parafield Gardens	side 50 Kings Road - Southcott Tce - dead tree	Friday, 19 April 2024	E350649 - Case 12023	Approved		
34	Parafield Gardens	Tecoma Street Reserve - side 23 Tecoma Court	Monday, 22 April 2024	E350681-Case 12070	D/A Approved - Regulated		
35	Parafield Gardens	9 Morgan Street - Regulated	Tuesday, 23 April 2024	E353526-Case 15378	D/A Approved - Regulated		
36	Paralowie	41 Byron Bay Drive - dead tree	Wednesday, 3 April 2024	E350371-Case 11682	Approved		

Item ESATS2 - Attachment 1 - Tree Removal- April 2024

TREE REMOVAL REQUESTS

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS			DATE	REFERENCE	APPROVED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
37	Paralowie	3 Tania Street - 2 trees 	Thursday, 11 April 2024	E349301-Case 10455		Refused- Pinus canariensis x 2. Health and structure rating 2 (fair). The quantity of trees was reduced some years ago due to the volume of debris. The trees don't currently achieve the criteria for removal	
38	Paralowie	Patterson Court Reserve - 4 x small dead trees near side 11 Patterson Crt and 3 x larger dead trees further south along fence line	Wednesday, 17 April 2024	E350849-Case 12264	Approved x 7		
39	Paralowie	18 Panto Avenue - Regulated	Monday, 22 April 2024	E331925	D/A Approved - Regulated		
40	Paralowie	11 Redford Court	Friday, 19 April 2024	E354876	D/A Approved - Regulated		
41	Pooraka	31 Barooka Street - dead tree	Monday, 8 April 2024	E349739-Case 10897	Approved		
42	Pooraka	10 Urawa Ave	Friday, 12 April 2024	E350529-Case 11884	D/A Approved - Regulated		
43	Pooraka	3 Lana Street	Tuesday, 30 April 2024	E351511 - Case 13004	Approved		
44	Salisbury East	Clayson Road Wetlands	Monday, 15 April 2024	E350187-Case 11457	Approved		
45	Salisbury East	16 Mario Court	Monday, 15 April 2024	E350345-Case 11642	D/A Approved - Regulated		
46	Salisbury East	37 Simpson Street - dead tree - nearest to driveway	Monday, 15 April 2024	E350620-Case 11989	Approved		

Item ESATS2 - Attachment 1 - Tree Removal- April 2024

TREE REMOVAL REQUESTS

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS		DATE	REFERENCE	APPROVED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
47	Salisbury East	21 Sherwood Ave - 2 x dead trees	Monday, 15 April 2024	E353888-Case 15831	Approved x 2	
48	Salisbury East	4B Tower Drive - dead tree	Friday, 12 April 2024	E352644-Case 14328	Approved	
49	Salisbury Heights	Damian Drive Reserve - side 12 Featherstone Place	Monday, 22 April 2024	E351174-Case 12632	Approved	
50	Salisbury North	Direk Reserve - side 4 Bilo Court and 29 Garrin Street	Monday, 15 April 2024	E354506-Case 16559	D/A Approved - Regulated	
51	Salisbury North	Andrews Street Reserve - rear 15 Window Cres - Ac.salicina	Wednesday, 17 April 2024	E351170-Case 12627	Approved	
52	Salisbury North	18 Langford Terrace - 4th tree - north	Monday, 22 April 2024	E350884-Case 12300	Approved x 1	
53	Salisbury Park	58 Heathersett Drive - Tree 1 - furthest from drive - REGULATED	Tuesday, 9 April 2024	E346698-Case 7387	D/A Approved - Regulated	
54	Salisbury Park	58 Heathersett Drive - Tree 2 - nearest drive - REGULATED	Tuesday, 9 April 2024	E346698-Case 7387	D/A Approved - Regulated	
55	Salisbury Park	31 Moss Road - STREE-61379	Tuesday, 16 April 2024	E354375-Case 16387	Approved	
56	Salisbury Park	31 Moss Road - STREE-61375	Tuesday, 16 April 2024	E354375-Case 16387	Approved	
57	St Kilda	2 Shell Street - self sown tree	Tuesday, 9 April 2024	E348792-Case 9824	Approved	
58	Valley View	25 Lindsay Avenue	Wednesday, 24 April 2024	E350661-Case 12041	Approved	

Item ESATS2 - Attachment 1 - Tree Removal- April 2024

TREE REMOVAL REQUESTS


Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS			DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
1	Brahma Lodge	25 The Strand - Reassessment completed now classified as Regulated and DA submitted due to poor structure	Monday, 13 May 2024	E355936- Case 18338	Approval supported - Regulated Tree		
2	Brahma Lodge	7 Karyn Crescent - Regulated	Monday, 20 May 2024	E354217- Case 16222 DA 24013592	D/A Approved - Regulated		
3	Burton	side 34 Atkinson Drive - Reassessment completed now classified as Regulated and DA submitted due to poor structure	Thursday, 2 May 2024	E351104- Case 12555	Approval supported - Regulated Tree		
4	Burton	19 Chelsea Avenue - Reassessed - now Regulated (originally approved 14/05/24 but not removed when new legislation came in 16/5/24)	Thursday, 30 May 2024	E351392- Case 12872 DA 24015775	D/A Approved - Regulated		
5	Burton	Wattlebird Drive Entry Reserve - dead tree in screen opposite 122 Bolivar Rd	Monday, 27 May 2024	E351291	Approved - dead tree		
6	Burton	13 Cavendish Terrace - APPEAL Non-Regulated Council Meeting held 27/05/2024	Monday, 27 May 2024	E347858- Case 8764 DW 8200077	Approved - APPEAL		
7	Gulfview Heights	18 Elliott Ave - larger tree nearest alleyway - Reassessment completed now classified as Regulated and DA submitted due to poor structure	Tuesday, 7 May 2024	E350713- Case 12103	Approval supported - Regulated Tree		

TREE REMOVAL REQUESTS

MONTH: May 2024

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria


ADDRESS			DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
8	Gulfview Heights	18 Elliott Avenue - larger tree nearest alleyway - Reassessed - Now Regulated (originally approved 07/05/24 but not removed when new legislation came in 16/5/24)	Friday, 31 May 2024	E350713-Case 12103 DA 24015919	D/A Approved - Regulated		
9	Ingle Farm	22 Denning Avenue - dead tree	Friday, 10 May 2024	E356467	Approved		
10	Ingle Farm	27 Antarlo Road - dead tree - front cnr Ramgo/Antarlo	Thursday, 16 May 2024	E351783-Case 13324	Approved		
11	Ingle Farm	20 Glenora Drive - Reassessment completed now classified as Regulated and DA submitted due to poor structure	Monday, 6 May 2024	E355834	Approval supported- Regulated Tree		
12	Mawson Lakes	Sanctuary Drive Reserve - dead tree front/side 6 Everglade Street	Thursday, 16 May 2024	E352305-Case 13925	Approved		
13	Para Hills	15 Dutton Drive - APPEAL - Council Meeting held 27/05/2024 - now classified as Regulated	Monday, 27 May 2024	E346031-Case 6683 DW 8200077			Tree was appealed and subsequently refused at ESAT 27-5-2024 
14	Para Hills West	50 Codd Street Reassessed - now Regulated (originally approved 03/05/24 but not removed when new legislation came in 16/5/24)	Friday, 31 May 2024	E351025-Case 12455 DA 24016005	D/A Approved - Regulated		

Item ESATS2 - Attachment 2 - Tree Removal -May 2024

TREE REMOVAL REQUESTS

MONTH: May 2024



Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS			DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
15	Para Hills West	10 Afton Court - 3 trees	Monday, 6 May 2024	E351363-Case 12842			Refused -Euc leucoxydon and Euc intertexta in fair condition, Trees do not achieve criteria for removal, tree removal request not supported. 
16	Para Hills West	55 Northcote Drive - Significant	Tuesday, 28 May 2024	E351472-DA 24015332	D/A Approved - Significant tree		
17	Para Vista	Milligan Drive Reserve - 3 dead trees	Friday, 3 May 2024	E356146	Approved x 3		
18	Para Vista	side 30B Malbanda - 2nd tree from corner -Reassessment completed as now classified as Regulated and DA submitted due to poor structure	Tuesday, 7 May 2024	E351761-Case 13300	D/A Approved-Regulated		
19	Para Vista	side 30B Malbanda - 3rd tree from corner -Reassessment completed as now classified as Regulated and DA submitted due to poor structure	Tuesday, 7 May 2024	E351761-Case 13300	D/A Approved-Regulated		

TREE REMOVAL REQUESTS

MONTH: May 2024



Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

	ADDRESS		DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
20	Para Vista	6 Colleen Court - STREE-43760 - smaller tree	Tuesday, 7 May 2024	E351459-Case 12944	Approved		
21	Para Vista	opp 388 Wright Road - Regulated Tree - Service Road Tree Screen	Monday, 20 May 2024	E344319 DA 24013699	D/A Approved - Regulated		
22	Parafield Gardens	3 Chesser Street - dead tree	Friday, 10 May 2024	E350948-Case 12376	Approved		
23	Parafield Gardens	9 Wattle Grove - dead tree	Thursday, 16 May 2024	E351567-Case 13077	Approved		
24	Parafield Gardens	Creaser Park, side 16 Blyth Avenue - Significant	Wednesday, 22 May 2024	E349159-Case 10286 DA 24014061	D/A Approved - Significant tree		
25	Parafield Gardens	5 Japonica Crescent - Regulated - side	Thursday, 23 May 2024	E351514-Case 13006			<p>Refused - Euc leucoxyton regulated tree. Health and structure rating is 2 fair and recently been pruned, no evidence of branch failure.</p> 
26	Parafield Gardens	5 Japonica Crescent - Regulated x 2 - front	Thursday, 23 May 2024	E351514-Case 13006			<p>Refused - x 2 Regulated trees. Health and structure rating is 2 fair and has recently been pruned, no evidence of branch failure.</p> 

TREE REMOVAL REQUESTS

MONTH: May 2024



Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

	ADDRESS		DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
27	Paralowie	220 Burton Road	Thursday, 2 May 2024	E356087-Case 18499	Approved		
28	Paralowie	3 Daly Court - dead tree	Tuesday, 7 May 2024	E354828-Case 16970	Approved		
29	Paralowie	35 Santander Drive - Significant	Tuesday, 28 May 2024	E347608 DA 24015022	D/A Approved - Significant tree		
30	Paralowie	13 Piar Street - Reassessed - now Regulated (originally approved 07/05/24 new legislation came in 16/5/24)	Friday, 31 May 2024	E351106-Case 12560	D/A Approved - Regulated		
31	Pooraka	4 Salzmann Drive	Tuesday, 7 May 2024	E350904-Case 12321			Refused-tree does not achieve criteria for removal, tree removal request not supported 
32	Pooraka	Lindblom Park - adj to bus stop (35A) bench on Quinlivan Rd - Significant - 1.15+1.74 = 2.89 circ (tree rhs in photo)	Thursday, 23 May 2024	E352163-Case 13742			Refused - Significant Tree 

TREE REMOVAL REQUESTS

MONTH: May 2024

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria


ADDRESS			DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
33	Pooraka	Lindblom Park - adj to bus stop (35A) bench on Quinlivan Rd - Significant 4.74 circ (tree lhs in photo)	Thursday, 23 May 2024	E352163-Case 13742			Refused - Significant Tree 
34	Salisbury	21 Lorna Street Reassessed - now Regulated (originally approved 14/05/24 but not removed when new legislation came in 16/5/24)	Tuesday, 28 May 2024	E351356 DA 24015507 DA 24015507	D/A Approved - Regulated		
35	Salisbury	Little River Golf Course - Significant	Friday, 31 May 2024	E354334-Case 16352 DA 24015514	D/A Approved - Significant tree		
36	Salisbury East	9 Cheltenham Crescent - Reassessment completed now classified as Regulated and DA submitted due to poor structure	Thursday, 2 May 2024	E355255 - Case 17460	Approval supported- Regulated Tree		
37	Salisbury East	28 McEvoy Drive - 2 trees	Friday, 3 May 2024	E351308-Case 12779			Regulated tree- No obvious health or structural concerns that would support removal 
38	Salisbury East	The Grove Way - rear 12 Gateway Drive -Reassessed - now Regulated (originally approved 07/05/24 new legislation came in 16/5/24)	Thursday, 9 May 2024	E352583-Case 14240	D/A approved Regulated		
39	Salisbury East	10 Benaud Avenue - dead tree	Friday, 10 May 2024	E356592	Approved		

Item ESA TS2 - Attachment 2 - Tree Removal -May 2024

TREE REMOVAL REQUESTS

MONTH: May 2024




Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS			DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
40	Salisbury East	Fern Grove Blvd - The Ferns - Ret Vill Facil, 20 Smith Road - STREE-48259	Friday, 10 May 2024	E348317-Case 9316	Approved		
41	Salisbury East	Fern Grove Blvd - The Ferns - Ret Vill Facil, 20 Smith Road - STREE-57398	Friday, 10 May 2024	E348317-Case 9316	Approved		
42	Salisbury East	side 9 Bunya Street - Cedarwood Ave	Tuesday, 14 May 2024	E354892-Case 17044	Approved		
43	Salisbury East	24 Strathpine Street - Regulated	Thursday, 23 May 2024	E351620-Case 13145			<p>Refused - Regulated Sophora sp Health and structure rating 2 fair, Tree does not achieve criteria for removal, tree removal request not supported</p> 

TREE REMOVAL REQUESTS

MONTH: May 2024

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria



ADDRESS			DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
44	Salisbury East	33 Topaz Crescent - Significant - tree nearest drive	Thursday, 23 May 2024	E351786-Case 13329			Refused - Significant Tree 
45	Salisbury Heights	24 Radiata Grove - Regulated - Anonymous request	Tuesday, 14 May 2024	E351299-Case 12767			Refused - Regulated 
46	Salisbury North	12 Coordinate Road - Significant - requested by resident from 14 Coordinate Rd	Thursday, 23 May 2024	E351292-Case 12760			Refused - Significant Tree 

Item ESA TS2 - Attachment 2 - Tree Removal -May 2024

TREE REMOVAL REQUESTS

MONTH: May 2024

Assessed by Parks and Landscape Arborist on site and removed based on Councils Tree Removal Criteria

ADDRESS			DATE	REFERENCE	APPROVED OR APPROVAL SUPPORTED	REFUSED NOT Regulated/Significant	REFUSED Regulated/Significant
47	Salisbury Park	7 Goldthorn Road - APPEAL - Exempt - Not Regulated (Ficus rubiginosa) - Council Meeting held 27/05/2024	Monday, 27 May 2024	E345509-Case 6107 DW 8200077		Refused - APPEAL 	
48	Salisbury Park	4 Floriston Way - Significant - T1	Thursday, 30 May 2024	E350400-Case 11729 DA 24015777	D/A Approved - Significant tree		
49	Salisbury Plain	Willochra Road - 47 Parawae Road - dead tree	Thursday, 23 May 2024	E352359-Case 13982	Approved - dead tree		
50	Valley View	22 Albany Terrace Reassessed - now Regulated (originally approved 07/05/24 new legislation came in 16/5/24)	Thursday, 2 May 2024	E349614-Case 10784	D/A approved Regulated Tree		
51	Valley View	172 Brougham Drive - Significant	Tuesday, 28 May 2024	E349245 DA 24015440	D/A Approved - Significant tree		
52	Walkley Heights	1 Pineview Court -Non-Regulated tree nearest corner	Thursday, 23 May 2024	E351643-Case 13180	Approved		
53	Walkley Heights	1 Pineview Court - Regulated - tree nearest driveway	Thursday, 23 May 2024	E351643-Case 13180			Refused - Regulated 

Item ESA TS2 - Attachment 2 - Tree Removal -May 2024

ITEM	ESATS3 ENVIRONMENTAL SUSTAINABILITY AND TREES SUB COMMITTEE
DATE	08 July 2024
HEADING	Appeals Report - Tree Removal Requests - Various Locations for April and May 2024
AUTHOR	Nigel John, Team Leader Parks & Landscape, City Infrastructure
CITY PLAN LINKS	1.1 Our City is attractive and well maintained 1.2 The health and wellbeing of our community is a priority 2.1 Salisbury has a balance of green spaces and natural environments that support biodiversity
SUMMARY	In line with the approved tree removal procedure several decisions relating to the retention of trees have been appealed.

RECOMMENDATION

That Council:

1. Notes that, the technical tree assessments undertaken for 18 Etuna Street, Para Hills West, 36 Birch Avenue, Salisbury East, and 3 Bearing Road, Salisbury North, do not conclude removal be recommended, based solely on the application of Council approved tree removal criteria.
2. Notes that, as part of the appeal process, the refused tree removal requests appealed during April and May 2024, as outlined in the report (Item ESATS3 Environmental Sustainability and Trees Sub Committee, 8 July 2024), are now presented to the Environmental Sustainability and Trees Sub Committee for consideration and/or recommendation to Council as per the Environmental Sustainability and Trees Sub Committee's Terms of Reference.

That the Environmental Sustainability and Trees Sub Committee, using its delegated authority under its adopted Terms of Reference:

3. Refuses the removal of the one (1) *Regulated* tree located at 18 Etuna Street, Para Hills West.
4. Refuses the removal of the one (1) *Regulated* tree located at 36 Birch Avenue, Salisbury East.
5. Refuses the removal of the one (1) now *Regulated* tree located at 3 Bearing Road, Salisbury North.

ATTACHMENTS

This document should be read in conjunction with the following attachments:

1. Tree Removal Criteria [↓](#) 

1. BACKGROUND

- 1.1 In line with the approved tree removal procedure, residents are able to appeal decisions relating to the retention of trees. This appeal process involves:
- Report to the Environmental Sustainability and Trees Sub Committee (ESATS)
 - Notification of outcome to residents

2. EXTERNAL CONSULTATION / COMMUNICATION

- 2.1 Residents
2.2 Ward Councilors in line with the adopted procedures

3. DISCUSSION

- 3.1 Significant and regulated trees are offered protection through the *Planning Development and Infrastructure Act 2016* (the Act) and require development applications for removal. Objectives for assessment of development applications are contained within the Regulated and Significant Tree Overlay of the Act:

Regulated trees are retained where they:

- *make an important visual contribution to local character and amenity;*
- *are indigenous to the local area and listed under the National Parks and Wildlife Act 1972 as a rare or endangered native species; and/or*
- *provide an important habitat for native fauna.*

Significant trees are retained where they:

- *make an important contribution to the character or amenity of the local area;*
- *are indigenous to the local area and are listed under the National Parks and Wildlife Act 1972 as a rare or endangered native species;*
- *represent an important habitat for native fauna;*
- *are part of a wildlife corridor of a remnant area of native vegetation;*
- *are important to the maintenance of biodiversity in the local environment; and/or*
- *form a notable visual element to the landscape of the local area.*

- 3.2 These objectives are distinct from City of Salisbury criteria for removal, which are not a consideration through the development assessment.
- 3.3 The following appeal has been lodged under the Tree Removal Procedure and the resident is seeking removal of the tree.

CRM/Salesforce	Street	Suburb	Tree Species
348842	3 Bearing Road	Salisbury North	Euc Leucoxyton
337646	36 Birch Avenue	Salisbury East	Sophora spp
350657	18 Etuna Street	Para Hills West	Euc leucoxyton

- 3.4 The initial assessment for this appeal has identified that the tree is healthy, in good condition without any structural flaws and didn't meet City of Salisbury criteria for removal.
- 3.5 Where appropriate, pruning or canopy reduction has been undertaken to help alleviate concerns raised and actively manage the trees.
- 3.6 Following notification of appeal from the resident, and where appropriate, site meetings were arranged given the history with the trees.
- 3.7 Any further information provided by residents was reviewed and the appeals are presented directly to the Environmental Sustainability and Trees Sub Committee for recommendation to Council for consideration.
- 3.8 ***3 Bearing Road, Salisbury North.***
- 3.8.1 This tree was reviewed at the last Environmental Sustainability and Trees Sub Committee meeting held on 13 May 2024 prior to the Planning Development and Infrastructure Act amendments.
- 3.8.2 The Euc leucoxyton tree is **now** noted as regulated under the amended Planning Development and Infrastructure Act in May 2024 and has been inspected by two independent bodies.
- 3.8.3 Preliminary Advice for a Regulated Tree was sought and Development Approval is not likely to be supported.
- 3.8.4 The tree is in good health and doesn't achieve removal through the current criteria framework.
- 3.8.5 Maintenance pruning has been completed in the past month.



3.9 36 Birch Avenue, Salisbury East

- 3.9.1 Request for tree removal due to drops a lot of sticky pods causing nuisance.
- 3.9.2 City of Salisbury arborist advised the resident the tree doesn't achieve the criteria for removal.
- 3.9.3 The basis of refusal – the Sophora sp. health and structure rating 1, good. Tree doesn't achieve criteria for removal based on debris.
- 3.9.4 This tree was reviewed at the Environmental Sustainability and Trees Sub Committee meeting on 12 March 2024 and was NOT a regulated tree at the time.
- 3.9.5 The request to remove the tree was deferred pending the outcome of the formal review of the tree management policy.
- 3.9.6 The Sophora spp is **now** noted as regulated under the amended Planning Development and Infrastructure Act in May 2024 and has been inspected by two independent bodies.
- 3.9.7 Preliminary Advice for a Regulated Tree was sought and Development Approval is not likely to be supported.
- 3.9.8 The tree being relatively modest in size, it is apparent it is a healthy tree, with good structure, offering good canopy cover, which is consistent with other established trees in the streetscape, thus contributing to overall amenity.



3.10 18 Etuna Street, Para Hills West

- 3.10.1 The Euc leucoxyton tree is noted as being regulated and has been inspected by two independent bodies.
- 3.10.2 The tree is in good health and doesn't achieve removal through the current criteria framework.
- 3.10.3 The tree was assessed by City of Salisbury in 2019, 2021 and 2024 and has had some pruning to reduce branch extension, but no obvious history of branch failure has been noted.
- 3.10.4 Current structure and health rating is 2 (Fair) with no obvious flaws or health issues.
- 3.10.5 September of 2021 renovations were complete and new driveway was constructed very close to the regulated tree, contrary to the approved development plans.
- 3.10.6 Preliminary Planning advice concludes a Development Approval is not likely, the removal request will be refused as per Tre removal procedure 5.3.3



4. FINANCIAL OVERVIEW

4.1 The approximate cost for the removal of trees is detailed in the below table:

Street	Tree Species	Removal Cost
3 Bearing Road, Salisbury North	Euc leucoxylon	\$824.19
36 Birch Avenue, Salisbury East	Sophora spp	\$918.08
18 Etuna Street, Para Hills West	Euc leucoxylon	\$1183.22

All costs are inclusive of the development approval fee, tree removal cost, traffic management and stump grinding

5. CONCLUSION

- 5.1 In accordance with the approved tree removal procedure, some decisions relating to the retention of trees have been appealed.
- 5.2 Site meetings have been completed and the Environmental Sustainability and Trees Sub Committee can now decide to approve removal, refuse removal or recommend that a Development Application be lodged for removal in line with the Sub Committee's adopted Terms of Reference.



6. Tree Removal Criteria

In order to ensure a consistent approach to requests for the removal of trees, the City of Salisbury has developed a Tree Management Policy and procedure to administer requests for tree removal.

Tree management in the urban environment seeks to achieve a balance of minimising risks and nuisances, whilst maximising benefits to ensure the best community outcome.

- 6.1 Removal of a tree could be warranted if one or more of the following criteria are met:
- 6.1.1 The tree is in an unsuitable location and is unreasonably obstructing approved infrastructure or traffic sight lines.
 - 6.1.2 The tree is inconsistent with the landscape style or character of the local area and/or does not contribute substantially to the landscape or streetscape.
 - 6.1.3 The spacing of trees planted on a standard width verge is inconsistent with the "Street Tree Planting Guide" for that species of tree.
 - 6.1.4 The tree is diseased and/or has a short life expectancy or is dead and has no significant landscape or habitat value.
 - 6.1.5 The tree is structurally poor and/or poses an unacceptable risk to public or private safety and/or has a history of major limb failure.
 - 6.1.6 The trees roots are shown to be causing or threatening to cause damage exceeding two thousand dollars to adjacent infrastructure.
 - 6.1.7 The trees roots have resulted in damage to Council's kerb or footpath that has required replacement or substantial repair works on more than one occasion within a 5 year period
 - 6.1.8 The tree is in the location of a first single driveway of a property (sub-division excluded).
 - 6.1.9 The tree is in the location of an approved Council development.
 - 6.1.10 The tree has been assessed for removal as part of the "Streetscape or Landscape Redevelopment/Renewal Programme".
 - 6.1.11 The tree, according to a medical specialist or GP, has been determined to be the cause of a detrimental effect on the health of a nearby resident. Such advice must be in writing.
 - 6.1.12 Other criteria may be applied where there are unique circumstances. These will be assessed on a case by case basis and may require the applicant to pay a set fee (as per section 7) for the removal of the tree.

6.1.13 Genuine Hardship

- 6.1.13.1 The person/resident is receiving assistance through the National Disability Insurance Scheme (NDIS) or a community care service and;
- 6.1.13.2 The person/resident does not have the functional ability to relieve the nuisance caused by the tree or;
- 6.1.13.3 The person/resident is aged or frail and has moderate, severe or profound disabilities which prevent them from relieving the nuisance caused by the tree; or
- 6.1.13.4 The person/resident is a carer of a person that meets the above criteria.

Where the above criteria is met but a tree qualifies as a "Regulated or Significant Tree" under the Development Act 1993, and the preliminary Planning Assessment concludes that Development Approval is not likely the removal of the tree may be refused, if it concludes that Development Approval is likely a Development Application (DA) is to be lodged. The DA will then be assessed against the provisions of the City of Salisbury Development Plan.

Adopted by Council April 2016

Tree Removal Procedure

Adopted by:	Council
Responsible Division:	Field Services
First Issued/Adopted:	28 September 2020 (0678/2020)
Last Reviewed:	22 April 2024
Next Review Date:	April 2027

Adopted by Council April 2016

INFORMATION ONLY





ITEM	ESATS4
	ENVIRONMENTAL SUSTAINABILITY AND TREES SUB COMMITTEE
DATE	08 July 2024
HEADING	Urban Tree Canopy Data and Reporting
AUTHOR	Elizabeth MacGillivray, Senior Engineer, City Infrastructure
CITY PLAN LINKS	<p>2.1 Salisbury has a balance of green spaces and natural environments that support biodiversity</p> <p>2.3 Our community, environment and infrastructure are adaptive to a changing climate</p>
SUMMARY	<p>The City of Salisbury in partnership with Resilient East group of Councils, Department of Infrastructure and Transport and Department of Environment and Water engaged the services of a consultant to undertake an update on tree canopy and heat mapping. Tree canopy and urban heat data was provided to the City of Salisbury. The data is being processed to enable it to be used in decision-making and strategy development in order to improve liveability and resident wellbeing. The data indicates that total tree canopy across the city has increased since 2019, however this is mainly due to growth and development of existing tree canopy. Heat mapping indicates that trees canopy, as well as irrigated open space, provides cooling within the City. It is proposed that Council submit a response to the State Government’s draft Urban Greening Strategy.</p>

RECOMMENDATIONThat Council:

1. Notes the information.
2. Endorses the attached letter (Attachment 1, Item ESATS4, Environmental Sustainability and Trees Sub Committee, 8 July 2024) and feedback tables as a submission to Green Adelaide in response to the draft *Urban Greening Strategy*.

ATTACHMENTS

This document should be read in conjunction with the following attachments:

1. Draft response to Urban Greening Strategy - Letter to Green Adelaide [↓](#) 
2. Proposed response to Draft Urban Greening Strategy discussion paper [↓](#) 
3. Draft Urban Greening Strategy (full text) [↓](#) 
4. Draft Urban Greening Strategy One Page Summary [↓](#) 

1. BACKGROUND

- 1.1 Tree canopy in our community, particularly in places where people play and live, is important for many reasons including improved amenity, adaptation to changing environmental conditions, and improved health and wellbeing.
- 1.2 In order to better understand tree canopy across metropolitan Adelaide, in 2018 and 2019, the Department for Infrastructure and Transport commissioned the capture of canopy data by means of planes fitted with specialist remote sensing instruments, using the method called Light Detection and Ranging (LiDAR). This is recognised as the most accurate method for measuring tree canopy and urban heat mapping.
- 1.3 The Regional Climate Partnership (including City of Salisbury), in conjunction with the Department for Infrastructure and Transport (DIT) and the Department for Environment and Water (DEW), then co-invested to have the data translated into a useful model.
- 1.4 A report outlining the methodology, data and analysis was prepared for Green Adelaide by DSM GeoData Limited.
- 1.5 In January and February 2022, LiDAR data was captured again in a second fly-over.
- 1.6 The 2022 fly-over was commissioned by Green Adelaide, partnering with the Department for Environment and Water, the Department for Infrastructure and Transport, Preventative Health SA and the metropolitan councils of Adelaide. A report regarding the new data was prepared by DSM GeoData Limited.

2. EXTERNAL CONSULTATION / COMMUNICATION

- 2.1 Green Adelaide

3. DISCUSSION

3.1 Tree Canopy Data

- 3.1.1 The release of the 2022 data was delayed until early in 2024 as additional analysis was required to ensure the 2022 and 2018/2019 datasets had been calculated in the same way in order to allow comparison between the two datasets.
- 3.1.2 All data gathered for South Australia has been published on the Government of South Australia's 'Enviro Data SA' website (<http://spatialwebapps.environment.sa.gov.au/urbanheat/?viewer=urbanheat>). Accompanying reports for the datasets are also available from this website.
- 3.1.3 The datasets provided by DEW have been reviewed by Council staff and amended to remove anomalies such as loss of Council road area in data.

- 3.1.4 These adjustments have resulted in slightly different areas and therefore different percentage results compared to the figures provided in the reports. The variation is minor when considered across the whole city (less than 1%) however the adjustments means our data is more accurate, it can be reproduced in future years and the figures for specific sites/locations can be used to inform decisions.
- 3.1.5 Using Council's amended dataset, the 2018/2019 data returned a total percentage of tree canopy across the City of Salisbury of 10.70%. This was calculated using the total horizontal extent of tree canopy cover greater than 3 metres in height (17,850,786 m²) over the total area of the City (166,871,754 m²).
- 3.1.6 Amended data for 2022 gave a total percentage of tree canopy across the City of Salisbury of 13.14%. This was also calculated using the total horizontal extent of tree canopy cover greater than 3 metres in height over the total area of the City.
- 3.1.7 The current 2035 City Plan includes a figure of 18% canopy cover in the Sustainable City dashboard. This figure was obtained using the initial 2018/2019 data, prior to refinements and adjustments undertaken to allow comparison with the 2022 data. This figure may have excluded the airports (Parafield and Edinburgh), resulting in a higher canopy figure. The technology and methodology used to capture the canopy information has been refined since the initial flyover, allowing for greater accuracy in the recent figures and future data.
- 3.1.8 The comparison of the results indicate the total canopy has increased from 10.93% in 2018/2019 to 13.14% in 2022, with the majority of this increase due to growth of existing trees. Wetter than average conditions at the time that the data was collected have likely led to a denser canopy due to reduced leaf drop through summer.
- 3.1.9 The data is based on assessing trees greater than 3m in height so is unlikely to have been impacted by any new trees planted over the preceding 3 years, as any growth would not have achieved a height greater than 3m.
- 3.1.10 The two datasets provide some helpful information, however due to the time taken for tree growth, ongoing surveys into the future will be required to observe the impact on canopy and longer term trends.
- 3.1.11 The canopy cover for the individual suburbs in the City of Salisbury are shown in Figure 1. This chart shows Salisbury Park has the highest percentage of canopy cover, primarily due to a section of the Little Para located in this suburb as well as a number of reserves – Jenkins, Harry Bowey, Tregoning Green, Carisbrooke and Wildwood Reserve which have more mature vegetation established due to past land use activities. Significant growth in the canopy of the existing large trees along Little Para is expected to have contributed to this. At the other end of the spectrum, the suburb with the lowest canopy cover percentage was Parafield, since Parafield Airport and commercial precincts cover the majority of this suburb. The only opportunity for tree canopy exists along the suburb boundary due to land use of the airport.

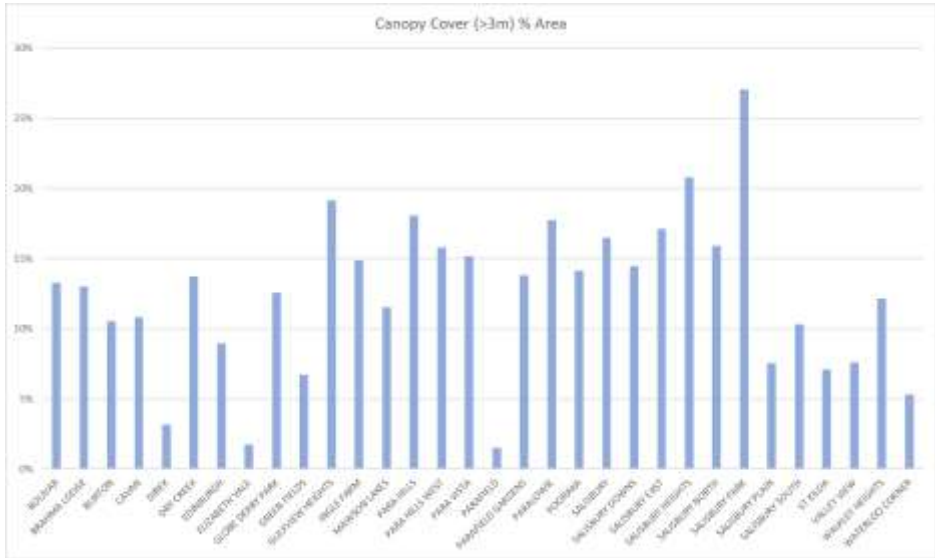


Figure 1: Percentage canopy cover (>3m tall) for each City of Salisbury suburb.

3.1.12 Of the area owned by the City of Salisbury, the data indicated canopy cover of 24%. This indicates that Council maintains levels of canopy cover above the state average in areas where it has care and control.

3.1.13 To provide some figures to give context to possible targets and/or actions, two scenarios are outlined here.

- i. In order to increase from 24% to 25% canopy cover on Salisbury land through planting additional trees (rather than assuming growth) an additional 443,210 m2 of canopy is required. Assuming a tree reaches a canopy of 10 m2 after approximately 10 years, 44,800 new trees would need to be planted to achieve the additional canopy area after 15 years.

At a cost of \$500 per tree (includes establishment cost for 2 years), this would cost \$24,250,000 which will be implemented through a 10 year planting program (valued at \$2.425 million/year). Furthermore, it should be noted that since Salisbury owned land is 18% of the City, a 1% shift in canopy cover on Salisbury land is equivalent to moving the total canopy cover of the City from 13.14% to 13.41%.

- ii. To increase canopy cover across the whole of the City from 13.14% to 14.14% through planting alone (not including growth) an additional 1,660,000 m2 of canopy is required. Based on the same assumption of 10m2 canopy after approximately 10 years, 166,200 new trees would need to be planted to achieve the additional canopy area after 15 years.

At a cost of \$500 per tree (including establishment cost for 2 years) this would cost \$83,100,000 (approximately \$8.3 million each year for 10 years). This would need to include planting on land that is not owned by the City of Salisbury (ie State Government land, Federal Government land, private land etc).

- 3.1.14 Private land returned a canopy cover of 8.51% in the 2022 data. This has increased from 7.19% in the 2018/2019 data which is positive, but is low compared to the state average of 16.7%.
- 3.1.15 The 2022 canopy data indicates that for streets where removal was undertaken as part of Council's street tree renewal program during the 2019/20 year, each street lost, on average, 25% of the total street canopy.
- 3.1.16 A comparison between the 2018/2019 and 2022 data was also reviewed for streets where trees were planted in 2014/15 as part of the tree renewal program (after removal). During the 2018/19 flyover, new plants may not have been above the 3m threshold and so were not captured. In 2022, the 2014/15 planted trees are expected to have been greater than 3m tall and therefore captured in the data. The average increase in canopy cover in these streets was 120% due to the trees planted as part of the renewal program.

3.2 Urban Heat Mapping

- 3.2.1 The urban heat mapping dataset is very large (more than 41 million points) and is still being analysed to provide more detailed information specific to Salisbury, our suburbs, reserves and streets. Some of the challenges faced by staff is the processing limitations of the hardware and developing data analytical processes that would facilitate quicker turnaround of models and analysis.
- 3.2.2 The 2018/2019 dataset cannot easily be compared to the 2022 data since the temperatures at the time of data capture were not the same and there is no simple conversion to apply. Work is underway to facilitate the comparison of the dataset.
- 3.2.3 The urban heat mapping shows that dense residential development with homes that have dark roofing are warmer overall than other areas of the city. This is particularly so during the initial years, prior to street trees becoming established.
- 3.2.4 Tree canopy, as well as irrigated open spaces, are clearly shown in the mapping tool as cooler areas within the city.

3.3 Attorney General Survey

- 3.3.1 Further to the tree canopy data gathered by DEW, the Attorney General's department circulated a survey to Councils late in 2023 to obtain information about tree canopy and related issues.
- 3.3.2 A summary of the information was recently provided to Council, which included the survey and the key results from the 2022 tree canopy mapping study. The pie chart in Figure 2 shows the average distribution of land types across all SA metropolitan councils and the average canopy cover of 16.7%. In Figure 3, the corresponding values are shown for the City of Salisbury.

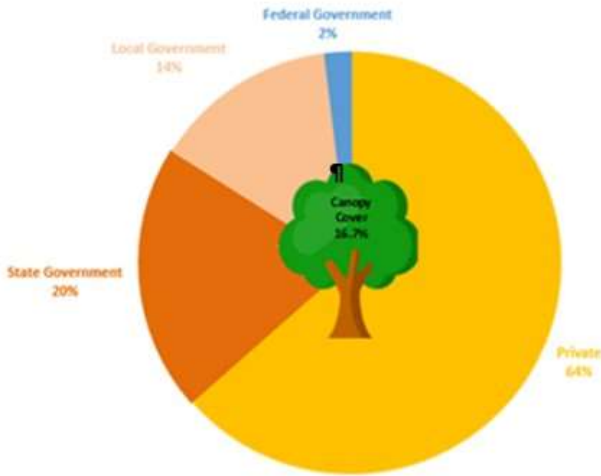


Figure 2: Average percentage of land ownership across metropolitan councils and average canopy cover.

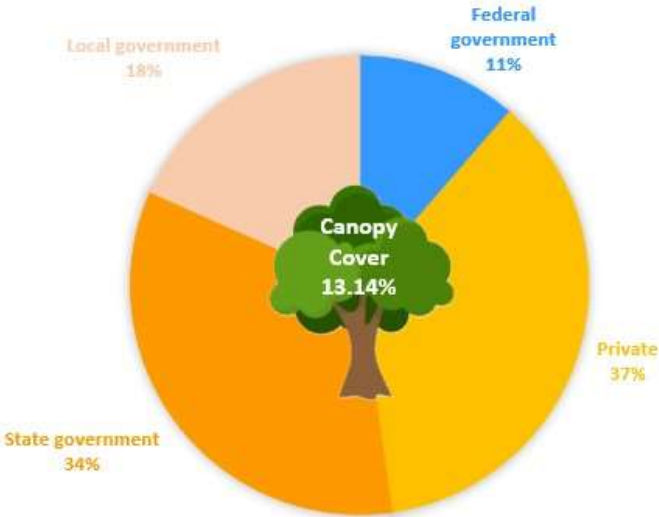


Figure 3: Land ownership percentages for City of Salisbury and total canopy cover for the City.

- 3.3.3 The Attorney General’s survey also asked councils about their biggest challenges to achieve targets. The challenges that were highlighted were lack of plantable space available, insufficient tree protection under existing legislation, increase in urban infill development, conflict between trees and utilities and grey infrastructure, and cost of planting.
- 3.3.4 The challenges highlighted by councils across the metropolitan area are also experienced by the City of Salisbury.

3.4 Urban Greening Strategy

- 3.4.1 The Government of South Australia has recently published an Urban Greening Strategy draft for consultation and has called for submissions and feedback. The draft strategy is included as Attachment 3, with a one page summary included as Attachment 4.
- 3.4.2 The strategy has been in development since 2021 and has involved consultation and workshops with a wide range of stakeholders, including local government. A discussion paper outlining performance indicators and targets has also been prepared to support the strategy.
- 3.4.3 Outlined in the strategy are 6 priority areas for action: cooler and greener infill development, government leading by example, building nature back in, future-proofing our urban forest, improving greening equity and scaling up impact by working together.
- 3.4.4 The City of Salisbury Sustainability Strategy has actions that line up with the draft Urban Greening Strategy.
- 3.4.5 A draft response is provided with this report (Attachments 1 and 2).

3.5 Regulated Tree Legislation

- 3.5.1 The Government of South Australia recently made changes to the Development, Planning and Infrastructure Act relating to Regulated Trees. The implications of these changes are yet to be fully assessed and will be the subject of a future report.
- 3.5.2 A quick analysis of the current street tree population indicates that the number of trees that now qualify as Regulated has increased by approximately 25%.
- 3.5.3 This figure is likely to change how Council's tree renewal programs are undertaken in the future.

3.6 Further Data Analysis

- 3.6.1 Further data analysis that staff could undertake would have a focus on information that will facilitate decision making in planning and design of the City and infrastructure.
- 3.6.2 A subsequent brief for future work will be prepared. Some of the layers being considered include:
 - a. Resilience of tree stock to climate change to gain an understanding on the variability of shade in response to heat and dry conditions.
 - b. Street tree species selection to maximise shading and cooling outcomes.
 - c. Identification of priority sites for future shading and/or cooling programs.
 - d. Proximity of vulnerable population to high temperature areas.
 - e. Develop greening and cooling strategies for open spaces, urban streetscape and key priority locations.

1. FINANCIAL OVERVIEW

- 1.1 No additional budget is required at this time.
- 1.2 Council’s Sustainability Strategy and implementation plan includes a number of actions related to canopy cover and reducing the urban heat within our City. Some of the proposed actions have existing funding however other actions are currently unfunded and will be the subject of future budget bids.

2. CONCLUSION

- 2.1 The City of Salisbury has received multiple datasets related to canopy cover and urban heat. The information can also be viewed on the State Government’s data viewer website.
- 2.2 Council staff continue to work on processing the data so that it can be used to inform decisions and strategy in order to improve the liveability of the city and the wellbeing of residents and community.
- 2.3 The State Government has distributed a draft Urban Greening Strategy and has asked for feedback. Endorsement is sought for submission of the prepared response.



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26 June 2024

Green Adelaide
Department for Environment and Water
Via email – dew.greenadelaide@greenadelaide.sa.gov.au

Dear Green Adelaide,

Re: Response to draft Urban Greening Strategy

The City of Salisbury acknowledges the work involved to prepare an Urban Greening Strategy for Adelaide and agrees that steps are needed to ensure "a resilient and liveable Adelaide for all".

One of the directions for the City of Salisbury is for our Council area to be a sustainable City. This is supported by many of the objectives and actions outlined in the City of Salisbury's City Plan, Sustainability Strategy and associated implementation plan. These corporate documents set out the direction for our Council and we are working on improving the resilience, biodiversity and wellbeing of our council area. Council will consider how the priority areas and outcomes proposed in any finalised State Government Urban Greening Strategy fit with the priorities for our own community and from there, determine how both levels of government could work together to implement the strategy.

Land owned by the City of Salisbury makes up 18% of our Council area. Of this area, 24% was covered by canopy according to the 2022 data. The Government of South Australia owns 34% of the land within the City of Salisbury and of this area, 16% recorded canopy cover. Considering these figures, the City of Salisbury supports Priority Area 2 – Government leading by example and looks forward to understanding how the State Government intends to achieve the stated outcomes. It is noted that the strategy acknowledges that there are challenges around dedicating budget to maintaining infrastructure assets, yet there are no solutions proposed in the strategy regarding how the work will be funded and supported – neither in the short nor long term.

The Urban Greening Strategy mentions the opportunities for urban greening in blue and green corridors, including along coastlines. The City of Salisbury would welcome partnership with the State Government regarding projects along our coastline however land ownership remains a complicated issue through this area of our City. Council engages with the Department of Infrastructure and Transport, the Environment Protection Authority, the Department for Energy and Mining, the Department for Environment and Water and Renewal SA regarding activities along the coastal area of our city and struggles to obtain a cohesive approach from the variety of State Government departments involved. Without significant change to clarify the existing complex situation, the City of Salisbury currently has little confidence in being able to implement initiatives along the coast, particularly in light of the ongoing management of the issues associated with the die-back of mangroves south of St Kilda in the second half of 2020.

Of specific interest to the City of Salisbury is the proposed strategy priority area 5 of "Improving Greening Equity". The City of Salisbury has a low Socio-Economic Index for Areas (SEIFA) and our community includes areas with higher vulnerability. Council is aware of the additional needs of these sections of our population and is eager to improve the equity in regards to greening. Of interest therefore, is the proposed prioritisation tool and associated grant funding and how this will be available to assist our Council to provide for the vulnerable members of our community.

Overall, the City of Salisbury's main concern is how the proposed actions of the draft Urban Greening Strategy will be resourced and funded. The City of Salisbury has a forward program of works determined as part of a Strategic Asset Management Plan and this is supported by a long-term

financial plan to enable Council to sustainably balance the needs of the community with a level of rates that can be reasonably expected from residents. Any additional actions, initiatives or programs expected to be undertaken by Council to deliver the outcomes through actions outlined in the State Government's strategy may be considered for incorporation into Council's future works, however this will be on the proviso that adequate support and funding will be made available by the State Government to resource the work and ongoing maintenance.

The City of Salisbury appreciates the opportunity to provide feedback on the Performance Indicators and Targets discussion paper. Completed tables for the discussion questions/topics are attached to this letter. The recognition that performance indicators and targets need to be scalable for a variety of geospatial areas is important and is supported by the City of Salisbury. Given the size and variety of land uses across our Council area, considering data and monitoring at different scales would be beneficial.

We look forward to the Urban Greening Strategy being finalised and working alongside the State Government on its delivery. In particular we look forward to hearing from the Government of South Australia on how this strategy will be supported and funded in the years ahead, in order to achieve the proposed outcomes and ensure a resilient and liveable urban area for all community members.

Yours faithfully,

John Harry
CEO, City of Salisbury

Response to Discussion paper – Measuring success: Performance indicators and targets

Ref	Tree Canopy Cover
1.1	<p>Do you prefer reporting via performance indicators in a report-card style and/or against a target?</p> <p>a. Do you wish both to be used? Use of both is preferred. An indicator in a report card style is a simple way to express information and is easier for the community to understand. It tends to give a broader view. A target is helpful to use for a specific, more defined, goal.</p> <p>b. If a target, which one? A target would best be set for a figure that Council has the ability to impact. Setting a target for private property/residential areas is not helpful from Council’s point of view as there is very little opportunity to influence this figure. Canopy target – setting a canopy target of 30% for the areas where people live and play will be unachievable for the City of Salisbury. Areas where people live currently has less than 10% canopy cover and Council has little opportunity to increase the canopy in these areas. The target for citizens to be able to see at least 3 trees from their home is not supported by the City of Salisbury due to the reasons outlined in the discussion paper – the establishment of a baseline for this and then the ongoing monitoring to measure in a way that can be compared is difficult. Council has little ability to impact an increase of 20% (to 15.5%) by 2029. This timeframe is five years away. If the seasons continue to be favourable for growth, existing trees may continue to develop as they have between previous datasets. Council cannot plant enough additional trees to achieve this over this timeframe.</p>
1.2	<p>Do you support the proposed performance indicator ranges, or would you like to suggest alternatives? If so, please provide detail. The performance indicator ranges are supported by the City of Salisbury. Ratings by suburb would be more relevant and useful</p>
1.3	<p>Monitoring and reporting is anticipated to occur on a 3-to-5 year basis.</p> <p>a. Is this an adequate monitoring timeframe? Yes, given the time period between the existing datasets it would be helpful to be closer to 3 to 4 years apart.</p> <p>b. If more frequent reporting is desired, please comment on the usefulness of lower resolution (but less resource intense) data, if available. Incorporating data at a lower resolution would not be useful, given that the two datasets we have would then not necessarily be comparable to the new information.</p> <p>c. How would your organisation intend to use more frequent data reports? For instance, what purpose would more frequent monitoring and reporting have for your organisation?</p>
1.4	<p>LiDAR is currently used for measuring canopy cover. Other tools exist and are expected to be developed. Are there alternative tools you are aware of that you would like to see considered? None that we are aware of.</p>

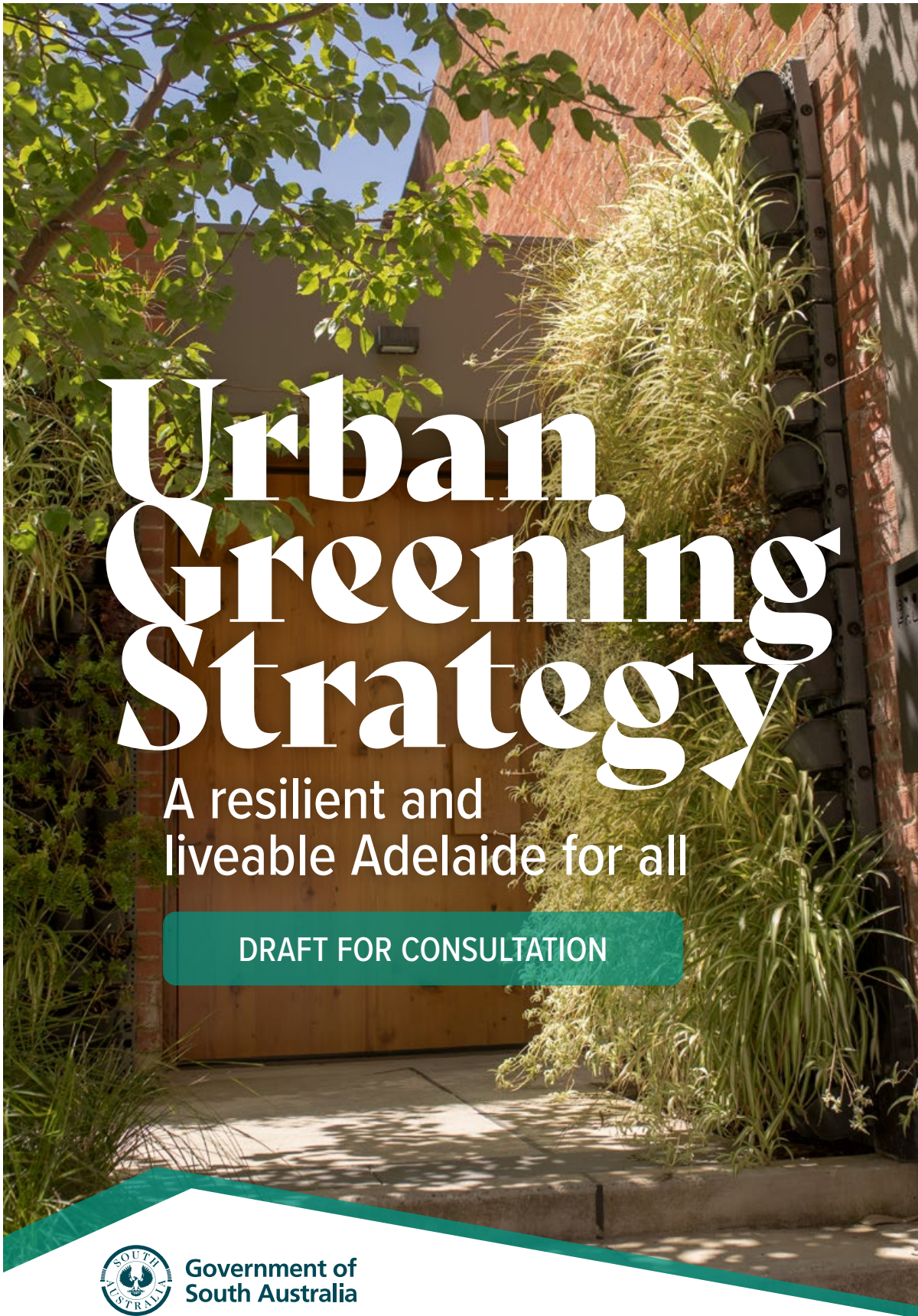
1.5	The indicators and targets can apply at many geospatial levels. For your purposes, do you have a preferred scale of reporting: across the region; across areas where people live (such as Neighbourhood Zones in the Planning System), across suburbs or LGAs, or no preference as different scales can be applied as required?
1.6	How important is obtaining the processed data to your organisation so that you can assess it against localised factors as considered appropriate by you? <i>This is very important to the City of Salisbury. The ability to be able to incorporate the data into existing GIS layers is very helpful. City of Salisbury has limited capacity and capability to analyse spatial data. Additional support may be required to ensure the data is utilised to it's greatest potential.</i>
1.7	Are there alternative metrics that you feel are necessary for monitoring progress toward the Urban Greening Strategy, such as stratified canopy heights? Please outline these.
1.8	Would you (or someone in your organisation) be interested in being part of a technical group to determine the detail of monitoring protocols? Please provide contact details.
1.9	Please provide any other feedback.

Ref	Urban Heat
2.1	Do you prefer reporting via performance indicators in a report-card style and/or against a target? a. Do you wish both to be used? <i>Both</i> b. If a target, which one? <i>Target H1 is unachievable as the City of Salisbury has two airports which will continue to have high heat intensities. Target H2 could be achieved as City of Salisbury aims to maintain at 1.8 degrees Celsius or decrease. Noting the City of Salisbury heat intensity is likely improved due to inclusion of mangrove areas within the boundary. Heat intensity for Parafield airport is extreme.</i>
2.2	Do you support the proposed performance indicator ranges, or would you like to suggest alternatives? If so, please provide detail.
2.3	Monitoring and reporting is anticipated to occur on a 3-to-5 year basis. a. Is this an adequate monitoring timeframe? <i>Yes, given the time period between the existing datasets it would be helpful to be closer to 3 to 4 years apart.</i> b. If more frequent reporting is desired, please comment on the usefulness of lower resolution (but less resource intense) data, if available. <i>Incorporating data at a lower resolution would not be useful, given that the two datasets we have would then not necessarily be comparable to the new information.</i> c. How would your organisation intend to use more frequent data reports? For instance, what purpose would more frequent monitoring and reporting have for your organisation?

2.4	The indicators and targets can apply at many geospatial levels. For your purposes, do you have a preferred scale of reporting: across the region; across areas where people live (such as Neighbourhood Zones in the Planning System), across suburbs or LGAs, or no preference as different scales can be applied as required? <i>Suburb level / SA1 would greatly help with decision making.</i>
2.5	How important is obtaining the processed data to your organisation so that you can assess it against localised factors as considered appropriate by you?
2.6	Are there alternative metrics that you feel are necessary for monitoring progress toward the Urban Greening Strategy? Please outline these.
2.7	Would you (or someone in your organisation) be interested in being part of a technical group to determine the detail of monitoring protocols? Please provide contact details.
2.8	Please provide any other feedback.

Ref	Increased Tree Species Diversity
3.1	Do you prefer reporting via performance indicators in a report-card style and/or against a target? a. Do you wish both to be used? b. If a target, which one? <i>Prefer Council endorsed target, which is currently 15:30:40</i>
3.2	Do you support the proposed performance indicator ranges, or would you like to suggest alternatives? If so, please provide detail. <i>The City of Salisbury currently has a target of 15:30:40. This is the distribution our performance is compared to.</i>
3.3	Monitoring and reporting is anticipated to occur on a 3-to-5 year basis. a. Is this an adequate monitoring timeframe? <i>5 years is suitable</i> b. If more frequent reporting is desired, please comment on the usefulness of lower resolution (but less resource intense) data, if available. <i>More frequent reporting is not useful due to planting loss.</i> c. How would your organisation intend to use more frequent data reports? For instance, what purpose would more frequent monitoring and reporting have for your organisation? <i>More frequent data would be used to provided a timeline of removal and planting to provided information on establishment.</i>
3.4	Measuring the diversity of the urban forest requires sharing of data from all partners. Please comment on the potential for sharing of tree census data from your organisation in order to track diversity of the urban forest across the region. <i>City of Salisbury is happy with this.</i>
3.5	Ideally, core information would be gathered in the same manner across all agencies, irrespective of the tree audit/census tool used. Would your organisation be open to aligning basic data collection parameters to streamline monitoring on tree species diversity across the region? <i>City of Salisbury utilises an existing software application which is not easy to modify.</i>

3.6	<p>Indicators and targets can apply at many geospatial levels. For your purposes, do you have a preferred scale of reporting: across the region; across areas where people live (such as Neighbourhood Zones in the Planning System), across suburbs or LGAs, or no preference as different scales can be applied as required?</p> <p>Street level across the LGAs. Reserve data is incomplete so difficult to apply target and have meaningful assessment.</p>
3.7	<p>How important is obtaining the processed data to your organisation so that you can assess it against localised factors as considered appropriate by you.</p> <p>It is of high importance and is included as part of the policy.</p>
3.8	<p>Two metrics are proposed as each provides a different type of information (the species: genus: family threshold; and the Top Diversity index TD50). Do you have a view on using one or the other, or using both?</p> <p>Preference for species: genus: family</p>
3.9	<p>Are there alternative metrics that you feel are necessary for monitoring progress toward the Urban Greening Strategy? Please outline these.</p>
3.10	<p>Would you (or someone in your organisation) be interested in being part of a technical group to determine the detail of monitoring protocols? Please provide contact details.</p>
3.11	<p>Please provide any other feedback.</p>



Urban Greening Strategy

A resilient and liveable Adelaide for all

DRAFT FOR CONSULTATION



Government of South Australia

Your views are important

We have the opportunity to improve the diversity of our urban forest, to ensure that the benefits are equally shared across Adelaide, to protect valued trees, and to respond to climate change.

The unique resources, knowledge and capabilities of different sectors and disciplines combined can make an enormous difference. By partnering and working towards this practical strategy, with shared actions we can deliver much better outcomes than could be achieved individually.

This is what the Urban Greening Strategy is all about – providing a roadmap for growing our tree canopy, cooling our local neighbourhoods and improving urban biodiversity.

Government and non-government partners have contributed their energy and expertise in shaping the development of this draft strategy, and we are now pleased to be releasing this document for consideration by the many stakeholders who have a role to play in realising our vision for a cooler, leafier and more biodiverse Adelaide.

You are encouraged to make a submission on the draft strategy. Guidelines for making a submission can be found on the back page of the document.



A blue ink signature of Dr Susan Close MP, written in a cursive style.

Dr Susan Close MP

Deputy Premier
Minister for Climate,
Environment and Water







Recognition of Kurna Miyurna and Yarta

We acknowledge and respect the native title holders and Traditional Owners of the Adelaide region – the Kurna People – and pay homage to their ancestors who maintained the natural processes of the land we are on and whose spirits still dwell on Yarta (Country).

In the spirit of recognition of our shared future, we have collaborated with representatives of Kurna on the content within this draft strategy and will continue to work with Kurna to implement it.

Mutual respect and trust will enable us to walk side-by-side and restore Yarta.

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DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide

Executive summary

This Urban Greening Strategy for Metropolitan Adelaide will drive an ambitious and coordinated approach to the greening of metropolitan Adelaide.

It aims to bring together state agencies, metropolitan councils, non-government organisations, industry peak bodies, research institutions, Karna and the broader community to achieve a greener, more liveable city.

Urban greening in Adelaide includes trees and other greenery located on both public and private land (see examples on Page 11). This strategy seeks to protect these green spaces, enhance them, and take advantage of their benefits to improve community wellbeing and amenity, and help us adapt to the warming climate.

This strategy sets a long-term shared vision – ‘**a resilient and liveable Adelaide for all: cooler, leafier and more biodiverse**’ and identifies practical actions to turn this vision into reality.

It outlines:

- the extensive **benefits** of urban greening
- the **current landscape**, which describes the status of tree canopy, tree species diversity, remnant vegetation, permeability, and community attitudes
- **megatrends** that are likely to impact urban greening into the future
- **priority areas for action**
- what **urban greening success** could look like for metropolitan Adelaide in 2050.

Priority areas for action

There are already many government and non-government stakeholders actively working to deliver a cooler, greener and more liveable Adelaide, but it is not without its challenges.

The priority areas and actions within this draft strategy are drawn from extensive stakeholder consultation and community discussion about how to practically address the challenges and opportunities to better protect and enhance Adelaide’s mature trees, green spaces and urban biodiversity.

The strategy outlines the following **priority areas for action**:

- cooler and greener infill development
- government leading by example
- building nature back in
- future-proofing our urban forest
- improving greening equity
- scaling up impact by working together.

This strategy seeks to establish consistent and shared monitoring across metropolitan Adelaide to increase efficiencies and provide optimal data for tracking urban greening progress. A standalone discussion paper outlines in detail 3 investigation areas for measuring performance: increased tree canopy, greater tree species diversity and reduced urban heat intensity.

This strategy is supported by a series of background papers (see Appendix 1) that provide a compelling evidence-base. A separate implementation plan will be developed that will identify the timing, lead organisations and partners for specific actions.

Collaboration maximises impact

All sectors and public and private landowners across metropolitan Adelaide have an important role to play in greening our city.

This strategy provides a mechanism for government and non-government partners to work together to achieve more by enabling projects that share the load and bridge the gaps between jurisdictions.

By joining forces – having shared priorities, knowledge and resources, and collaborating and delivering complementary activities – we will grow our tree canopy and metropolitan greenery.



Vision:

A resilient and liveable Adelaide for all

Cooler, leafier and more biodiverse



DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide



Snapshot of priority areas for action:

to drive practical urban greening action across metropolitan Adelaide



Cooler and greener infill development

Infill housing makes up a significant proportion of new housing in metropolitan Adelaide. It can be challenging to balance the benefits of more housing options close to shops and services with keeping our neighbourhoods cool and leafy. An integrated package of initiatives will be undertaken to drive cooler, greener and more biodiverse places to live.

Summary of actions

- Strengthen tree protection legislation.
- Introduce user-friendly tools and other capacity-building measures to make exceeding minimum standards easy and attractive.
- Identify cost-effective solutions to remove barriers and incentivise positive action.



Government leading by example

Expanding urban tree canopy in public spaces will become even more important for supporting sustainable and liveable neighbourhoods because more people have small, or no, front and back gardens. State and local government have important roles to play to identify and showcase innovative solutions to achieve greening outcomes while balancing challenges with infrastructure and other constraints.

Summary of actions

- Showcase best-practice green and blue infrastructure along active transport corridors and in major land releases, schools and other government land.
- Find practical solutions to challenges such as infrastructure conflicts and maintenance.
- Recognise the true value of trees in government systems and policy.



Building nature back in



Cities are increasingly recognised for their important role in supporting biodiversity. The concept of Biodiversity Sensitive Urban Design (BSUD) aims to create built environments that make a positive, on-site contribution to biodiversity while meeting other urban greening or development outcomes. Biodiverse greening enhances health and wellbeing, increases habitat for native wildlife and connects people with nature – right on their doorsteps.

Summary of actions

- Investigate how to encourage biodiverse plantings through levers such as legislation and policy.
- Build community and government understanding of BSUD principles, expertise and use.
- Identify and protect areas of valued native vegetation and critical habitat.

• DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide

These priorities and actions are explored further on page 27.





Future-proofing our urban forest

Climate change is already impacting the sustainability of metropolitan Adelaide's urban forest, which is largely comprised of a small number of plant families with varying tolerances to the projected warming and drying. It will be important to increase the diversity of our urban forest to improve climate resilience, as well as ensure adequate water is available to support sustainable growth.

Summary of actions

- Increase knowledge and availability of locally endemic and climate-resilient plant species.
- Undertake research to improve the resilience and health of the urban forest.
- Build capacity in understanding and delivery of Water Sensitive Urban Design (WSUD) to ensure it becomes 'business as usual'.






Improving greening equity

Research demonstrates that if a person has trees and other vegetation within view of their home, place of work or school, it benefits their mental health and productivity. Not all residents in Adelaide have equitable access to urban green spaces and, in turn, the benefits they provide. It is vital to identify how to best prioritise urban greening investment where it is needed most.

Summary of actions

- Develop a spatial prioritisation tool to support evidence-based decision making.
- Identify the greening potential ('plantable verge spaces') across metropolitan Adelaide.
- Undertake regional-level, open space planning to identify potential locations for new or improved green open space.

Scaling up impact by working together

The need for urban greening action is strong and growing within the community. There is an opportunity for this work to be better coordinated and facilitated at a metropolitan-scale to enable the growing momentum to be translated into collective impact. It is also important to develop effective partnership models with Koorana people to help heal our landscape.

Summary of actions

- Design a cross-sector collaboration process to facilitate better coordination, efficiencies and knowledge-sharing.
- Develop a joint research pipeline to fill knowledge gaps.
- Work with Koorana Yerta Aboriginal Corporation (KYAC) to identify opportunities for partnerships with Koorana.



Defining urban greening

Urban greening is the conservation, restoration or creation of green infrastructure, including trees and vegetation, in urban areas that benefits people, nature and our economy, and the soils and water needed to support it.

There are many opportunities for urban greening across Adelaide, including:

<p>Urban parks</p> <p>Local parks, playgrounds, sportsgrounds, community gardens, conservation areas and managed forests.</p>			
<p>Streetscapes and transport corridors</p> <p>Street trees, verges, raingardens, swales and major transport corridors.</p>			
<p>Green roofs, walls and facades</p> <p>Residential and commercial buildings</p>			
<p>Green and blue corridors</p> <p>Greening along coastlines, lakes, rivers, natural and managed wetlands.</p>			
<p>Remnant vegetation</p> <p>Coastal, riparian, wetland, grassland and grassy woodlands vegetation.</p>			
<p>Private greening</p> <p>Residential gardens, commercial car parks, market gardens and urban renewal projects.</p>			



The many benefits of urban greening

It is now widely recognised, and supported by a substantial body of evidence¹, that trees and other greenery deliver substantial benefits to people, economies and nature in cities.

People are happier, healthier, more active, and more connected with their communities in greener cities. Water is cleaner and used as a resource, while stormwater management costs and flood risks are reduced. Air quality is better, urban heat is reduced, and microclimates are more comfortable for people. Soil is healthier, and more food is produced locally. There is high market demand to live in green and leafy suburbs. People in these areas also spend more in local businesses, and jobs are created. Habitat is available to support biodiversity. Carbon is sequestered, emissions are reduced, and climate change impacts are mitigated.

In short, greener cities are nicer to live in, respond better to climate challenges and contribute to a healthier economy.

Urban greening has significant benefits, particularly around:

Financial savings and gains

Shading from trees can greatly improve the thermal comfort of our homes, in turn reducing the reliance on air-conditioning on hot days. Not only does this provide financial benefits to householders in terms of energy costs, but it has environmental benefits too in the reduction of greenhouse gases produced by these appliances².

Shading the western façade of a dwelling with trees can drop total energy costs by 5% to 10%³.

A number of studies have also revealed significant boosts to house value in leafy neighbourhoods.

A Brisbane-based study revealed a 5% increase in the median house price in streets with 50% canopy cover⁴.

Perth-based research showed that a broad-leaved tree in front of a home can add more than \$23,000⁵.

¹ DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide

Urban cooling

Not only do trees provide shade by shielding areas against the sun and absorbing light, but they also actively cool the air through evapotranspiration.

A study based in Adelaide’s western suburbs has shown that trees and other vegetation can have significant cooling benefits and reduce surface temperature in garden areas by 5 to 6 degrees⁶.

Health and wellbeing benefits

Trees can support physiological health by providing sensory relief and generating a sense of calm. In fact, studies have shown that residents of tree-lined neighbourhoods feel healthier and have fewer cardiometabolic conditions⁷.

People who live in neighbourhoods with a tree canopy coverage of 30% or more have been shown to experience a third less stress⁸.

Recent research suggests the benefits are not just related to having access to green space, but that the more biodiverse the space the greater the benefits⁹.

Having a daily dose of nature gives people many health and wellbeing benefits.

It is widely accepted that humans are hardwired to need connection with nature and other forms of life. With this in mind, a healthy, thriving natural environment is vital for creating resilient communities.

There is a large body of evidence to show that time spent in green spaces is linked to positive short-term and long-term health benefits¹⁰.

Provision of ecosystem services

Trees help improve air quality by capturing and filtering pollutants, including ozone, sulphur dioxide, nitrogen oxides and particulates.

A New York study found that its urban forest removed 1,821 metric tonnes of air pollution at an estimated value to society of \$9.3 million annually¹¹.

Trees also play other important ecosystem services such as:

- improving stormwater quality by reducing runoff and erosion
- mitigating climate change by capturing and storing carbon dioxide.

Habitat for animals

Trees and other urban green cover provide important habitat for animals. Cities around the world are home to numerous threatened plant and animal species, and are important places for conservation in their own right.

In fact, Australian cities and towns have been shown to provide habitat for 3 times as many threatened species per unit area than rural areas¹².

Some species are only found in urban environments, while others rely on cities for key food and habitat resources¹³. For some species, cities provide stable, year-round resources¹⁴ due to plant selection and watering regimes. In addition, many of our animals, such as birds and possums, rely on hollows in large old trees to nest or den in.

Attracting residents and businesses

The importance of creating a liveable Adelaide is recognised in [South Australia’s Economic Statement](#) because it is a significant factor in attracting the best and brightest.

Protecting and enhancing liveability can help to attract people to Adelaide to live and work here – and retain them.

Green and leafy neighbourhoods, where residents have access to quality green spaces within walking distance, tend to make great places to live.

Cultural value

The Kurna people attach great value to natural habitats, which are core to many cultural practices and obligations.

Adelaide’s unique species and ecosystems are an integral part of Kurna Yarta – the identity, stories and history of the land and its people.

For instance, for Kurna and the broader community, trees are important as spaces for gatherings, ceremonies or experiencing a connection to a place.

The case for this strategy

For Adelaide’s urban environment to thrive, we need a roadmap for increasing tree canopy, cooling the city and boosting biodiversity.

This Urban Greening Strategy for Metropolitan Adelaide will provide this direction, and help us to:

Respond to challenges and opportunities facing urban greening

Numerous in-depth conversations have taken place in recent years to identify the challenges and possible solutions to increasing and improving the quality of urban greening in metropolitan Adelaide and ensuring everyone benefits.

These conversations have been led by parliament, state government departments, the Local Government Association of South Australia, councils, non-government organisations, peak bodies, and research bodies, demonstrating the **strong cross-sectoral interest in urban greening**. These are reflected in:

- the parliamentary Natural Resources Committee’s [Inquiry into Urban Green Spaces \(2020\)](#)
- Green Adelaide’s [Regional Landscape Plan 2021-2026](#)
- the Minister for Planning’s [Planning System Implementation Review \(2022-ongoing\)](#)
- the parliamentary Environment, Resources and Development Committee’s [Inquiry into the Urban Forest \(2023-ongoing\)](#).

This strategy was developed in consultation with a wide range of stakeholders who deliver, influence and/or are interested in urban greening in metropolitan Adelaide (see Appendix 1). This strategy’s 6 priority areas seek to tackle the key challenges and opportunities facing Adelaide’s tree canopy and other greenery.

Through these investigations and extensive stakeholder consultation, the following concerns have been identified:

- the impacts of climate change
- ensuring adequate water to support healthy and thriving green spaces
- impacts of increased housing density on our neighbourhoods
- competition for space with hard infrastructure
- retaining and building nature into the city
- community awareness and perceptions
- the loss of mature trees (see graphic on Page 16).



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Ensure our long-term investments are based on long-term planning

Urban greening is a long-term investment. Trees can take decades to reach maturity, so this needs long-term planning.

While the state government does have an urban tree canopy target (see Page 53), there has been no dedicated, long-term metropolitan-level strategy setting out how this will be achieved. This strategy will fill this gap.

An important role of this strategy will also be to complement and amplify relevant existing state and local government strategies and plans (see Appendix 2).

Foster collaboration to scale up impact

No singular organisation or professional group is responsible for urban greening, and everyone has a different, but important, role to play. (See Figure 1, right)

Urban greening is delivered and influenced by many diverse stakeholder groups in metropolitan Adelaide, including Kaurua, local and state governments, not-for-profits, research bodies, private enterprise, community groups and individual households. Many are already actively working to increase urban greening within their own area.

Increasing tree canopy and other urban greenery will require action from all landowners and land managers across Adelaide. This includes those responsible for residential, state government, council, commercial, and primary production land.

This strategy recognises that a range of complementary levers will need to come together to achieve the most impactful improvements to urban greening efforts. (See Figure 2, right)

This strategy identifies which levers are most impactful to improve urban greening and will help coordinate work to fill gaps.

It will help partners achieve more by identifying projects that:

- fill known gaps or scale up what is already working well
- unlock metropolitan-wide Adelaide benefits
- harness cross-sector collaboration and/or co-investment.

Figure 1. Everyone has an important role to green Adelaide



Figure 2. Key levers for collaboration



Why is it vital to protect mature large trees?

Replacing mature trees with new trees does not account for the many years of growth required for them to reach a size that will provide significant environmental, health and wellbeing, and economic benefits.

It takes 80 to 100 years for trees to form hollows for wildlife to use¹⁶

A single mature tree can absorb as much as **21 kg of CO₂ in a year¹⁵**

In extreme heat events, shading provided by large trees can reduce energy use and associated costs by **10%³⁹**

One large tree can release enough oxygen back into the atmosphere to support **2 people for a year¹⁷**

Removing trees **reduces shade, increases temperatures and reduces amenity**

¹⁶ DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide



Item ESATS4 - Attachment 3 - Draft Urban Greening Strategy (full text)



Understanding Adelaide's current landscape

State and local government have worked together to utilise LiDAR (a remote sensing technique) and aerial imagery to better understand the state of Adelaide's urban forest, as well as the levels of urban heat and impermeability.

This will allow us to track the success of our urban greening initiatives and identify priorities for investment and effort. A consolidated dataset for council street tree diversity has also recently been compiled for the first time across metropolitan Adelaide. It shows that:

Tree canopy cover across metropolitan Adelaide has increased

- Tree canopy increased from **14.5% in 2018-2019** (baseline) to **18.26% in 2022^a**.
- All local government areas experienced tree canopy cover increases, ranging from **1.5%** in City of Port Adelaide Enfield to **7.5%** in the City of Mitcham.
- Average canopy height increased between 2018-2019 and 2022.
- About 69% of tree canopy is **less than 10 m** in height.

See map overleaf and **Appendix 3**

Tree canopy cover is unevenly distributed

- Tree canopy cover across local government areas ranged from **8.1% to 39.8%** in 2022.
- **Three** council areas have **<10%** tree canopy cover, **7** have between **10% and 20%**, **6** have between **20% and 25%** and only **2** have **over 30%** in 2022.
- **295** suburbs in metropolitan Adelaide (**74%** of all suburbs) have **<20%** tree canopy cover.

See maps overleaf and **Appendix 3**

Tree species diversity in council parks and streets is considered low in a changing climate

- The **top 13 most abundant species** make up **50%** of all trees^b.
- There is potential to improve the species, genus and family diversity of trees to increase resilience against climate change impacts and pests.
- No tree species diversity data is available yet for other land use types.

See **Box 12** and **Appendix 4**

Remnant vegetation is scarce and it is important to protect what we have left

- Since European colonisation **nearly 90% of native vegetation has been cleared**.
- Work is needed to make biodiversity data more consistent and fill knowledge gaps.

See **Appendix 5** and **6**

^a DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide



Impermeable surfaces are likely to be increasing in infill areas

- Total percentage of impermeable surfaces across metropolitan Adelaide was **29.1%** in 2022.
- Impermeable surfaces impact on space for tree planting, water for vegetation and increases stormwater run-off.

See **Appendix 7**

Urban heat intensity varies significantly

- Average urban heat intensity **increased by 0.2 C** from 2014 to 2023.
- While the results indicate an overall stable trend, there is **significant variation at the local-scale** resulting from tree and vegetation clearance and new development.

See **Boxes 14, 15, 17 and Appendix 8**

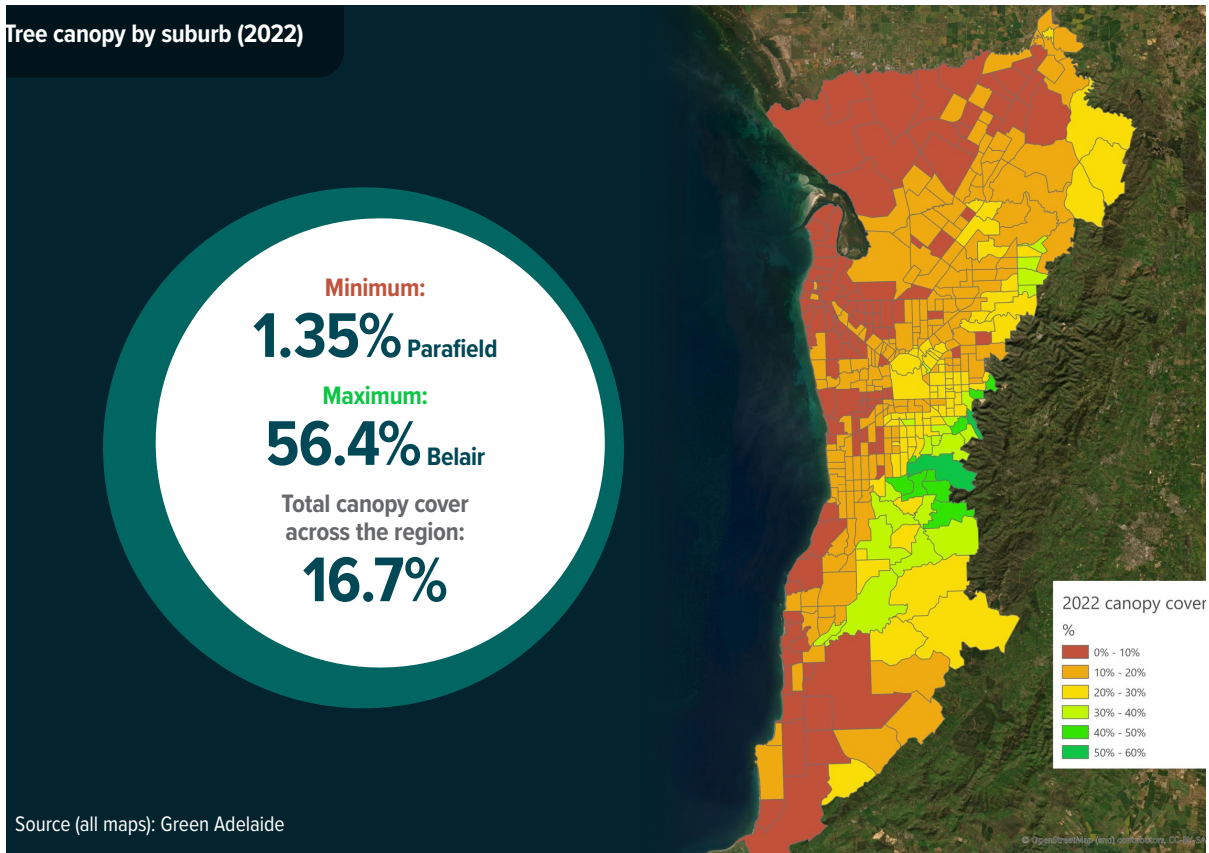
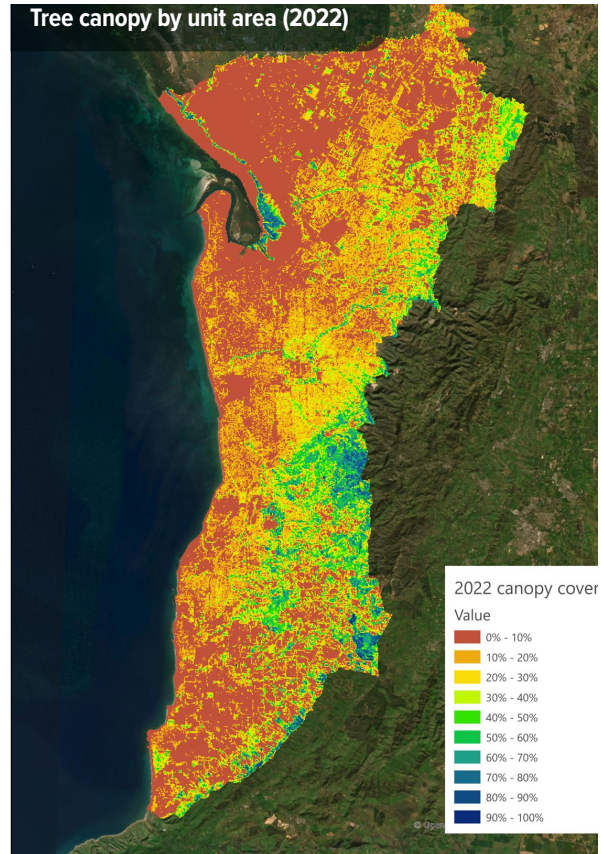
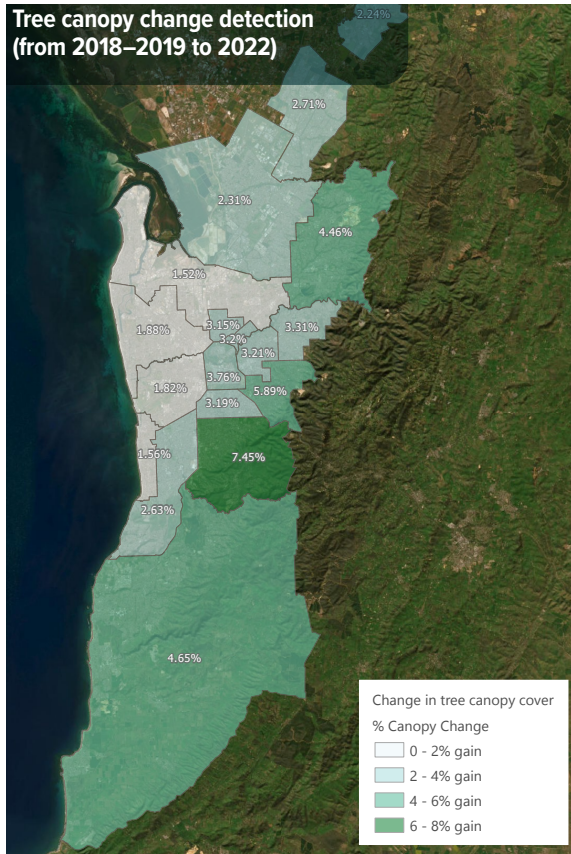
Strong community appreciation for urban greening and nature

- A **2019 national survey** found that urban greening is important to **85%** of people (while **12%** think it's a nuisance or have other concerns), with people appreciating it for its great aesthetics, for relaxation and health and wellbeing, and for wildlife⁸.

See **Appendix 9**

^a LiDAR data capture (a remote sensing technique) was first carried out for part of metropolitan Adelaide in June 2018 and for some additional council areas in October 2019. A recapture was undertaken for the whole region in January 2022 (18 Councils). Tree canopy change detection is based on the area for which LiDAR data capture has been undertaken twice, which includes only partial areas of City of Playford and Town of Gawler (see the map in Appendix 3).

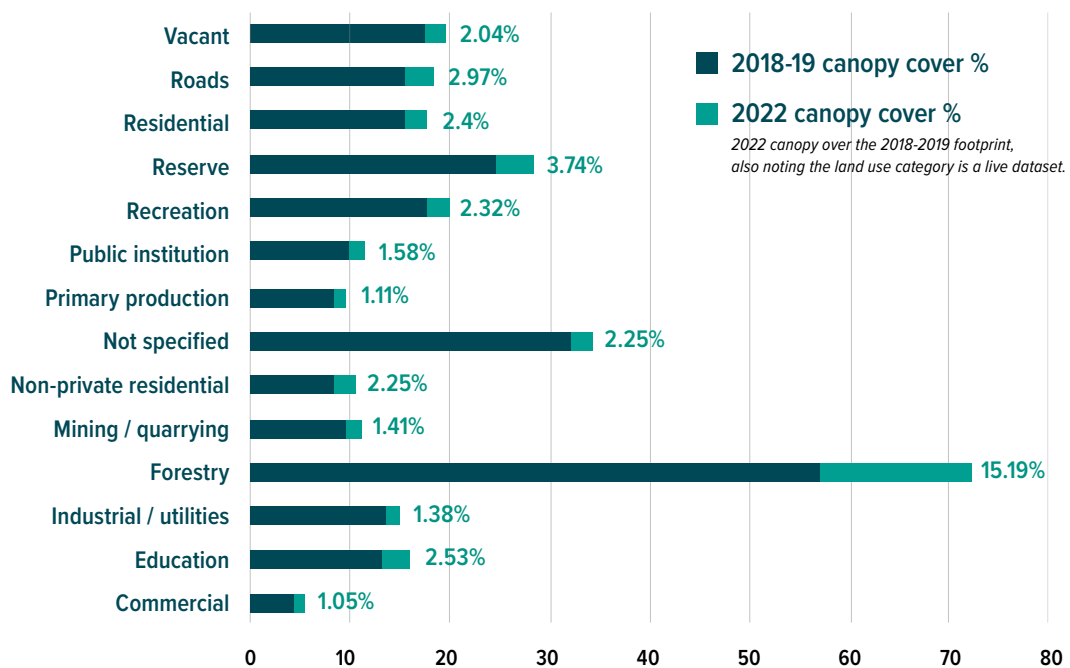
^b For areas where data was available



Source (all maps): Green Adelaide



Figure 3. Tree canopy cover % gain by land use



Source: Green Adelaide

Impact of global megatrends

It is valuable to consider the global megatrends that are likely to impact on growing and improving the condition of Adelaide’s urban greening in the future.

Scenario planning is a useful frame for exploring the potential impacts of megatrends on urban greening, to ensure that the strategy is robust and responsive to a changing and unpredictable future.

For further information about the scenarios (and megatrends) that were prepared to support the development of this strategy refer to the [‘Scenario planning background paper’](#).

Climate change

Climate change is one of the most significant challenges and drivers for growing our urban forest. Projected climate change impacts include hotter summer temperatures with more extreme heat days; more frequent, more severe and longer heatwaves; reduced annual rainfall; more intense high rainfall and storm events; and increased likelihood of bushfires and droughts¹⁹.








Liveability of our cities

The increased urban heat and drier conditions projected for the future are also predicted to impact human health, wellbeing and quality of life. Hotter temperatures have a direct impact on mortality rates, but also reduce the uptake of many outdoor activities including active transport, such as walking and cycling. SA Health advises that people, especially older and more vulnerable people, may not be able to remain cool enough to stay healthy on days that exceed 35°C.

This is reflected in a 16% increase in people visiting a doctor during heatwaves across metropolitan Adelaide between 2011 and 2016²⁰. Increasing tree canopy will be increasingly important to cool urban areas for liveable outcomes.

Major cities in Australia face a 2.3% increase in the risk of mortality during heatwaves, with Adelaide facing the greatest increase in the risk of heatwave-related deaths at 8.3%²¹.

Climate trends projected to 2050 and beyond indicate:

 Increasing maximum, minimum and average temperatures.*	 Hotter days and more frequent hot days.*	 More intense heavy rainfall events.
 Warmer spring temperatures.*	 Declining rainfall.*	 More dangerous fire weather.
	 Lower spring rainfall.*	

*Based on new climate projections from the NSW Australian Regional Climate Modelling Project stage 1.5.

Biodiversity loss

Pressures from climate change, habitat loss, pollution, and invasive species are threatening every Australian ecosystem, with 19% showing signs of collapse loss²². Moreover, this number is predicted to increase substantially over the coming decades, with further extinctions expected unless radical changes are made. Therefore, it is vital to identify ways to protect and enhance the diversity of metropolitan Adelaide's vegetation.

These pressures have resulted in the number of threatened species growing by 8% since 2016, such that 21% of Australian mammal species are now threatened²³.

Changing mobility systems

How people physically move around is changing, due to various trends such as electrification of vehicles, mobility-as-a-service, micro-mobility, connected and autonomous vehicles, and consumer preference for active transport²⁴. Changing mobility systems impact roads and infrastructure, housing design, how we move around public spaces, and access to employment and educational opportunities for residents. It will potentially change how much road and verge space is needed, which could impact on space available for urban greening.

Land-use patterns

Traditionally South Australian towns and cities have been low-density, dominated by detached houses on large allotments. In recent years, the urban form has been changing, with a move to more medium- and high-density living. In metropolitan Adelaide, this often takes the form of small-scale infill development, with single allotments being split into 2 or more dwellings. Infill development is likely to continue to be an important part of new housing and needs to be carefully managed to avoid negative impacts on retaining large trees and increases in impermeable surfaces⁵.

Greater Adelaide's population is projected to increase by up to 672,000 people, reaching between 2 and 2.19 million, by 2051 – around 86% of the state's population²⁵.

Declining water quantity, quality and availability

Water demand is increasing, but less water sources will be available because of the drier climate. The demand and supply of water will be impacted by various shifts, such as dwindling native water resources from climate change, population growth, cultural acceptance of recycled water, technological innovations, demand from water-intensive industries of the future, and our ability to maximise use of water where it falls through WSUD⁴. Securing adequate water could be a limiting factor for successful greening.

Technology

Rapid adoption of digital and data technologies, and incredible improvements in the ability of software and machines to solve problems and perform complex tasks without explicit human guidance, might make it easier to understand how our urban forest is performing and better manage it.

These technological developments are driven by ongoing scientific breakthroughs in artificial intelligence and global investments in technology-driven research and development.

While technical advancements have been significant, experts predict that this is just the tip of the iceberg, with the vast majority of digitisation yet to occur²⁶.

Recognition/ appreciation of Aboriginal people's wisdom

For tens of thousands of years, Aboriginal people have addressed changing weather²⁷ in Australia and successfully applied their knowledge to land management.

One of the distinctive characteristics of Indigenous stewardship is the focus on humans as caretakers of the land, rather than owning and controlling it. There is growing recognition and appreciation of cultural knowledge, skills and perspectives of the Kurna Miyurna, and all Aboriginal people. This is likely to increasingly influence and shape land management practices.

^c Preparation of the Greater Adelaide Regional Plan (GARP) is underway, which will replace the [30-Year Plan for Greater Adelaide \(2017 Update\)](#). This will involve making decisions about how and where future population growth is accommodated.

^d SA Water is leading the development of a [Resilient Water Futures Strategy](#) to identify how metropolitan Adelaide can maintain a secure, sustainable and resilient water supply.

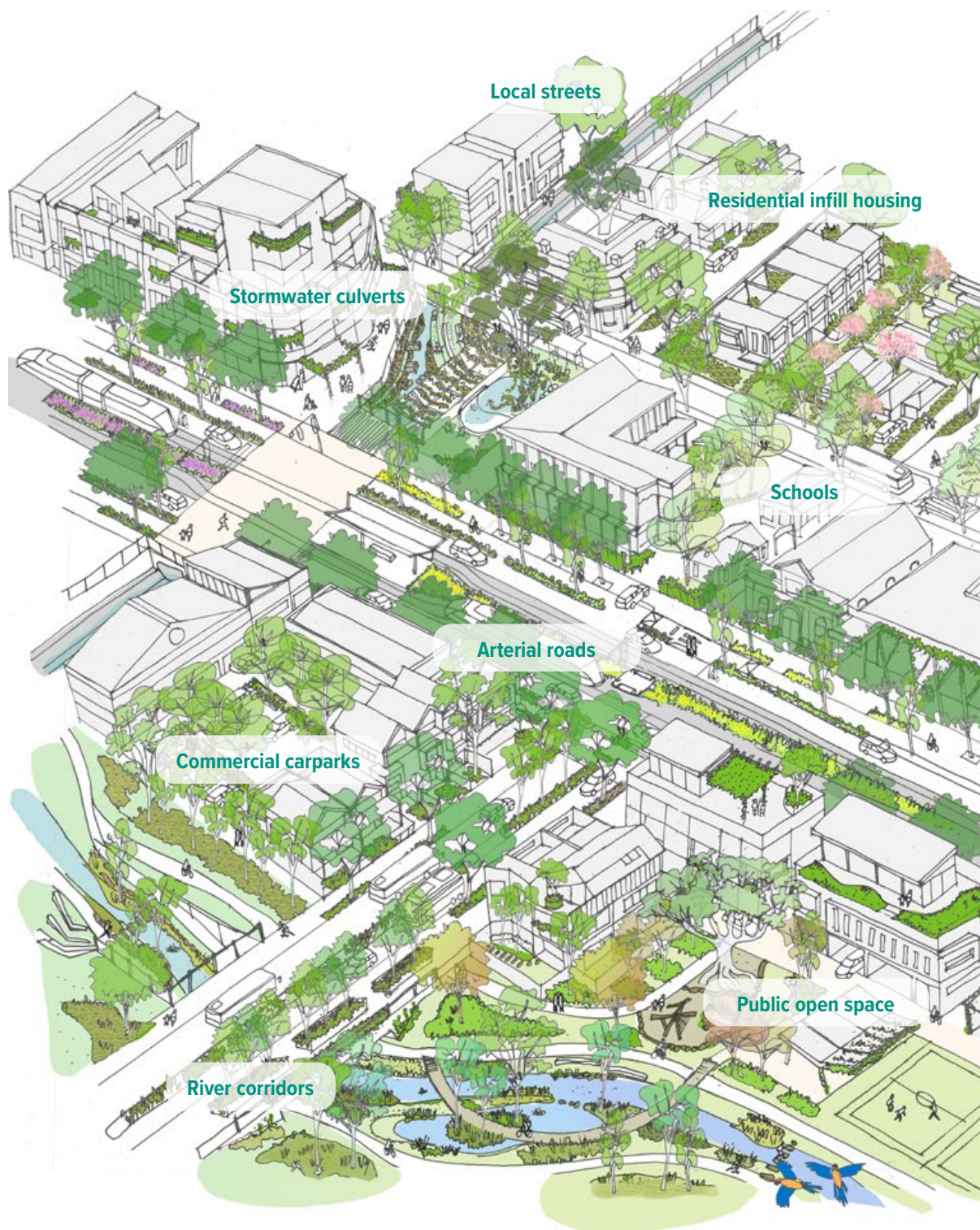




Our vision is a **resilient and liveable Adelaide for all: cooler, leafier and more biodiverse**. This means:

- increased tree canopy and more mature trees retained
- greening embedded in new developments and infrastructure conflicts resolved
- more biodiverse vegetation attracting native birds and animals
- more integrated water-sensitive urban design
- a climate-resilient urban forest
- equitable distribution of canopy cover across Adelaide
- strong community, industry and government support to deliver nature-based solutions
- strong urban green partnerships with Kaurna
- collaborative management of urban greening
- urban greening cover targets met.

This vision will be met by reaching the outcomes described in this strategy's 6 priority areas for action.



Bringing the vision to life

This illustration shows the many opportunities to achieve our vision within metropolitan Adelaide by greening our new infill housing and commercial car parks and transforming public open space, river corridors, schools, arterial and local roads.

For before and after visualisation of these key locations within metropolitan Adelaide, see Pages 55 to 58.





There has been a significant trend across metropolitan Adelaide towards smaller blocks, larger houses and ‘low maintenance’ gardens. Subdividing existing suburban allotments into 2 or more smaller ones often involves clearing and levelling the land, resulting in a loss of mature trees and other vegetation.

Housing built on subdivided properties – known as infill housing – is a challenge for urban greening. This type of development generally increases site coverage and driveway crossovers, creating up to 90% impermeable surfaces (see Box 1).

It is important to reduce impermeable surfaces, where possible, to help improve stormwater management, retain healthy soils, reduce the ‘urban heat island’ effect, and increase the available space for planting trees and other greenery.

Other types of development, such as new surface car parks associated with commercial development, also provide key opportunities for better urban greening outcomes (see Box 3).

Therefore, a priority focus of this strategy is creating cooler and greener infill development. That is, facilitating good design outcomes that ensure new infill developments protect existing trees and provide sufficient space for new urban greening, supported by adequate soil and water infrastructure.

Strengthening land-use planning policy and tree protection legislation is considered by many stakeholders to be the number one opportunity to support retention and expansion of greening on private land (see Box 2).

However, it is not possible to stem the loss of trees through these levers alone. Education, appropriate valuation of trees and other green infrastructure, tools, guides, incentives and new practices supported by strong evidence and data all need to play a role. It will also be vital to identify cost-effective and easy to implement solutions, suitable for small spaces.

Now that the architecture of the new e-planning system and the Planning and Design Code is in place for metropolitan Adelaide, the focus can move more fully to policy improvements, especially through the development of the new Greater Adelaide Regional Plan.

Cultural shifts are also needed across the community, as well as within the development and building industries, to prioritise and value trees. It will be important to develop an effective, wide-reaching communications campaign that establishes a clear and consistent narrative to help the community realise the value of urban greening. This will target those not already engaged and include messages about economic benefits, wellbeing, wildlife and climate-resilience, and myth-busting regarding concerns.

Australian homes are among the largest in the world, and the average size increased between 2008 and 2018 from 234m² to 248m². Additionally, the median lot size²⁸ for new development across Greater Adelaide has reduced significantly – from approximately 600m² in 2000 to 468m² in 2021²⁸.

²⁸ DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide



Priority Area 1: Cooler and greener infill development

Outcomes	Ref	Actions	Indicators	Levers	Where
Policy and legislation better support urban greening and are in line with national best-practice	1.1	Strengthen tree protection legislation (and associated offset schemes) to align with best-practice and reflect the true value of existing trees	1	Legislation Offset scheme	All land
	1.2	Review and refine the Urban Green Cover target (and policies) as part of the new Greater Adelaide Regional Plan	1	Regional Plan	All land
Developers and community have increased knowledge, motivation and capacity to practically and cost-effectively achieve greening, cooling and biodiversity outcomes	1.3	Monitor and enhance the Planning and Design Code and develop supporting tools to make it easier for developers to achieve, and go beyond, minimum requirements	1 3	Policy Tool Guide	Private (residential, commercial)
	1.4	Undertake coordinated metropolitan-wide campaigns (linked to incentives) targeted at improving urban greening outcomes	1 2 3	Inspire Incentives	Private (residential, commercial)
	1.5	Develop a catalogue of costed housing designs that showcase practical and affordable greening, WSUD and BSUD	1 2 3	Education Guidance	Private (residential, commercial)
New developments include trees by adopting innovative and cost effective solutions	1.6	Work with the development sector to understand urban greening drivers and encourage innovation and adoption of best-practice (including identifying effective incentives)	1 2 3	Research Trials Incentives	Private (residential, commercial)
	1.7	Develop best-practice engineering solutions, planting and maintenance techniques to minimise conflicts between green and grey infrastructure (building footings and infrastructure)	1	Research Trials	Private (residential, commercial)

Box 1: Impact of infill on existing mature trees

The images below for the City of Unley (2018 to 2021) and City of Campbelltown (2018 to 2020) suggests that urban development and associated infill is a cause of canopy loss.

Reducing canopy loss, preserving existing trees and utilising plantable space on private land is key to growing Adelaide's urban forest.

Community engagement with private landowners will play a critical role in helping build a greener, more sustainable future for Adelaide.

For further information about these case studies view [Aerometrex's webinar](#).



City of Unley



City of Campbelltown



Box 2: Introduction of tree planting and soft landscaping requirement

New requirements were introduced into the Planning and Design Code by the State Planning Commission in response to significant community concern about the impact of infill development on mature trees and other urban greening.

It includes minimum requirements for tree planting, minimum requirements for soft landscaping areas, and a supporting Urban Tree Canopy Offset Fund.

It will be important to monitor how these new requirements are adhered to and identify whether any adjustments or enhancements are needed to maximise their ability to support better urban greening outcomes.

Infill development is an important focus for improving urban greening as it has delivered about 5,500 new dwellings per year in metropolitan Adelaide (between 2017 and 2021)²⁹.

For further information visit: [PlanSA](#)

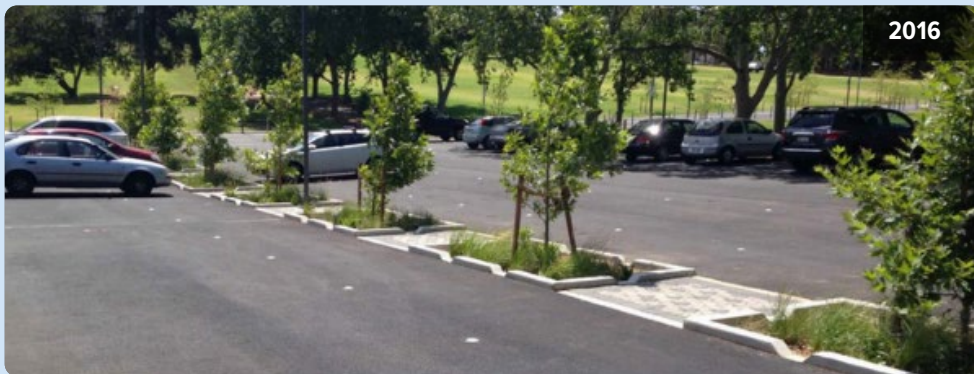
Box 3: Car parks could provide easy WSUD wins

Integrating WSUD into surface car parks is a practical and effective way to manage stormwater, improve water quality and maximise the growth of trees and other vegetation.

Car parks provide the opportunity for cost-effective and easy WSUD solutions as they usually have minimal underground services compared with other land-uses such as roads.

A good example of this is the Fig Plaza Car Park at Adelaide Oval, where installing raingardens that collect stormwater to passively water garden beds has led to significant tree growth in just 2 years.

For further information about this case study visit: [Water Sensitive SA](#)





Well-vegetated streetscapes and other public areas are becoming increasingly important across metropolitan Adelaide, as more people live in neighbourhoods with small, or no, front and backyards.

Public green spaces provide many advantages, such as improved physical and mental health and wellbeing for the community. Other benefits include opportunities for sport and recreational activities, preservation of natural environments and biodiversity, climate change adaptation and urban stormwater management²⁰.

However, urban streetscapes are often highly contested spaces. Due to the potential conflict with powerlines, tree species that grow to more than 6m tall by maturity are not permitted to be planted directly under powerlines. This has contributed to less diversity in the species of trees that are planted, and less shade and aesthetic appeal than what would be provided by trees with larger canopy.

Major transport upgrades and other public infrastructure works can also lead to the removal of mature trees and put pressure on the limited space available for greening.

Conflicts for space are sometimes not visible, with some of the restrictions below ground (that is, utilities requirements) or from other competing needs (for example, sightlines, safety, and bin space on verges). There is an opportunity to pilot and scale up alternative approaches to installing infrastructure for utilities that would minimise streetscape impact and maximise space for urban greening, such as installing root barriers, underground powerlines, trenches for common services and multi-utility tunnelling.

Greening has often been seen as a 'nice-to-have' or an afterthought, rather than a critical piece of valuable public infrastructure. This is compounded by the fact that trees are often left out of asset management registers and systems, and there is no agreed mechanism to account for trees as 'appreciating assets' in financial systems.

Dedicating budget to maintaining green infrastructure assets has also been raised as a challenge. Resolving these barriers is likely to require a more robust evidence-base and tools, based on credible quantitative economic valuations in the local context. Identifying new ways to make public greening and its maintenance more cost-effective and sustainable will also be vital.

It will also be important for both levels of government to review their policies to drive better greening outcomes and to show leadership in this space (see Box 4).

Both state and local government can play an important role in trialling new ideas, commissioning research and driving innovative solutions for greening the land that they own and manage (see Box 5 and 6).

²⁰ DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide



Priority Area 2: Government leads by example

Outcomes	Ref	Actions	Indicators	Levers	Where
Innovative and best-practice green and blue infrastructure is showcased in government infrastructure works and major projects	2.1	Integrate urban greening and WSUD as part of business-as-usual in government projects including: <ul style="list-style-type: none"> transport infrastructure upgrades, particularly roads with a high level of pedestrian and cyclist activity major land releases new schools and significant upgrades SA Water assets healthcare facilities other government land 	1 3	On-ground action	State government land (major projects)
	2.2	State and local governments to deliver flagship greening, BSUD and WSUD projects that cross boundaries and set new benchmarks	1 2 3	On-ground action	State and local government land
Barriers to BSUD and WSUD are solved to accelerate implementation	2.3	Identify and implement solutions to key barriers to BSUD and WSUD in public infrastructure and projects, such as maintenance	1 2 3	Research trials	State and local government land
	2.4	Investigate alternative approaches to installing utilities infrastructure in roadways to create more space for trees	1	Research trials	State and local government roads
	2.5	Review restrictions on planting near utilities infrastructure, including permitted species lists	1 2	Research policy	
Trees are appropriately valued as essential community assets that contribute to the wellbeing of our community and environment	2.6	Determine and apply an agreed method for applying economic valuations to trees and other green infrastructure	1	Research policy	All land
	2.7	Investigate including green infrastructure into public asset management systems and account for trees as appreciating assets	1	Research policy	State and local government land

Box 4: Green Infrastructure Commitment

As South Australia’s key agency in delivering public infrastructure, the Department for Infrastructure and Transport (DIT) has a major role to play in achieving the government’s urban green cover target.

DIT has developed a Green Infrastructure Commitment (2021), which focuses on increasing tree canopy cover on department-managed land, over footpaths and bikeways, implementing WSUD for infrastructure projects, and ensuring that new green infrastructure contributes to improved biodiversity. Key actions within this Urban Greening Strategy will help DIT implement its Green Infrastructure Commitment.

An example of an infrastructure project with positive greening outcomes is the 1.8 km Regency to Pym Street upgrade – part of Adelaide’s North-South Corridor initiative. It has:

- increased habitat for native butterflies
- retained existing trees where possible
- positioned new trees to maximise shade for pedestrians, while minimising impacts to infrastructure
- incorporated WSUD elements, including turfed swales and passive irrigation for new trees
- incorporated trees that have a large canopy to maximise shade.

For further information view: DIT’s [Green Infrastructure Commitment](#)



Box 5: ‘Connecting Nature, Connecting People’ initiative

There is an opportunity to learn from other jurisdictions on how best to facilitate biodiverse greening outcomes. The ACT Government is seeking to harness the potential biodiversity of public open spaces by delivering a range of initiatives such as:

- Biodiversity Sensitive Urban Design guidelines
- an updated Nature Map, which will provide accurate biodiversity data
- improving urban open-space areas to increase functionality and connectivity of wildlife habitat and resilience to impacts of climate change and urbanisation.

These initiatives are being delivered in partnership with community groups, in particular, the Ngunnawal people and other people or families who have a connection to the lands of the ACT and broader region.

For further details visit: [Connecting Nature, Connecting People Initiative](#).

Box 6: Creation of a biodiversity corridor for animals and people

Windsor Street Linear Reserve in Parkside was created as part of the City of Unley’s vision to develop a native plant corridor. It is used by people to walk or cycle from Urrbrae to the Adelaide Park Lands, while also providing an unhindered corridor for native bird movement.

Unley Council has taken advantage of repurposing an open concrete stormwater drain to create this reserve. The open drain has been replaced with box culverts to manage stormwater and now hosts a 11,000 m² linear reserve featuring 15,000 locally indigenous plants with 84 unique species. These include threatened species, such as grey box (*Eucalyptus microcarpa*), and other plants that constitute the original woodland ecosystems of the area.

There is an opportunity to learn from as well as scale up the implementation of biodiverse linear reserves.

For further information refer to the [project fact sheet](#).





Cities are increasingly recognised for their role in being home to important biodiversity. However, without conscious efforts to protect and enhance habitat, the biodiversity of our region will continue to decline. The future of many threatened species will depend on actions to accommodate their needs within urban boundaries.

Recent research in Adelaide has demonstrated that higher levels of biodiversity, as measured by increasing naturalness and vegetation structure, enhanced the psychological benefits of the city’s parks for visitors³¹. This work demonstrated that sometimes even small areas of biodiverse vegetation, from pocket parks, to backyards, on streets and along urban waterways, can reinstate and support animal species.

Improving biodiversity in urban places is imperative as the climate-crisis intensifies³². This was recognised at the 2022 United Nations Biodiversity Conference (COP 15), which introduced a number of biodiversity targets committed to by the Australian Government (refer to [Target 12](#) in particular). Jurisdictions around the world are increasingly introducing legislation and policies to achieve better biodiversity outcomes and there is an opportunity to learn from this in the Adelaide context (see Box 7).

BSUD aims to create built environments that make a positive, on-site contribution to biodiversity while providing other urban greening or development outcomes.

BSUD initiatives may target individual animal or bird species, a group of species, and/or entire ecosystems. This means that BSUD can be applied across multiple scales and contexts, from small-scale site redevelopments like green roofs or streetscapes, to precinct-scale planning for new developments (see Box 9), or large-scale infrastructure projects like transport corridors.

BSUD is an emerging area of focus, and practitioners and the community need education and capacity-building to understand what it is and how to deliver it on both public and private land. A key focus of this strategy is to help drive this capacity-building to ensure biodiverse greening outcomes.

There are also a number of challenges in biodiverse urban greening practices in Adelaide where this strategy can play an important role. For instance, gaining a better understanding of the locations of remnant vegetation and strategic landscape linkages through improved spatial mapping. Additionally, it will be important to develop guidance material to give advice about which animal and bird species to target through new tree or understorey plantings in various areas of metropolitan Adelaide (see Box 8).



Priority Area 3: Building nature back in

Outcomes	Ref	Actions	Indicators	Lever	Where
More biodiversity net gain development	3.1	Investigate how the planning system and other government legislation could best facilitate biodiversity net gain development	1	Legislation Policy	Private residential land
			2		
			3		
Increased motivation and capacity to undertake BSUD (government, council, developer and community)	3.2	Develop a BSUD capacity-building program, including design guidance, for the government, the development sectors and the community	1	Capacity-building	All land
			2		
Areas of valued native vegetation and critical habitat are protected	3.3	Develop a region-wide approach to supporting individuals and community groups to undertake biodiverse urban greening on private land, open space and schools, and/or verge planting along strategic corridors	1	Education Capacity-building On-ground action	Private residential land Strategic transport corridors
			2		
			2		

Box 7: Biodiversity Net Positive Legislation

Under the United Kingdom’s Environment Act 2021, all planning permissions granted in England (with a few exemptions) will have to deliver at least 10% biodiversity net gain (BNG).

BNG is an approach to development, and/or land management, that aims to leave the natural environment in a measurably better state than it was. It delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development. It is additional to existing habitat and species protections, and aims to create new habitat as well as enhance existing habitats.

In the UK, BNG requirements are being introduced in a phased process, with mandatory requirements to start applying to housing, industrial and commercial development in 2024. BNG can be achieved on-site or off-site through a combination of measures or through the purchase of statutory credits – as a last resort.

There is an opportunity to learn from this leading example and identify how similar outcomes could potentially be achieved in the Adelaide context.

For further information visit: [Biodiversity net gain](#).

Box 8: Understanding biodiversity challenges and opportunities in Adelaide

RMIT University’s Nature Positive in Adelaide Report shows that there are numerous challenges and opportunities relevant to improving the biodiversity of metropolitan Adelaide’s vegetation, including:

- protecting the remaining patches of remnant vegetation, which are often highly fragmented and vulnerable
- maintaining biodiverse plantings due to inadequate budgets for required maintenance
- improving knowledge and access to locally indigenous plant species
- better supporting volunteers, who are often key to planting and maintaining successful biodiverse greening
- improving monitoring, which is vital for understanding the state of biodiversity and for determining the impact of investments, maintenance work and stewardship programs
- setting targets and measuring success, which would benefit from understanding the baseline and/or metrics.

For further discussion about the challenges to achieving biodiverse greening, information about BSUD and case studies from across metropolitan Adelaide, refer to RMIT University’s [Nature Positive in Adelaide Report](#).



Box 9: Fishermans Bend redevelopment

Fishermans Bend is a large-scale urban renewal project that will be carried out in Melbourne. Biodiversity objectives and actions for 4 target species have been identified – blue-tongued lizards, growling grass frogs, superb fairy wrens and blue-banded bees.

Co-design of the biodiversity objectives and approaches was led by RMIT University and was undertaken with Traditional Owners, ecologists, planners and local environment groups along with the Fishermans Bend Authority and other key state agencies.

For further information: see RMIT's [Fishermans Bend BSUD case study](#)





Priority Area 4: Future-proofing our urban forest

Climate change impacts will likely have cascading effects on ecosystems, including changes to biodiversity and reduced ecosystem resilience.

Climate change is likely to significantly impact the sustainability of metropolitan Adelaide's urban forest, which largely comprises a small number of species – many of which may not cope well with the projected warming and drying (see Box 10). Many popular species are from areas that receive high annual rainfall and/or less extreme summer temperatures. It is also expected that climate change and urban activities will increase the transmissivity of pests and pathogens such as myrtle rust, phytophthora and borers.

Another challenge is that mass propagation of cultivars through tissue culture (growing trees from cuttings rather than seed) has allowed nurseries to grow young trees at scale at low cost and maximise tree consistency in form and growth characteristics. This has resulted in many cultivars planted in Adelaide consisting entirely of clones with very little overall diversity.

The best way to bolster our urban forest against direct climate impacts and climate-mediated threats, like disease, is through diversification of plantings. Higher diversity ecological communities are more resilient, which means there is more redundancy in place if Adelaide passes the climatic threshold or experiences the introduction of a pest or disease that heavily impacts one or more tree species.

Increased diversity should occur within species (maximising genetic diversity), between species (maximising the different trees we plant), in size and form (increasing functional diversity) and in age (ensuring not all trees will age at the same time).

Ensuring adequate water availability to support sustainable and healthy vegetation growth is already a challenge. Demand for water will also increase as Adelaide becomes hotter and drier. The demand on irrigation sources can be reduced by capturing and retaining rainwater run-off in the landscape through WSUD. Additionally, trade-offs may need to be made about where to prioritise water for greening (see Boxes 11 and 12).

WSUD has advanced further than BSUD, in terms of people understanding and delivering it. This has been facilitated by programs like Water Sensitive SA, which has helped grow practitioner knowledge through training and research. However, there is still much to be done to support local and state governments, private developers and the community to maximise opportunities for its effective delivery.

Developing a solid foundation of credible and locally applicable research will help inform good policy and investment decisions, including via robust cost-benefit analyses and business cases, and will optimise outcomes from on-ground works. For example, an accurate understanding of the water requirements of urban vegetation to maximise cooling benefits and health remains a knowledge gap. Improved climate sensitivity modelling is also needed to predict the impact of climate scenarios on common trees and potential new taxa in the local Adelaide context. It will also be important to trial new taxa in wide-scale studies, including to identify suitable new species to plant under powerlines. Improving the access to quality information and guidance will also be important (see Box 13).



Priority Area 4: Future-proofing the urban forest

Outcomes	Ref	Actions	Indicators	Lever	Where
Increased knowledge and availability of locally endemic and climate-resilient plant species	4.1	Develop up-to-date guidance to drive appropriate and climate-resilience species selection in a variety of contexts	1	Tool	All land
			2	Education	
	4.2	Undertake trials to identify appropriate trees for Adelaide’s projected future climate	1	Research	Council land (streets)
Improved urban forest resilience and health	4.4	Identify and solve threats to the health of the urban forest from pests and diseases	1	Research	All land
			2		
Government, councils, developers and community motivation and capacity is increased	4.5	Model future water demands for meeting greening targets and support greater use of WSUD and recycled water	1	Research	All land
Government, councils, developers and community motivation and capacity is increased	4.6	Scale up established WSUD capacity-building programs that are working well	1	Capacity-building	All land

Box 10: Species diversity on local government land

A benchmarking report has recently been released that provides an analysis of the taxonomic diversity of the public urban forest across 20 councils in Greater Adelaide and identifies potential vulnerabilities and opportunities.

This analysis, by the University of Adelaide, has identified a predominance of a handful of heavily planted species. The trees most planted by councils are jacarandas and SA blue gums, which together account for nearly 13% of Adelaide's public urban forest. Other common exotic trees include callery pears (4.76%) and golden rain trees (4.35%). In addition, nearly half (44.19%) of the audited trees planted on local government land in Adelaide are from the Myrtaceae family (for example, eucalypts and bottlebrushes).

These results indicate that it is important to further investigate opportunities to improve diversity, as well as identify the diversity of tree species that occur on state government and private land for which data is not currently available.

For further details about this work, contact the University of Adelaide about their Future Trees Project Stage 1 report (to be published later in 2024).

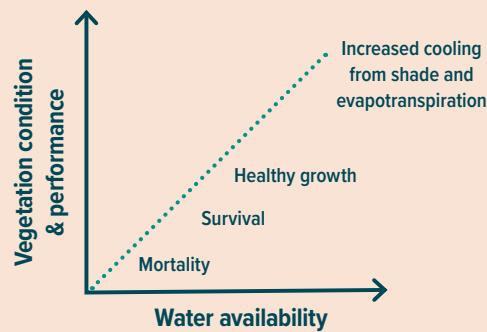


Box 11: Understanding water challenges in Adelaide and implications for urban greening

The Greater Adelaide water supply system is complex and offers a diversity of supply sources including rivers, surface water reservoirs, groundwater, rainwater, stormwater and alternative water resources like wastewater.

In 2022, DEW released the [Urban Water Directions Statement](#) and supporting [background paper](#). Part of this work identified the future challenges and opportunities associated with supplying enough water to ensure urban vegetation is healthy and resilient.

SA Water is currently leading, in partnership with DEW, the development of a [Resilient Water Futures Strategy](#) to identify how Adelaide can maintain a secure, sustainable and resilient water supply into the future. This will involve increasing the use of alternative water sources such as recycled water.



Source: *Urban Water Directions Statement Background Paper 3, 2022*

Box 12: Impact of TREENET inlets

TREENET inlets have been shown to significantly improve the growth rates and health of street trees. For the studied tree species, [research](#) of 'TREENET' inlets connected to soakage pits demonstrated:

- a 25% growth increase in young trees and 50% increase in saplings, compared to traditional council watering methods
- a 2-fold increase in photosynthesis rates and stomatal conductance, suggesting enhanced outcomes for tree health and enhanced evapotranspirational cooling.

Source: [Space Down Under research](#)



Box 13: Plant Selector tool

The Botanic Gardens of South Australia's online Plant Selector + tool allows users to identify plants suitable for a particular location or search for information about individual plant species. The recommended species for a particular area is determined using locational data such as climate, and soil and landscape types.

Over time, the recommended plant species lists will need to be reviewed to consider the impacts of climate change, such as changes in rainfall patterns and more extreme heat events, to ensure they are still appropriate in a changing environment.

For further information visit: [Plant Selector +](#)





Priority Area 5: Improving greening equity

Research demonstrates that having trees and other vegetation within view of one’s home, place of work or school, has important mental health and productivity benefits.

In many cities, not all residents have equal access to urban green spaces and the benefits they provide, and Adelaide is no different. Therefore, it is vital to identify how to best prioritise urban greening investment where it is most needed.

In recent years, there have been significant advances in Adelaide in terms of the availability and capability of spatial data capture and analysis. This means it is possible to move to a more refined decision-making model for urban greening investment.

There is significant tree canopy variability across metropolitan Adelaide. Some of this is due to tree canopy being variable, historically (pre-European colonisation), because of differences in soil and rainfall, while other variation has resulted from more recent human land management impacts (see maps on Pages 20 and 63). Additionally, some council jurisdictions contain protected areas or other large open spaces, while others have airports and commercial areas less suitable to accommodating more trees. Areas of high canopy cover are concentrated in the foothills, along river corridors and in the mangrove forests along the northwestern coast.

There is also urban heat intensity variation across the region due to a range of land-use factors (refer to Boxes 15, 16 and 17 and the map in Appendix 8). High temperatures impact most severely on communities with low socio-economic status, high rates of unemployment, and pre-existing health conditions. These communities are often less able to escape and/or mitigate the effects of urban heat through lack of

access to green spaces, cost of air conditioning, and working in outdoor manual-labour jobs.

The amount of public open space for greening can be limited, especially in inner-city suburbs.

Adelaide has the lowest percentage of public open space of Australia’s capital cities, at about 10%, compared with 57% in Sydney, 40% in Perth, 22% in Hobart and 20% in Melbourne³³. This means public greening needs to be high-quality, accommodate multiple uses, and be high-performing across multiple outcomes.

Therefore, it will be important to ascertain criteria for identifying the location of new public open space, to support space for tree canopy and other urban green cover, that includes considerations such as:

- low amounts of tree canopy and open space
- high urban heat
- areas of high conservation value
- connectivity of existing open space
- areas of significant new urban development.

Identifying where ‘plantable space’ on street verges is located across the region and where water is available will also be important to better understand the opportunities and constraints to meeting tree canopy targets. Refer to Box 14 for further information about greening prioritisation investigations to date in Adelaide.

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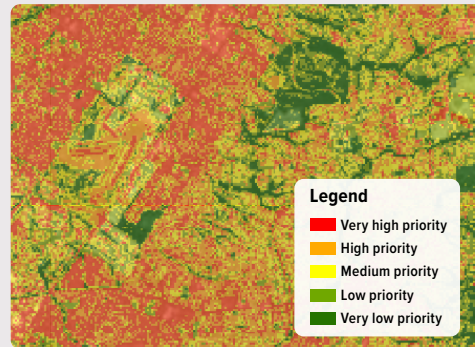
Priority Area 5: Improving greening equity

Outcomes	Ref	Actions	Indicators	Levers	Where
Urban greening investments are prioritised in areas of low greenery, high urban heat and high socio-economic disadvantage	5.1	Refine the Greening Prioritisation Pilot Study and consider the inclusion of additional datasets	1	Tool	All land
			2	Spatial mapping	
	5.2	Develop a greening prioritisation tool and investigate how it could be used in urban green investment decision-making, including relevant grants programs	1	Tool	State and local government land
2			Policy		
5.3	Integrate urban heat mapping into the planning system and identify an appropriate policy response	1	Policy	All land	
		3	Data		
Priority areas for new and/or improved green open space are identified	5.4	Prepare an open space strategy to identify priority areas for new or improved green open space and tree canopy	1	Plan	State and local government land
			2	Policy	
Locations for new feasible plantings are identified to expand the urban forest	5.5	Identify the potential locations of 'new plantable space' for trees	1	Spatial mapping	All land
			3	Policy	

Box 14: Greening Prioritisation Pilot

In 2022, Green Adelaide undertook a Greening Prioritisation Study that combined spatial data on tree canopy, urban heat and population vulnerability (based on age and socio-economic disadvantage) to identify the location of potential priority areas for urban greening need. These metrics are in line with what has been done elsewhere in Australia. Green Adelaide will re-run this pilot study in liaison with councils and relevant state agencies using the latest ABS, urban heat and tree canopy data.

There may also be an opportunity to bring in additional data layers such as biodiversity, active transport routes, land use and open space to help prioritise future urban greening investments.

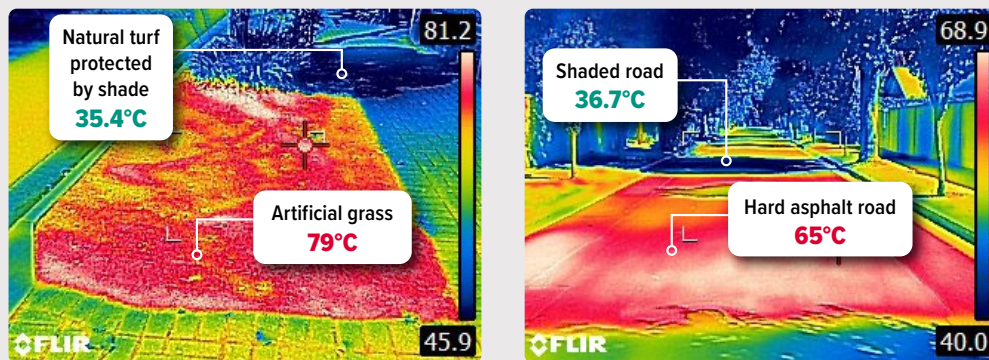


Box 15: Vegetation and hard surfaces have a significant impact on urban heat intensity

Thermal images taken in Dulwich in February 2023 on a 40 °C day demonstrate significant differences in urban heat due to differences in vegetation and land surfaces.

As shown in the images below, hard asphalt surfaces can reach temperatures of more than 65 °C when exposed to prolonged sunlight on a hot day, while nearby asphalt covered by shade can be almost 30 °C cooler. Artificial lawn can get even hotter, reaching temperatures of almost 80 °C in direct sun. Meanwhile, natural turf protected by shade was a far more comfortable 35 °C.

This shading not only benefits road users, but also increases the life of assets, like roads, houses, footpaths and other infrastructure, and reduces maintenance costs through protection from extreme heat.



Source: City of Burnside 2023

Box 16: Urban heat intensity mapping

DEW has undertaken an analysis to identify urban heat intensity trends across metropolitan Adelaide. This work found that the average urban heat intensity increased by 0.2°C from 1 January 2014 to 1 January 2023.

While the results indicate an overall stable trend, there is significant variation at the local scale, showing areas of both warming and cooling since 2014. Refer to Appendix 8 for a map showing the spatial distribution of urban heat intensity across metropolitan Adelaide and where this analysis was undertaken.

Urban heat intensity measures the additional heat in the landscape attributable to urban development. Urban heat intensity is generally higher in areas with high proportions of impermeable surfaces (such as roads, car parks, buildings) as well as bare paddocks. Lower urban heat intensity is associated with vegetation cover, water bodies and cool infrastructure, such as light-coloured roofs.

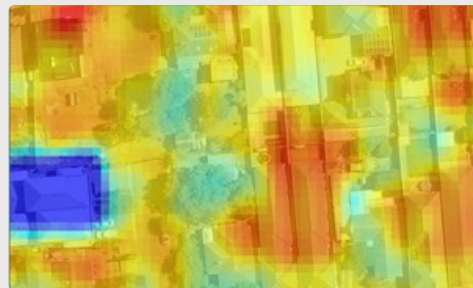
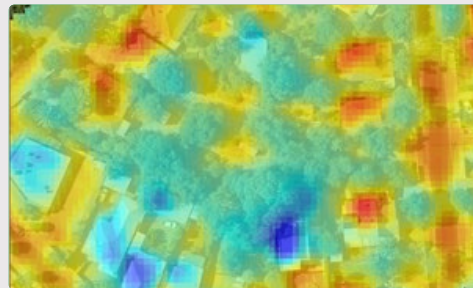
Understanding where urban heat settles is important, particularly since heatwaves in Australia have contributed to higher rates of mortality than all other natural hazards combined.

For further details about the results refer to DEW's [Technical Information Supporting the 2024 Urban Heat Environmental Trend and Condition Report Card](#).

Box 17: Urban heat island mapping

Green Adelaide commissioned a thermal heat imagery data capture in 2022. This allows a comparison between aerial maps and thermal heat images. The light and dark blue areas indicate cooler surfaces such as trees, irrigated vegetation and light coloured roofs. Areas of red, orange and yellow indicate hotter surfaces such as dark roofs, bare ground and roads.

To explore the thermal imagery further visit: the [Urban heat and tree mapping viewer](#)





Priority Area 6: Scaling up impact by working together

Urban greening is influenced by a huge range of sectors, organisations and disciplines, such as sustainability, assets and infrastructure, parks and gardens, water management, utilities, planning policy, community engagement and education, academia, design, and maintenance and operations.

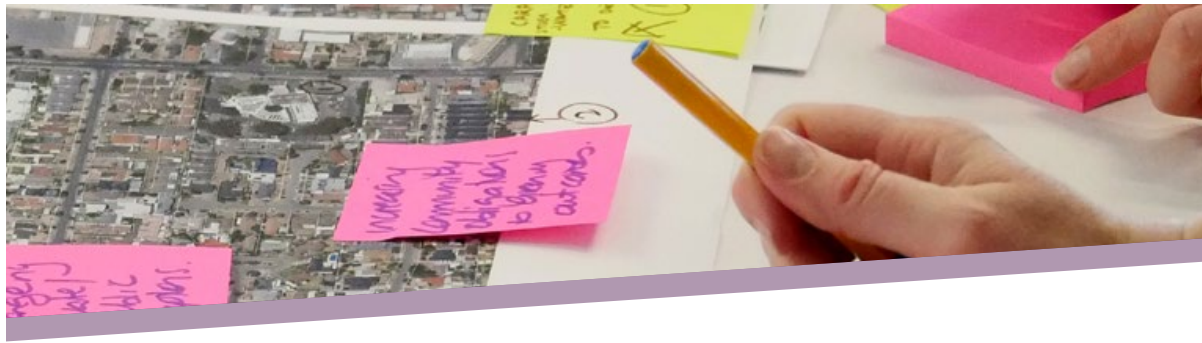
The impetus for urban greening action is strong and growing within the stakeholder base, including in the community. Many have already been involved in recent strategic planning activities, and there are many potential delivery partners for the strategy. What has been missing is a way for urban greening work to be coordinated and enabled at a metropolitan scale, to translate into collective impact.

The consultation process undertaken to develop this strategy found that some key issues are falling between jurisdictional gaps. Greater coordination between stakeholders, including within and between agencies, councils and other stakeholders, could enable accelerated action, reduced duplication and more cost-effective projects. This is particularly important where projects would benefit from co-investment of funds or resources.

Where there are many beneficiaries for a project, it makes sense for those organisations to work together, share resources and knowledge, and make substantial cost savings through joint procurement. Therefore, effective delivery of the strategy will depend on the development of an implementation plan with cross-sector buy-in (see Box 18). There is an opportunity to learn from other jurisdictions about ways to work across different sectors and organisations to deliver better urban greening outcomes (see Box 19).

Practitioners have also expressed a strong interest in developing a research pipeline to fill knowledge gaps. Cross-sector and cross-disciplinary efforts are needed to clearly articulate what research is needed to support policy development and on-ground action, as well as to convert research outputs into a useful format (tools and applications) for practitioners. To support this, it would be valuable to scale up the reach of bridging organisations, such as TreeNet and Water Sensitive SA, which have the skillsets and networks to provide a link between research and practice.

Finally, collaborating with Kaurana through KYAC will be important to the health and wellbeing of the urban forest. (See Box 20).



Priority Area 6: Scaling up impact by working together

Outcomes	Ref	Action	Indicators	Lever	Where
Roles and responsibilities are clear, learnings are shared, co-investment is optimised and cross-sector challenges are addressed	6.1	Prepare an implementation plan to identify opportunities for greater coordination, efficiencies and impact	All	Whole of region coordination	All land
	6.2	Investigate funding mechanisms for expanding urban greening, WSUD and BSUD delivery	All	Research Funding	All land
Quality information, research and guidance to achieve urban greening is available to all	6.3	Develop an applied research pipeline to identify and fill knowledge gaps	All	Research Whole of region coordination	All land
	6.4	Develop a centralised hub to share knowledge across the region, between sectors and with the community	All	Knowledge sharing	All land
	6.5	Extend the reach of established bridging organisations and networks that are working well	All	Capacity-building	All land
Aboriginal wisdom is recognised and partnership opportunities are facilitated	6.6	Work with KYAC to identify opportunities for partnerships with Kaurna	All	Whole of region coordination	All land

Box 18: Development of an implementation plan

An implementation plan will be developed to support delivery of the final urban greening strategy. The implementation plan will identify lead organisations, partners and timeframes for delivery of specific actions. It will also focus on identifying roles and responsibilities and describe how an annual process will work to identify and select priority projects for shared efforts in future financial years. This is likely to involve better alignment of state and local government annual business planning processes.

The development of the implementation plan will include a collaboration and governance framework that identifies opportunities for greater coordination, efficiency, and impact. The intention is that the implementation plan will be a tool for partner organisations to identify priority projects including who will lead them, whether funding is secured, and the type and location of potential collaboration and co-investment priority projects.

This strategy will also be reviewed at least once every 5 years to reflect progress made on actions, improvements in expertise, and emerging challenges and opportunities. Further information about the methodology for this review will be included in the implementation plan.

Box 19: Living Melbourne

The Living Melbourne strategy was prepared by the Nature Conservancy and Resilient Melbourne on behalf of many partners across metropolitan Melbourne. This strategy aims to provide the missing link for Melbournians to work better together to connect, protect and enhance Melbourne's urban forest.

To achieve its vision of thriving communities that are resilient and connected through nature, partners were drawn from across Melbourne and all sectors. Interested organisations were invited to endorse the final strategy, including its vision, goals, high-level actions and framework for collaboration and coordination.

This approach provides a useful precedent for Adelaide to learn from. Find out more by visiting:
<https://livingmelbourne.org.au/strategy/>.

Box 20: Kurna principles for collaboration

Adelaide's unique species and ecosystems are an integral part of Kurna Yarta (Country) – the identity, stories and history of the land and its people.

The Kurna people managed their land sustainably for tens of thousands of years knowing that if they cared for Country, it would care for them. This strategy recognises that there is much to be learned from Traditional Owners. Their knowledge of the land and its systems, and how to live harmoniously within the landscape is very relevant to the future of Adelaide's urban forest.

KYAC is the peak body for the Kurna community and is their registered native title body corporate.

It will be important to investigate and develop effective partnership models with Kurna people. Partnerships take effort and there is no 'one size fits all' approach to building a relationship with the Kurna community. Projects require purpose and meaningful social, cultural and economic outcomes for Aboriginal Peoples.

We are working with KYAC throughout the development of this strategy to identify appropriate partnership projects. Refer to **Box 21** for an example of an existing partnership project that improves the urban greening outcomes of Adelaide.

Refer to **Appendix 10** for list of collaboration principles that will assist project managers in working with KYAC.

Box 21: Kurna Kardla: Returning fire to Country

Also known as fire-stick farming, cultural burning has been used by Aboriginal people to manage their Country over tens of thousands of years. By introducing new generations of young people to the practice, traditional fire practitioners are keeping this ancient, invaluable Aboriginal cultural knowledge alive. Cultural burning is different to western prescribed burning in that smaller, cooler and slower burning fires are used to manage the landscape. The practice is based on a deep cultural understanding of the landscape and its needs. It is also about the healing that comes from people reconnecting with their Country. Cultural burning offers a number of benefits to urban forests, including biodiversity conservation, reducing fire risk and supporting regeneration and growth.

In 2021, the Kurna community, Green Adelaide and the City of Adelaide took part in the 'Kurna Kardla Parranthi Cultural Burn' project in the city's south Park Lands, which was funded by a Green Adelaide Grassroots Grant. The Kurna community is now undertaking cultural burning along the Field River, south of Adelaide.

Reaffirming Aboriginal Fire Management as a critical component of natural resource management, underpinned by positive ecological outcomes, will contribute to climate adaptation.





Shared monitoring and indicators

Item ESA TS4 - Attachment 3 - Draft Urban Greening Strategy (full text)

This strategy seeks to establish consistent and shared monitoring across metropolitan Adelaide to increase efficiencies and provide optimal data for tracking the progress of urban greening.

Urban green cover target

The Government of South Australia (through the [2017 Update to the 30-Year Plan for Greater Adelaide](#)) introduced an [urban green cover target](#), in recognition of the importance of balancing new housing in existing suburbs with creating shady and leafy places to live. This is being reviewed as part of developing the Greater Adelaide Regional Plan (GARP).

Methodology and data analysis improvements

In recent years, there have been significant advancements in terms of enhancing how tree canopy data is captured and analysed. This progress has resulted from a partnership between the South Australian Government and 18 local governments to measure tree canopy cover across metropolitan Adelaide using LiDAR data (a remote sensing technique).

The most recent tree canopy data capture (coordinated by Green Adelaide in 2022) has identified that positive progress has been made across metropolitan Adelaide in response to this urban green cover target. This data capture also mapped the extents of green spaces and impermeable surfaces, as well as urban heat islands, across metropolitan Adelaide.

It is a prime example of a collaborative cross-sector project that harnesses co-investment from multiple partners.

Investigation areas for measuring performance

Based on the technological advancements and the progress made to increase tree canopy outcomes, it is timely to review and consider refinement of the urban green cover target as part of the development of the Greater Adelaide Regional Plan and this Strategy.

The accompanying discussion paper outlines the proposed investigation areas for measuring performance:

- increased tree canopy
- greater diversity of tree species
- reduced urban heat intensity.

Each of these investigation areas covers:

- why this is important
- how it could be measured
- current status
- discussion topics for the consultation process
- areas for further investigations.

Box 22: Existing Adelaide greening targets

As well as a target to increase urban green cover by 20% by 2045, the 30-Year Plan for Greater Adelaide set a target for increasing walkable neighbourhoods by 25%, which includes a criterion about access to public open space (spaces >4000m²) within a 5-minute walk from a person's home. Both targets will be reviewed as part of the development of the GARP in 2024, including a review of monitoring and data arrangements.

In response to the urban green cover target, DIT prepared its [Green Infrastructure Commitment](#) (refer to [Box 4](#) on Page 34). Renewal SA also sets tree canopy target requirements for many of its projects.

Many metropolitan councils have set their own canopy targets – some of which are aligned with the 30-Year Plan.



If this strategy is successful, by 2050 metropolitan Adelaide could have^f:

Increased tree canopy and greater retention of mature trees

- Adelaide’s urban forest will have significantly increased across all council areas and in both the public and private realm.
- It will be widely recognised that while planting new trees is important, it is not as valuable as looking after what we already have.
- Mature trees and remnant native vegetation will be highly valued and protected, with recognition of their significant ecosystem services and economic benefits.

Greening embedded in new developments and infrastructure conflicts resolved

- Metropolitan Adelaide will have transformed how it undertakes new development, including residential infill, commercial car parks and arterial road upgrades.
- Housing types that balance the protection of mature trees with the establishment of landscaping, and that maximise the greening of small and vertical spaces, will be commonplace and affordable.

- Planting tall, shady trees in contested urban locations, such as under powerlines, will be achieved using technology and careful planning.
- Green infrastructure will become embedded into the planning and design fabric of our urban areas.

More biodiverse vegetation attracting birds and animals

- Streetscapes will have mixed vegetation storeys with far more use of shrubs and grasses.
- Mid-storey and understorey plantings will provide healthy habitat for our native wildlife, including birds, pollinators and living soils.
- The greening of our urban areas will be curated through key considerations, such as strategic planting for climate resilience and to support urban biodiversity.
- BSUD principles will be applied at all scales and types of development to ensure adequate resources for our native wildlife.
- Ecological connectivity will be enhanced to facilitate the movement of native species through the urban landscape and provision of adequate habitat to ensure population viability.

Residential infill



^f This was drawn from a visioning exercise undertaken to develop the draft strategy with a diverse range of cross-sector participants from local government, state agencies, research institutions, industry peak bodies and Warpulai Kumangka (Green Adelaide’s Kurna advisory group).

More integrated water sensitive urban design

- Principles of WSUD will be applied to the planning of urban neighbourhoods, ensuring that water is captured and reused to facilitate urban cooling and greening.
- WSUD will be integrated into asset renewal, capital works projects, urban development, and the retrofitting of existing homes and gardens.
- Stormwater capture and WSUD will be linked to greening investments to promote the survival and health of trees.

A climate resilient urban forest

- There will be a strong understanding and expertise about what to plant to ensure that our urban forest is resilient to our warming climate.
- Additionally, government, industry and the community will have easy access to climate-resilient trees and other plants.

Equitable urban greening across Adelaide

- Climate resilient plantings and increased canopy cover will be targeted at hotspots and vulnerable areas. This will result in an equitable urban greening distribution across our neighbourhoods and help address socio-economic and health inequity.

- Across all suburbs there will be healthy tree canopy cover that mitigates the ‘urban heat island’ effect and creates walkable neighbourhoods.
- There will be an interconnected network of public open spaces linked to shady tree-lined streets, which will enhance biodiversity, harness stormwater runoff and connect people to each other and to nature.

Strong community, industry and government support for nature-based solutions

- The community, industry and government will have strong knowledge, motivation and capability to deliver nature-based solutions.
- Communities and other stakeholders will be ecologically literate and better understand the value of nature in the urban environment.
- More Adelaideans will value trees and other vegetation as assets and choose to protect them.
- There will be high levels of community participation in urban greening in a variety of ways, including within people’s own homes as well as in shared and/or public spaces.
- People will enjoy, value, and actively care for their local natural spaces, which will help metropolitan Adelaide to adapt to a warmer, drier climate.

Car parks



BEFORE



AFTER

ES4 DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide

Collaborative management of urban greening

- Agencies will be working together effectively and proactively, with ongoing dialogue to tackle barriers to urban greening outcomes.
- All government and non-government stakeholders that either deliver, influence or are interested in urban greening outcomes will understand how best to coordinate, share data and leverage limited resources.

Strong urban greening partnerships with Kaurna

- First Nations land management practices will be supported across our urban landscapes to protect, heal and enhance ecologically diverse ecosystems.
- Cultural burns that build natural disaster resilience and urban biodiversity outcomes will be implemented.
- Adelaideans will have embraced Indigenous culture, practices and landscape and, as a result, there will be greater connection to place.

Decisions based on cutting-edge technology

- Effective shared monitoring systems will be in place to ensure that urban greening investment is efficient and goes where it is most needed. This would be achieved through the use of cutting-edge technology, such as remote sensing, artificial intelligence and automation.

Green targets met

- Our urban greening target will have been met, with the aid of strong leadership at all levels.
- Species diversity and permeability targets will also have been met for strategic locations, such as along active transport routes and in areas of high urban heat.

Public open space



Major arterial roads



Local streets



ESATS4 DRAFT FOR CONSULTATION: Urban Greening Strategy for Metropolitan Adelaide



Item ESATS4 - Attachment 3 - Draft Urban Greening Strategy (full text)

Appendix 1: How was the strategy developed?

This draft strategy has been developed with key practitioner groups in a highly collaborative way, ready for testing through the public consultation process.

As part of developing this strategy, Green Adelaide undertook an extensive range of engagement activities with a wide range of stakeholders that have a role in delivering or influencing, and/or an interest in, urban greening.

This engagement process was led by Green Adelaide and overseen by a Government Leadership Group, which included senior representatives from the Local Government Association as well as the following government agencies: Infrastructure and Transport, Renewal SA, Trade and Investment, as well as Education, Health and Wellbeing, Premier and Cabinet, Infrastructure SA, Wellbeing SA and SA Water.

Technical working groups (with cross-sector membership) were also set up to provide advice and support evidence-based content. Membership of these groups was sought via an Expression of Interest process and focused on:

- urban heat and tree canopy
- urban biodiversity
- policy and green open space.

Additionally, the following background papers were prepared to support this draft strategy:

- [Blueprint for a Nature Positive Adelaide and urban biodiversity case studies](#) (RMIT)
- [Legislation, Policy and Urban Greening](#) (Green Adelaide)
- [Scenario planning](#) (DPC and Green Adelaide).

The strategy has also drawn on the following evidence bases:

- Adelaide University’s ‘Future trees project Stage 1’ (to be published later in 2024)
- [DEW’s Urban heat report card](#) (2023)
- [Urban heat and tree mapping viewer](#)

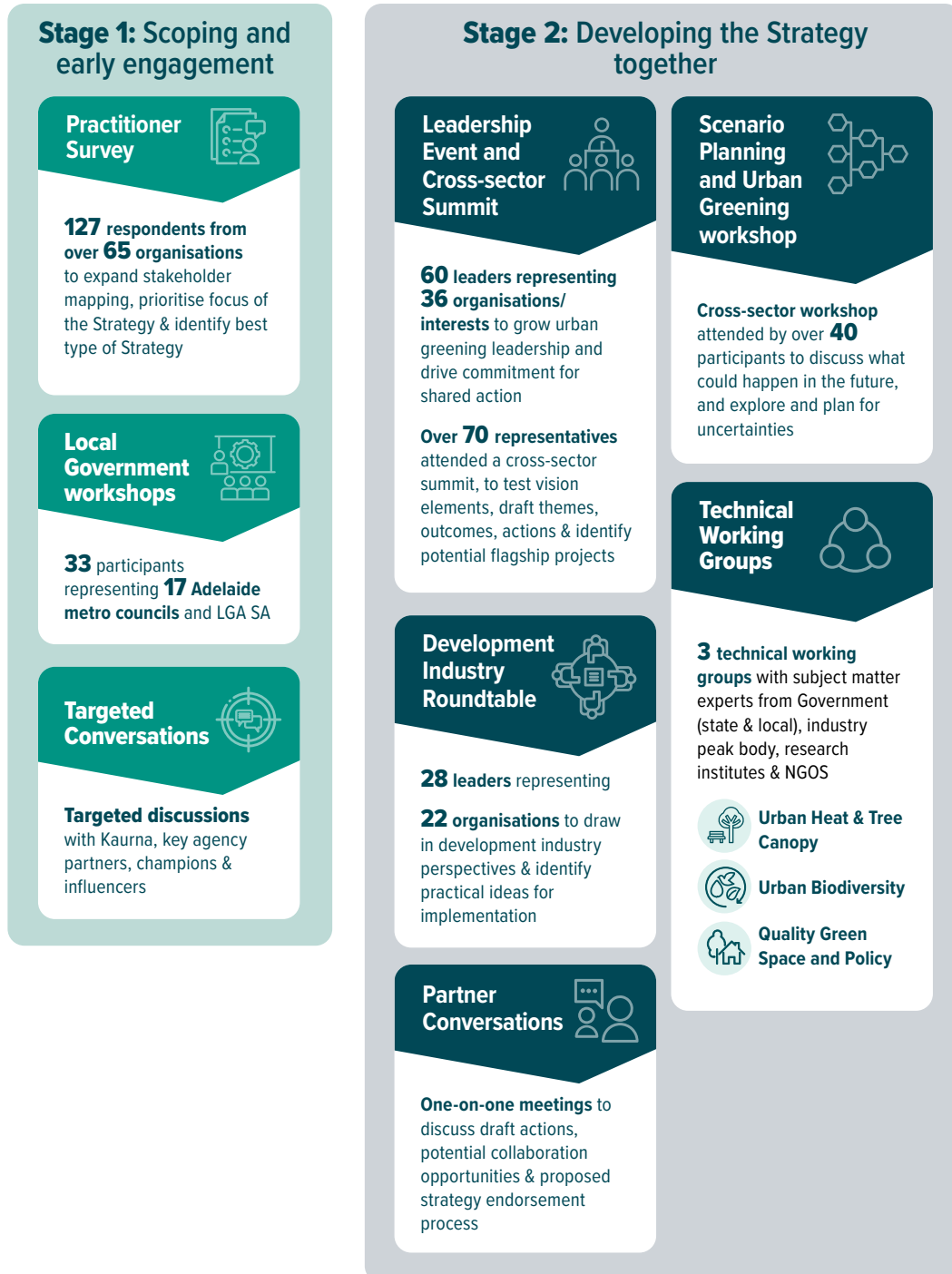
Refer to Figure 4 for a summary of the consultation process. Visit the [Urban Greening Strategy website page](#) for copies of the:

- literature review
- practitioner survey results
- discussion paper
- consultation reports.

For the full list of organisations that participated in the strategy development process, see Page 74.



Figure 4: Summary of the consultation process



Appendix 2: Relationship to other government strategies and plans

This Urban Greening Strategy aims to complement and amplify the mission of the many existing urban greening commitments of state government agencies.

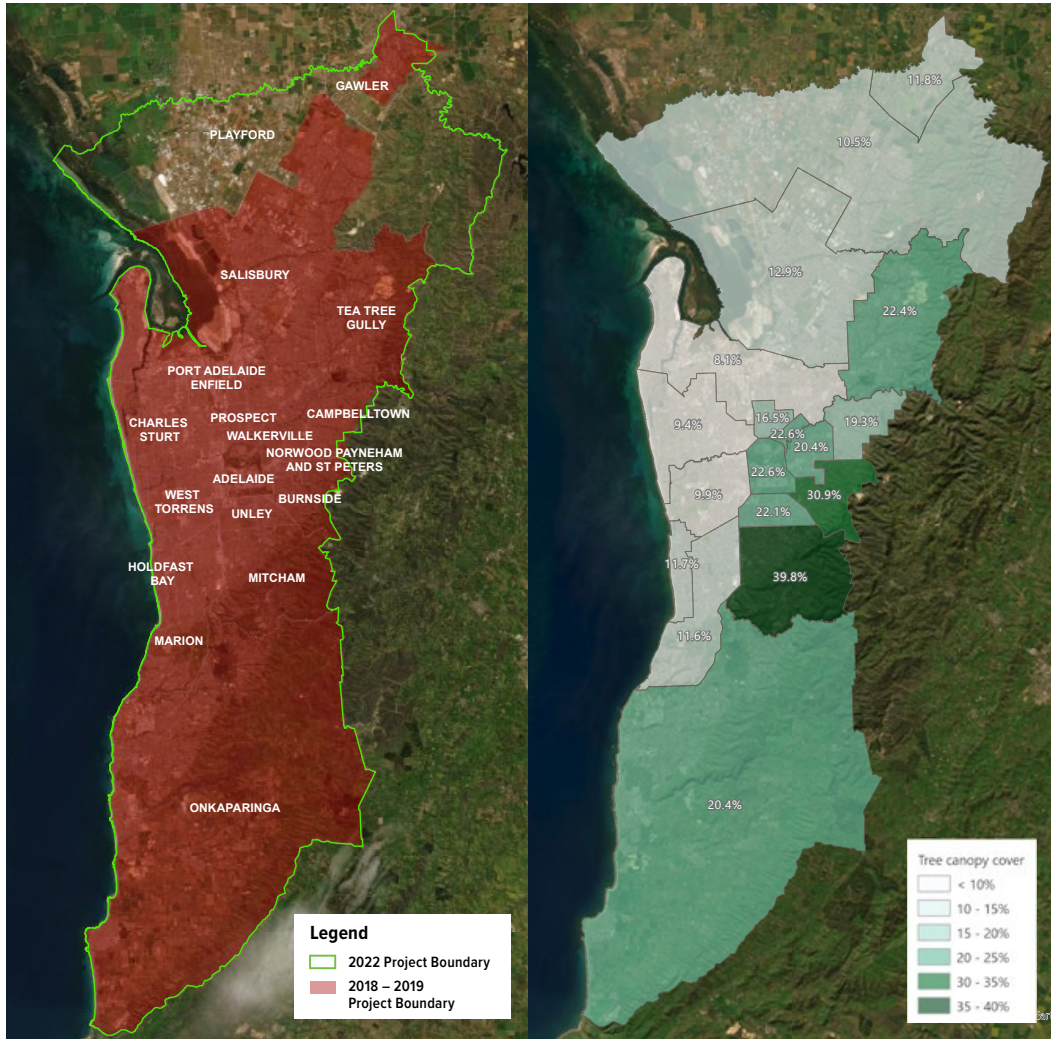
This includes commitments to increase greening, strengthen climate resilience and identify opportunities to improve biodiversity within our urban areas. This includes:

- [SA State Planning policies \(2019\)](#), State Planning Commission
- The [Greater Adelaide Regional Plan \(GARP\)](#), State Planning Commission – currently under development
- [The 30-Year Plan for Greater Adelaide 2017 Update](#) – until it is replaced by GARP
- [Green Infrastructure Commitment \(2021\)](#), Department of Infrastructure and Transport
- [South Australian Economic Statement \(2023\)](#), Government of SA
- [20-Year State Infrastructure Strategy](#), Infrastructure SA – currently under review
- [Green Adelaide Regional Landscape Plan 2021-26](#), Green Adelaide
- [South Australian Government Climate Change Actions \(2022\)](#), Government of SA
- [Resilient Waters Future Strategy](#), led by SA Water – currently under development
- [Healthy Parks, Healthy People SA 2021 - 2026](#), Department for Health and Wellbeing and Department for Environment and Water

It also strives to build on the plans and strategies developed by local government, including those on urban greening, open space, biodiversity, recreation, asset management. In particular, 11 councils have urban greening strategies.

For further details, see the [Legislation, Policy and Urban Greening Background Paper](#).

Appendix 3: Tree canopy cover by local government area



Source: Green Adelaide

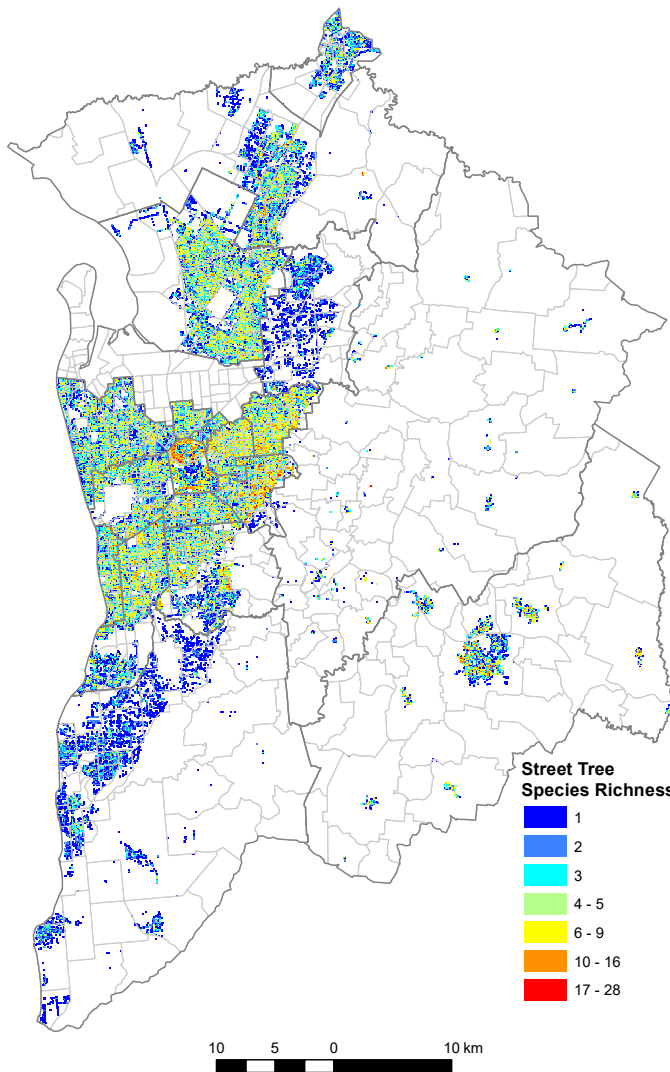
Source for all maps apart from Appendix 4.

Produced by: Green Adelaide
 Data Sources: South Australian Government
 Date: 9 February 2024
 Coordinate System: GDA2020 South Australia Lambert
 Projection: Lambert Conformal Conic
 Datum: GDA2020
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Appendix 4: Tree species diversity on local government land

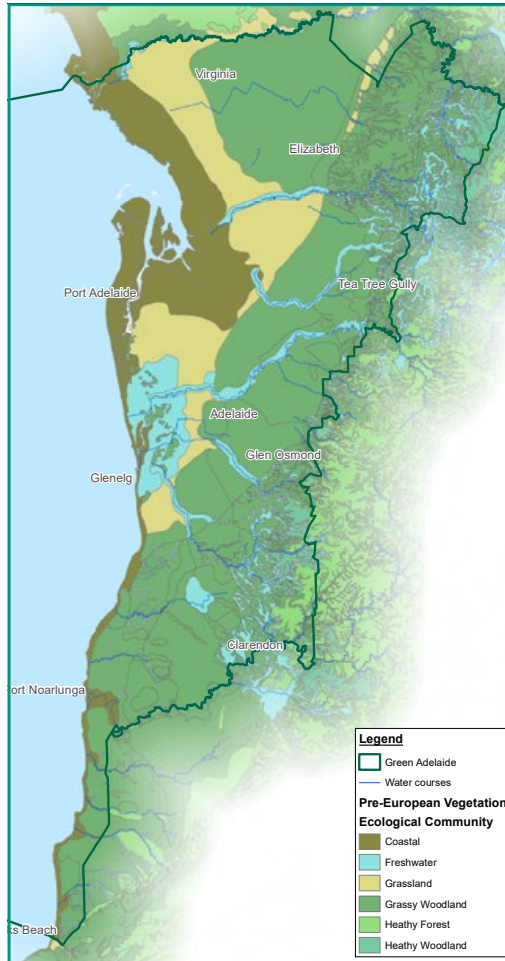


The University of Adelaide has compared Greater Adelaide local government data for trees located on its reserves and streetscapes. The highest tree diversity is in the northern Adelaide parklands and inner eastern suburbs, particularly in the City of Burnside.

This study found that older suburbs have a greater variety of tree plantings and age classes. The lowest levels of tree diversity were found in the more newly established areas that have only recently urbanised, such as the cities of Onkaparinga, Tea Tree Gully and Playford.

For further details about this work refer to Adelaide University's Future Trees Project Phase 1 report (to be published later in 2024).

Appendix 5: Adelaide's original urban forest

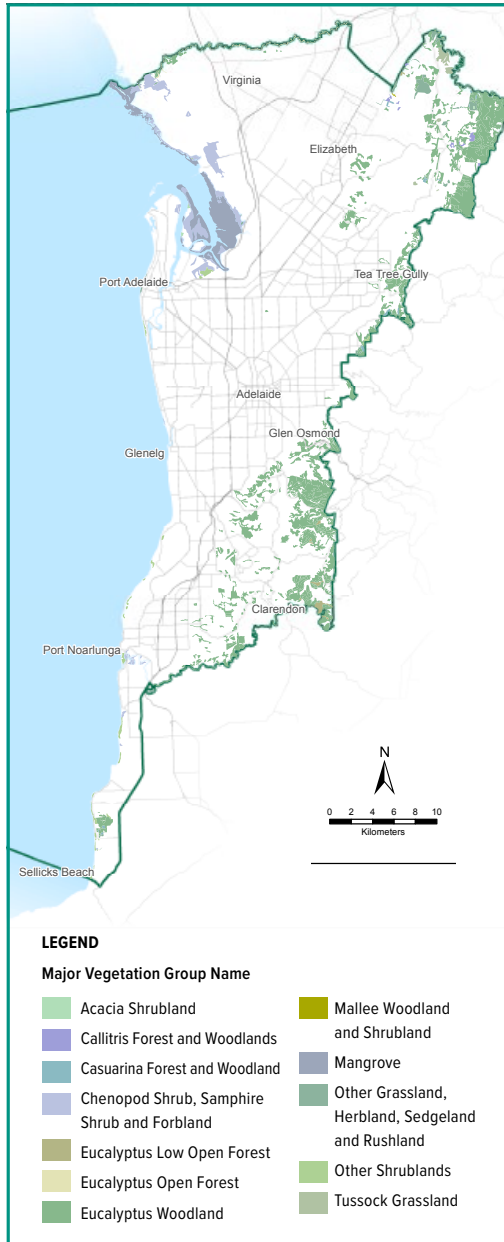


Prior to European colonisation Kurna Miyurna maintained a varied landscape including highly vegetated woodlands, moderately vegetated grasslands and sparsely vegetated coastal plains.

Variability in landscape forms across the Adelaide Plains and Adelaide Hills influences the vegetation communities – from coastal dunes and wetlands, to open grassy woodlands of the foothills, and dense eucalypt forests of the hills.

Source: Department for Environment and Water

Appendix 6: Remnant vegetation



Metropolitan Adelaide’s natural landscape has changed dramatically over the past 200 years. Land clearance, after European colonisation, mainly for agriculture, led to the removal of nearly 90% of the native vegetation within the Green Adelaide region³⁴.

This area now consists predominantly of a highly urbanised landscape with many exotic trees, understorey and grasses introduced from elsewhere in Australia and from overseas. Trees and other vegetation also continue to be removed due to new developments to accommodate a growing population.

Where is remnant vegetation?

Ground-truthing has been undertaken to identify and describe scattered remnant vegetation in peri-urban areas, with larger patches found along the boundary of the region in the foothills along the Mount Lofty Ranges.

This remnant native vegetation can be classified in many different ways based on general characteristics and dominant species types.

This map shows the current ground-truthed extent of remnant vegetation in known major vegetation groups. This is likely to underrepresent the extent of remnant vegetation in metropolitan Adelaide, as more field surveys are needed to confirm the exact amount and location of remnant native vegetation.

Refer to the [Blueprint to a Nature-Positive Adelaide background report](#) for further details about the type of flora and fauna in the Green Adelaide region.

Source: Green Adelaide

Appendix 7: Impermeable surfaces

It is important to understand the levels of permeability in our urban areas in relation to urban development. Impermeable surfaces, like buildings, roads, car parks, footpaths, and other hard surfaces, do not absorb water and do not support tree growth.

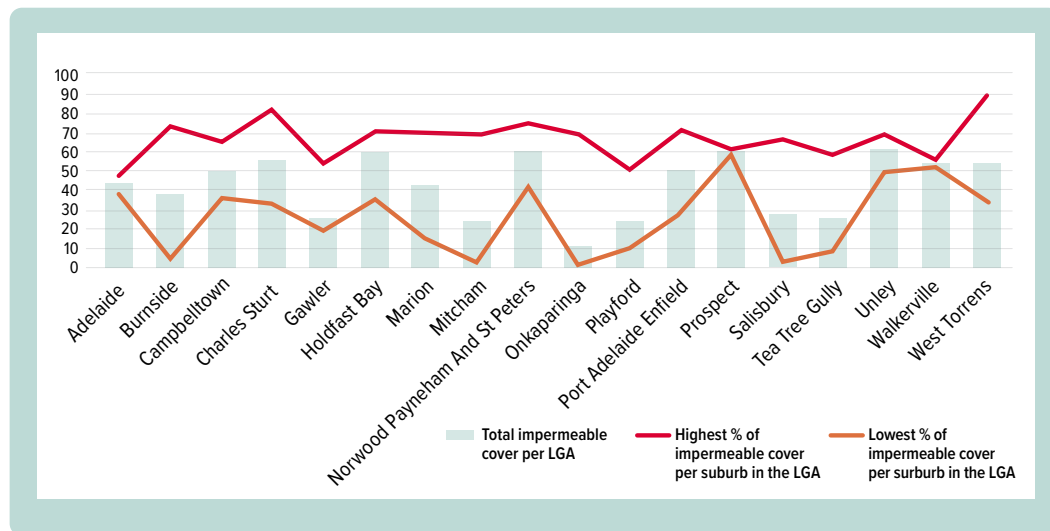
Instead, these surfaces increase surface water runoff, which carries water of poor quality into our rivers and Gulf St Vincent, which negatively impacts aquatic life. Impermeable surfaces also encroach on the area available for urban green spaces.

Permeable surfaces, such as include grassed areas, mulched beds, groundcover plantings and porous bare earth, absorb water that supports tree growth. They are potential planting spaces for new tree planting.

The levels of impermeability in Adelaide range widely in many council areas (as shown in the graph below). The total area of impermeable surfaces in metropolitan Adelaide is 29.14%.

The top 3 most impermeable suburbs all have high levels of commercial and industrial land-use i.e. Mile End South (93.11%), Marlestone (86.33%), Glanville (85.5%)

Figure 5: 2022 Impermeable Surface % by LGA with respective minimum and maximum suburb values



Source: Green Adelaide

Infill development case studies

The following aerial imagery shows changes in canopy cover, total building footprint and impermeable surface levels due to infill development (between 2018 and 2022).



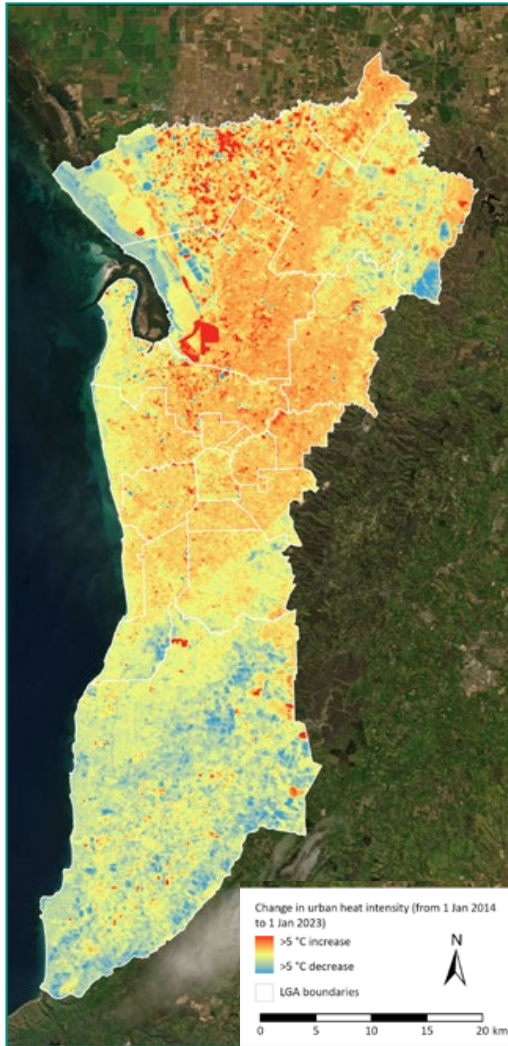
- Total canopy lost = 378m²
- Impermeable surface extent has increased from 523 m² (38.47%) to 1,281 m² (94.05%)
- Total building footprint has increased from 492.1 m² (36.13%) to 1,278.74 m² (93.89%)



- Total canopy lost = 72m²
- Impermeable surface extent has increased from 781 m² (55.7%) to 1,358 m² (96.9%)
- Total building footprint has increased from 553.4 m² (39.48%) to 966.8 m² (68.97%)

Source: Green Adelaide, 2024

Appendix 8: Urban heat intensity distribution



This map shows changes in urban heat distribution in metropolitan Adelaide from 2014 to 2023.

For further details about the results refer to DEW's [Technical Information Supporting the 2023 Urban Heat Environmental Trend and Condition Report Card](#).

Source: Department of Environment and Water, 2023

Appendix 9: Community urban greening attitudes

There is strong community appreciation for public urban greening. A 2016 survey found that 94% of South Australians considered conserving nature to be of critical importance³⁵.

There is also emerging global evidence that the COVID-19 pandemic has driven a marked increase in the appreciation and demand for public open spaces^{36,9}. This provides an opportunity to build on and drive a deeper appreciation, stewardship and pride in urban greening as part of Adelaide’s collective identity, which could lead to immeasurable benefits to the community’s health, wellbeing, connection and cohesion, as well as climate adaptation, environmental and biodiversity outcomes³⁷.

The importance of engaging the community is reflected in a nationwide local government survey, which found that ‘Community attitudes toward the value of trees’ are just as important as ‘Council’s ability to plant and protect trees’ for ensuring the success of urban greening strategies³⁸.

There is, however, a diverse range of community attitudes about trees and shrubs in the urban environment, with some people seeing trees as a potential maintenance issue and a safety risk from falling limbs or fire, whereas others appreciate the holistic value of plants.



⁹ For example, an April 2020 ‘pulse check’ survey found that 87% of Australian urban councils have noted a positive shift in community attitudes towards green space (Greener Spaces Better Places). A recent NSW Government survey found 45% of people are spending more time in public spaces than before COVID-19, 71% appreciate local parks more, and 94% are using public spaces for exercise. In South Australia, visitation to the state’s parks and open spaces increased by 43% during the COVID-19 pandemic (Green Adelaide Regional Landscape Plan, 2021).

Appendix 10: Kurna principles for collaboration

Engagement principles that will assist project managers to work with KYAC:

- **Respect:** The rights of Kurna people to determine, own and control their culture should be respected and acknowledged. Their customary rights should be recognised, protected and maintained.
- **Involvement:** KYAC (or supported Kurna advisory groups) should be the first point of contact for consultations and all forms of negotiations. The Kurna people should be consulted on the ways in which their land, spiritual and cultural heritage, knowledge, beliefs, customs, true histories, community, interviews, lives and families are represented and/or used.
- **Timing:** It is important to recognise that engaging the Kurna community will take time, and that sufficient time for proposals will be required for consideration by the appropriate Kurna people.
- **Appropriate resources:** Participation of Kurna people will require appropriate, fair and equitable resources to achieve outcomes.
- **Cross-boundary consultation:** A Traditional Owner will only comment on significant sites, places, objects and associations within their traditional homelands and country, so where projects or issues overlap, or are on other nation boundaries, a 10 km cross-boundary consultation overlap on either side should be conducted.
- **Acknowledge elders:** The term 'elder' does not always mean men or women of a particular age. A relatively young man or woman may be considered an elder because of their highly respected position in the community. They may possess specific skills and knowledge in an area, which endorses their position.
- **Establish a common purpose:** Kurna people understand the need to establish a common purpose or shared vision.
- **Acknowledge Kurna intellectual property rights:** It is essential that the cultural and intellectual property rights of Kurna people are acknowledged, respected, recognised and protected. Approval by Kurna people must be given on the use and representation of their cultural, heritage, language and intellectual property and copyrights^h.
- **Maintain confidentiality:** Confidentiality and privacy are very important with Kurna people. The purpose for which information is obtained should be negotiated and agreed. Information that is 'women's business' or 'men's business' should be acknowledged as such, and not recorded or stored in such a way that is likely to be seen as disrespectful or culturally inappropriate.

^h Aboriginal cultural and intellectual property means the totality of the cultural heritage of Aboriginal people including, without limitation, their intangible heritage (such as songs, dances, artwork, stories, ecological and cultural knowledge), and cultural property, which includes Aboriginal human remains, artefacts, and any other tangible cultural objects.

Glossary of terms

Active transport

Active transport involves walking, cycling and other physical modes of travel to work, school, parks, shops or other destinations. Using public transport, such as catching a bus or train, also involves active travel when walking or cycling to and from stops, stations, home and destinations.

Blue infrastructure

Blue infrastructure makes cities nature-positive by repairing natural ecosystems. For example, wetlands, healthy catchments and permeable pavements help mitigate the impacts of flooding and stormwater runoff.

Biodiversity

The variability among living organisms from all sources (including terrestrial, aquatic, marine and other ecosystems and the ecological complexes of which they are part), at all levels of organisation, including genetic diversity, species diversity and ecosystem diversity.

Biodiversity Sensitive Urban Design (BSUD)

BSUD aims to create urban areas that make a positive on-site contribution to biodiversity through the provision of essential habitat and food resources for native animals.

BSUD links urban design to measurable biodiversity outcomes, providing a flexible framework for developers and planners to consider provisions for biodiversity alongside other considerations early in the development process.

Blue water

Water found in surface-water systems (lakes, rivers and reservoirs) and groundwater.

Canopy cover

The equivalent cover and ecosystem benefits associated with tree canopy cover.

Climate change adaptation

Actions taken to help communities and ecosystems adjust to changing climate conditions and their effects.

Cultural burning

Burning undertaken by Traditional Owners. Cultural burning is different to western prescribed burning in that smaller, cooler and slower burning fires are used to manage the landscape. The practice is based on a deep cultural understanding of the landscape and its needs. It is also about the healing that comes from people reconnecting with their Country.

Ecosystem

A dynamic combination of plant, animal and microorganism communities and their non-living environment (for example, soil, water and the climatic regime) interacting as a functional unit. Examples of types of ecosystems include forests, wetlands, grasslands and tundra.

Ecosystem services

The services provided by the functioning of natural ecosystems that are essential to human survival and wellbeing. Natural ecosystems maintain the atmosphere; provide clean water; control soil erosion, pollution and pests; pollinate plants; and provide many other essential processes. The language of ecosystem services has emerged in recent decades as a way of representing the significance of the benefits humans derive from natural systems.

Evapotranspiration

The release of water from leaves of vegetation to the surrounding air by the process of evaporation and transpiration. This cools the plant while cooling the air around the plant.

Future Trees project

Future Trees is a Resilient South and University of Adelaide project focused on increasing urban tree diversity through data sharing, trialling new species and developing new cultivars resilient to more challenging climates.

Greenfield

Greenfield areas are made up of undeveloped land outside of the existing urban footprint. They are often located on the edge of existing urban areas. Greenfield development requires full assessment of environmental, infrastructure and planning issues, to determine future use and suitability for expansion of the city.

Green infrastructure

Green infrastructure includes both natural and designed greening – from parks and street trees to green roofs, rain gardens and green laneways.

Impermeable surfaces

Hard surfaces introduced by urban infrastructure that restrict or limit the permeability of surface layers of the landscape.

Infill

Infill development involves the subdividing of one existing allotments into two or more new ones. This type of development increases the capacity of existing neighbourhoods to support population growth.

LiDAR

LiDAR (Light Detection and Ranging) is a remote-sensing method that scans the surface of a survey area using a device installed in a light aircraft that fires to make a digital three-dimensional image of objects on or near the ground, such as buildings, roads and trees.

The resulting data can be used to model tree canopies, including tree heights and canopy boundaries.

Liveability

This is a measure of a city resident's quality of life and is used to benchmark cities around the world. It includes socio-economic, environmental, transport and recreational measures.

Living infrastructure

Living infrastructure refers to all interconnected ecosystems within an urban catchment, including the 'green infrastructure' of trees, gardens, green walls and roofs, parks, reserves and open spaces and the 'blue infrastructure' of our waterbodies, including lakes, wetlands and waterways.

Multispectral imagery

Multispectral imagery consists of at least 4 bands of the electromagnetic spectrum (for example, red, green, blue and near-infrared). The inclusion of bands in the near-infrared and short-wave infrared provides additional information on vegetation health and greenness, improves the identification and classification of features, and allows for further analysis using remote sensing indices and analysis techniques.

Nature positive

Nature positive refers to halting and reversing biodiversity loss, through measurable gains in the health, abundance, diversity and resilience of species, ecosystems and processes.

Natural resources

Natural resources include soil, water, and marine resources; geological features and landscapes; native vegetation; native animals and other native organisms; and ecosystems.

Normalised Difference Vegetation Index (NDVI)

NDVI was developed (Rouse Jr. et al. 1974) as an index of plant "greenness" and attempts to track photosynthetic activity. It has since become one of the most widely applied vegetation indices.

Permeable surfaces

Natural surfaces that allow water to penetrate and move through the underlying landscape.

Resilience

The capacity of a system to absorb disturbances and reorganise while undergoing change, so as to retain essentially the same function, structure, identity and feedbacks.

Surface-level parking

Surface-level parking refers to parking that is not enclosed or created by a structure and is allocated an area 'at grade' on ground level.

Sustainable development

Forms of development that meet the needs of the present without compromising the ability of future generations to meet their needs.

Thermal imagery

Thermal imaging cameras mounted on a purpose-built aircraft are used to capture surface temperature. Heat maps generated from this data identify thermal patterns in the landscape, including heat islands and localised hot spots.

Urban design

Urban design is the collaborative and multidisciplinary process of shaping the physical setting for life in cities and towns. It involves the design of buildings, groups of buildings, spaces and landscapes, and the establishment of frameworks and processes that facilitate successful development.

Urban forest

The urban forest comprises all trees and other living infrastructure (including soil and water) within an urban area. It applies to both the public and private realms (for example, streets, parks, residential blocks, road and/or pathway corridors, universities, schools, open spaces, and so on).

Urban form

Urban form is the general pattern of building height and development intensity and the structural elements that define the city physically, such as natural features, transportation corridors (including fixed rail/tram transit system), open space, public facilities, as well as activity centres and focal elements.

Urban heat island

An urban heat island is an area that heats up more than its surrounding areas and stays hotter than those areas. It is often the result of hard surfaces and urban development.

Urban green corridors

Connected fragments of green space, such as trails, parks and waterways, within the urban footprint that provide ecological corridors for plant and animal biodiversity and habitat.

Urban renewal

The process of improving the economic, social and environmental sustainability of a particular urban area through redevelopment of under-utilised urban areas. It typically involves urban redesign, infrastructure renewal and investment, and identifying precincts and land for mixed use.

Water sensitive urban design (WSUD)

WSUD is an approach to the planning and design of urban environments focused on integrating the urban water cycle (including potable water, wastewater and stormwater) with the built and natural environment.

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Government Leadership Group

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- Botanic Gardens State Herbarium
- Departments for Education, Environment and Water, Infrastructure and Transport, Infrastructure SA, Premier and Cabinet, Trade and Investment (Planning and Land Use Services) and Wellbeing SA
- Department of the Premier and Cabinet
- Green Adelaide
- State Planning Commission
- Premier's Climate Change Council
- Office for Design and Architecture SA
- Office for Recreation, Sport and Racing
- Renewal SA
- SA Power Networks
- SA Water
- Wellbeing SA.

Local government

- Local Government Association of SA
- Cities of Adelaide, Burnside, Charles Sturt, Holdfast Bay, Marion, Mitcham, Norwood, Payneham and St Peters, Onkaparinga, Playford, Port Adelaide Enfield, Prospect, Salisbury, Tea Tree Gully, Unley, West Torrens and Mount Barker District Council
- Regional Climate Partnerships (Adapt West, Resilient South and Resilient East).

Research institutions, NGOs and peak bodies

- Adelaide Sustainable Building Network
- Australian Institute of Architects
- Australian Institute of Landscape Architects
- Flinders University
- Greening Australia
- Housing Institute of Australia
- Parks and Leisure Australia
- Planning Institute of Australia
- Property Council
- Trees for Life
- Treenet
- Urban Development Institute of Australia SA
- Urban Futures Exchange
- University of Adelaide
- Warpulai Kumangka
- Water Sensitive SA.

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- Page 31 – Water Sensitive SA
- Page 34 – DIT
- Page 35 – City of Unley (photo from 1978)
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- Page 70 – Planning and Land Use Services
- Page 77 – City of Adelaide



Item ESA TS4 - Attachment 3 - Draft Urban Greening Strategy (full text)

Get involved

We want to hear from you on what you think is important for the future greening of Adelaide. Read the full draft strategy and get involved by visiting the YourSAy website.

Public consultation is open for 8 weeks from 30 April to 28 June 2024.



Have your say by scanning the QR code or by visiting <https://yoursay.sa.gov.au/urban-greening-strategy>

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Government of
South Australia

Draft Urban Greening Strategy for Metropolitan Adelaide

Priority areas

Key outcomes

Actions



1. Cooler and greener infill development

- Policy and legislation better support urban greening and are in line with national best-practice
- Developers and community have increased knowledge, motivation and capacity to practically and cost-effectively achieve greening, cooling and biodiversity outcomes
- New developments include trees by adopting innovative and cost effective solutions

- 1.1. Strengthen tree protection legislation (and associated off-set schemes) to align with best-practice and reflect the true value of existing trees
- 1.2. Review and refine the Urban Green Cover target (and policies) as part of the new Greater Adelaide Regional Plan
- 1.3. Monitor and enhance the Planning and Design Code and develop supporting tools to make it easier for developers to achieve, and go beyond, minimum requirements
- 1.4. Undertake coordinated metropolitan-wide campaigns (linked to incentives) targeted at improving urban greening outcomes
- 1.5. Develop a catalogue of costed housing designs that showcase practical and affordable greening, WSUD and BSUD
- 1.6. Work with the development sector to understand urban greening drivers and encourage innovation and adoption of best practice (including identifying effective incentives)
- 1.7. Develop best practice engineering solutions, planting and maintenance techniques to minimise conflicts between green and grey infrastructure (building footings and infrastructure)



2. Government leading by example

- Innovative and best practice green and blue infrastructure is showcased in government infrastructure works and major projects
- Barriers to BSUD and WSUD are solved to accelerate implementation
- Trees are appropriately valued as essential community assets that contribute to the wellbeing of our community and environment

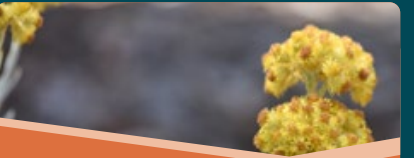
- 2.1 Integrate urban greening and WSUD as part of business-as-usual in government projects including: transport infrastructure upgrades (particularly roads with a high level of pedestrian and cyclist activity); major land releases; new schools and significant upgrades; SA Water assets; healthcare facilities; other government land
- 2.2 State and local governments to deliver flagship greening, BSUD and WSUD projects that cross boundaries and set new benchmarks
- 2.3 Identify and implement solutions to key barriers to BSUD and WSUD in public infrastructure and projects, such as maintenance
- 2.4 Investigate alternative approaches to installing utilities infrastructure in roadways to create more space for trees.
- 2.5 Review restrictions on planting near utilities infrastructure, including permitted species lists
- 2.6 Determine and apply an agreed method for applying economic valuations to trees and other green infrastructure
- 2.7 Investigate including green infrastructure into public asset management systems and account for trees as appreciating assets



3. Building nature back in

- More biodiversity net gain development
- Increased motivation and capacity to undertake BSUD (government, council, developer, and community)
- Areas of valued native vegetation and critical habitat are protected

- 3.1 Investigate how the planning system and other government legislation could best facilitate biodiversity net gain development
- 3.2 Develop a BSUD capacity-building program, including design guidance, for the government, the development sectors and the community
- 3.3 Develop a region-wide approach to supporting individuals and community groups to undertake biodiverse urban greening on private land, open space and schools, and/or verge planting along strategic corridors
- 3.4 Map remnant vegetation and critical habitat and spatially represent in the Greater Adelaide Regional Plan and the Planning and Design Code to minimise development impacts



4. Future proofing our urban forest

- Increased knowledge and availability of locally endemic and climate-resilient plant species
- Improved urban forest resilience and health
- Government, councils, developers and community motivation and capacity is increased

- 4.1 Develop up-to-date guidance to drive appropriate and climate-resilient species selection in a variety of contexts
- 4.2 Undertake trials to identify appropriate trees for Adelaide's projected future climate
- 4.3 Investigate ways to increase the provision of local endemic and climate-resilient plant species and seed at scale
- 4.4 Identify and solve threats to the health of the urban forest from pests and diseases
- 4.5 Model future water demands for meeting greening targets and support greater use of WSUD and recycled water
- 4.6 Scale up established WSUD capacity-building programs that are working well



5. Improving greening equity

- Urban greening investments are prioritised in areas of low greenery, high urban heat and high socio-economic disadvantage
- Priority areas for new and/or improved green open space are identified
- Locations for new feasible plantings are identified to expand the urban forest

- 5.1 Refine the Greening Prioritisation Pilot Study and consider the inclusion of additional datasets
- 5.2 Develop a greening prioritisation tool and investigate how it could be used in urban green investment decision-making, including relevant grants programs
- 5.3 Integrate urban heat mapping into the planning system and identify an appropriate policy response
- 5.4 Prepare an open space strategy to identify priority areas for new or improved green open space and tree canopy
- 5.5 Identify the potential locations of 'new plantable space' for trees



6. Scaling up impact by working together

- Roles and responsibilities are clear, learnings are shared, co-investment is optimised and cross-sector challenges are addressed
- Quality information, research and guidance to achieve urban greening is available to all
- Aboriginal wisdom is recognised and partnership opportunities are facilitated

- 6.1 Prepare an implementation plan to identify opportunities for greater coordination, efficiencies and impact
- 6.2 Investigate funding mechanisms for expanding urban greening, WSUD and BSUD delivery
- 6.3 Develop an applied research pipeline to identify and fill knowledge gaps
- 6.4 Develop a centralised hub to share knowledge across the region, between sectors and with the community
- 6.5 Extend the reach of established bridging organisations and networks that are working well
- 6.6 Work with KYAC to identify opportunities for partnerships with Kaurana

Vision: A resilient and liveable Adelaide for all: cooler, leafier and more biodiverse

Measuring performance

1. Increased urban tree canopy

2. Greater tree species diversity

3. Reduced urban heat

Have your say by visiting <https://yoursay.sa.gov.au/urban-greening-strategy>