Strategic Weed Management Tool

Site analysis and guidance

Determining what weeds to prioritise

Within our long-term weed management of the western bank of the Yarra in Abbotsford, we must make continual judgement calls on what weeds to prioritise. E.g.:

- **Weeds that should be left in place**. They may be holding vulnerable, erosion-prone river bank together
- **Weeds of National Significance** and Victorian **Declared Noxious Weeds** (see below, and in guide)
- **Emerging vs established** weeds
- **Bully weeds** (crowd out other plants, seed constantly)
- **Seasonal weeds** that disappear
- **Weeds that act as buffers** against other more problematic weeds
- **Our capacity** (numbers, availability) **and capabilities** (high precision weeding skill, weed management abilities)
- **Mindset and behaviours** (self-restraint, checking before acting)

Example of prioritising

This picture predominantly shows an **American Rat's tail grass** and a **flat weed.** There are also **native grasses** and **onion orchids** in the same frame.

The American Rat's tail is a high priority and should be removed first. The flat weeds are not a high priority here.

Why?

The Rat's tail is a bully plant: it crowds out indigenous plants and seeds constantly. Its extensive root system makes it hard to eradicate. The flat weed is plentiful but shallow rooted. It quickly dies off and reappears.

Recommended method

Dig out the roots just below the surface with a sharp edged gardening fork. Keep soil disturbance at a minimum.

Declared noxious weeds:

1. as Weeds of National Significance
2. under the Catchment and Land Protection (CaLP) Act 1994:

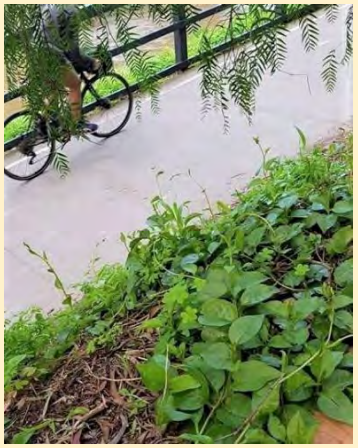
Weed of National Significance	WoN	A list of the most problematic plant species in Australia, determined by the federal government based on invasiveness, impacts, potential for spread, and socioeconomic and environmental values.
State Prohibited	S	Do not occur in Victoria but pose a significant threat if they invade, or if they are present here, pose a serious threat and can reasonably be expected to be eradicated.
Regionally Prohibited	P	Not widely distributed in a Region but are capable of spreading further. It is reasonable to expect that they can be eradicated from a Region and they must be controlled or eradicated.
Regionally Controlled	C	Usually widespread and considered important in a particular region. To prevent their spread, continuing control measures are required. Declaration of a Regionally Controlled Weed can be made for the whole Region or certain local government areas.
Restricted	R	Plants that are a serious threat to primary production, Crown land, the environment or community health in another State or Territory, which can potentially spread into and within Victoria, and pose an unacceptable risk of spreading if sold or traded in Victoria.

Identify your area and weeding guidance using the mapping guide below

Area	Weed		Comments	Action
				S1 - High risk - high priority
				Year-round

Johnston St Bridge RIVERINE ZONE **OWNER:** ASIC (MW drainage caveat) **MANAGED:** ABR (informal)	African Box Thorn (Lyceum Ferocissimum) **WoNC** **C**		**Jan 2022 update – re-emerging on the upper bank lower down from the Computer Share fence. Existing stands below the fence.** Mostly eradicated 2017-2019 except stands just below ComputerShare. Year-round management until eradicated 1. Cut branches back to stump/s 2. Scrape and paint poison stump/s 3. Cut branches into small pieces, immediately take off site. Follow up regrowth with more poison until plant is dead.	S
	African Lovegrass (Eragrostis curvula) **C**		Mostly around base of upper bank around low retaining wall 'Bully' – crowds out other vegetation, tough hard root ball hard to pull out. **However,** it's binding soil in a couple of erosion-prone spots. Target throughout the year and monitor regrowth 1. **Cut down stalks and paint poison the stalk** 2. **Immediately bag grass and any seeds for safe disposal** **Install terracing where root base is binding soil. Gradually replace with soil-binding vegetation.**	**S2 to S1 – Moderate-high risk = high priority** **Year-round**
				S1 – high risk = high priority **Spring** / **Early summer**

	Asthma plant (Parientaria Judaica)Ha		Jan 2022 update – still scattered in patches throughout the area, especially higher up close to staircase. • Very high seed bearing. • Hand remove before seeds mature • Bag immediately for disposal. Do not handle if you have respiratory issues.	Monitor for spreading.
	Heartleaf Iceplant (Aptenia cordifolia)		2022 – Infestation in patches in high bank area beside Johnston St Bridge below Computer Share carpark. Mixed with Madeira vine and (some) African Boxthorn. • Hard to remove as entangled with other weeds and performing an erosion control function in extremely degraded area • Hand remove only as feasible when indigenous vegetation can overtake & terracing is secure • Bag immediately for disposal	S2-S1 - Moderate risk = moderate priority. Year-round
	Madeira Vine (Anredera cordifolia)		Jan 2022 update – the Madeira 'edge' continues being pushed back from the Trail	S1 - High risk - High priority Year-round

	R WoNS		edge. Terrain too steep and soil too poor to dig out: scrape and paint poison necessary. Extremely highly infested area. Significant reduction between 2017 and 2019 but constant monitoring & removal required. • Hand remove tubers where feasible • Scrape & paint poison difficult-to-remove vines Bag separately from other weeds and destroy safely. DO NOT LEAVE IN PILES ON GROUND.	
	Oxalis (Oxalis Pes-Caprae) R		2022 – Keep targeting to reduce occurrence • Bullying tendencies around young plants • Viable bulbs through area but fluctuating emergence between 2018 (high) and 2019 (low) 1. Cut & paint poison, or 2. Dig out bulbs ad hoc when soil dries out	U – ubiquitous species Winter | Spring | Early summer Ongoing
	Purslane (Portulaca oleracea)		2022 – Keep on top of isolated outbreaks, esp. along Trail. Expanded rapidly in Summer 2019-20. Scattered very lightly in this section, showing less invasive tendencies than elsewhere. • Hand weed with fork • Pull out from root • Minimise soil disturbance. Pat back soil and cover with leaf mulch. Also edible.	S2-3 Low-medium risk Summer | Early autumn Target to halt spread. Winter

	Wild Radish (Raphanus raphanistrum)		**Jan 2022 update – greatly reduced but monitor for outbreaks.** Prolific seeder – up to 6 years germination. Annual late winter-early spring, restricted to patches below small retaining wall, around drainage outlets and elsewhere high up on the upper bank where there is almost no indigenous vegetation. Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. • **Hand remove as much as feasible before seeds drop and after new seedlings emerge.** • **Cut stem near base. Bagging unnecessary if seedpods closed** • **Replace onsite with leaf mulching and replacement with grasses/groundcovers**	**S2-S1 - Moderate risk = moderate priority.** **Early Spring** / **Mid-late summer**
	Small-flowered Mallow (Malva parviflora)		**Eliminate in retention areas but of varying priority elsewhere** Scattered weeds in disturbed areas with no competition. Hard to eliminate. Non-bully annual. **Remove early Spring or mid-late Summer if recurring.** **Hand weed with fork/knife without disturbing soil. Recover with leaf mulch.**	**U – ubiquitous species** **Early Spring** / **Mid-late Summer**
	Common Cat's-ear/Flat-weed		Part of a group of mainly yellow-flowered daisies in the Tribe Lactuceae.	**U – ubiquitous species** **Early Spring**

	(Hypochoeris radicata)		Hard to eliminate. Non-bully annuals Occurs among sweet vernal grass, Cleavers sticky weed, fumitory and other annuals in bare, disturbed & degraded sections around Johnston Street Bridge. Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. **Hand weed with fork/knife without disturbing soil. Recover with leaf mulch.**	
	Panic Veldt grass (Ehrharta erecta)		Scattered weeds of disturbed areas. Hard to eliminate. Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. **Eliminate in asset retention areas.** To manage by: • **Hand removal:** hand weed with fork/knife without disturbing soil. Recover with leaf mulch. • **Poison: spot cut and paint poison.** Cut to base and brush. Cover area with leaf mulch.	**U - Ubiquitous species** Year-round Target before seeds drop,
	Cleavers Stickyweed (Galium aparine)		Scattered weeds of disturbed areas Smothering but non-bullying annual, hard to eliminate. Fills void late winter early spring where no groundcover or leaf mulch Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. • **Eliminate in priority areas with existing vegetation or being prepared for planting**	**U – ubiquitous species** Winter / Spring

			• Gradually reduce through hand weeding with fork/knife • DO NOT DRAG stems. This causes seeds to drop.	
	Sweet Vernal Grass (Anthoxanthum odoratum)		Target in asset retention areas. Annual late winter-early spring and Summer, scattered through bank. Will invade low leaf-mulch areas where understory not established and fill void left by other weed removal. Hard to eliminate. Ongoing reduction management. • Gradually remove through hand weeding, leaf mulching, replacing with grasses/groundcovers. • If a barrier against other weed infestation, leave intact but remove seed heads wherever possible.	U – ubiquitous species Winter- Spring (before seed drop) / Summer-Autumn (young plant)
	White Fumitory (Fumaria capreolata)		Annual late winter-early spring, scattered through bank. Fills void left by other weed removal	S2 - Moderate risk = Moderate priority Autumn / Winter / Spring

			Ongoing. Eliminate from asset retention (highest quality) areas first. • **Remove as much as feasible before seeds drop.** • **Target weeds where flowering stems have smothered vegetation** • **Bag flowering/seeding plants immediately** • **Replace onsite with leaf mulching and replacement with grasses/groundcovers.** • DO NOT DRAG **stems.** This causes seeds to drop.	However, fumitory chokes competing indigenous vegetation – monitor priority level.
	Heartleaf ice plant (Aptenia cordifolia)		Concentrated on upper bank close to ComputerShare. To be gradually removed. Method not yet established. **Eliminate from asset retention area as possible.**	**S3 – low risk – low priority** **Year round**
	Tall Fleabane (Conyza Bonariensis		Erect, annual herb to 1 m tall with grey, bristle-like hairs. Grows around Victoria colonising disturbed space. The only one seen as at March 2020. • **Target before buds open/seeds drop** • **Hand remove carefully at root. Bag for disposal.**	**S3 – low risk = low priority** **Summer** / **Autumn** However, monitor for possible spread.

	Wild Fennel (Foeniculum vulgare) R		Eradicated from site around low retaining wall as at 1 January 2019.	
	Corn Sow Thistle (Sonchus arvensis) Doesn't seem to be identified as weed in Victoria. But this isn't Common sow thistle)		Non-bullying annual, hard to eliminate. Occurs among sweet vernal grass, Cleavers sticky weed, Flat-weed, fumitory and other annuals in bare, disturbed & degraded sections around Johnston Street Bridge. Spot weed, using fork/knife to dig out from tap root.	U – Ubiquitous species Year-round Monitor for regrowth. Seems to be spreading along south side of Johnston St Bridge.
Area	Weed		Comments	Action
Johnston St Bridge RIPARIAN ZONE OWNER:	Hemlock (Conium Maculatum) C		• Small, localised outbreaks in 'mini floodplain' • Monitor for possible spread.	S1 - High risk - High priority Year-round

ASIC (MW waterway management) **MANAGED:** ABR (ASIC permission)	Kikuyu grass (Pennisetum clandestinum)		**Jan 2022 update – Kikuyu continues to be a key erosion prevention component.** • Melbourne Water and ARB have continued brushcutting along the Trail and beside the steps from the Trail to the river. • Experimental brushcutting to the left of the steps has attracted people onto the lower bank beside the steps and risks rapid erosion. For this reason, ARB will confine brushcutting to the above areas and will reassess at the end of 2022.	High brush cut around steps only. Monitor for human traffic and reassess with brushcutting and other team members regularly.
	Madeira Vine (Anredera cordifolia) R WoNS		**Jan 2022 update – brushcutting may have encouraged some Madeira spread.** Infesting the riparian zone, as seen by young vines emerging above kikuyu grass and growing out onto the Trail. But Kikuyu is largely keeping Madeira in check ATM.	SI – high risk = high priority MONITOR CONTINUALLY FOR OUTBREAKS. Scrape & paint poison outbreaks growing above kikuyu grass.
	Curled dock (Rumex crispus)		**Jan 2022 – volume of mature plants much reduced.** 2018-2020 - scattered plentifully throughout zone. • Hand remove smaller plants • Cut larger plants to base of plant and paint poison • Bag stems for removal	S1 – highly invasive = high risk. Summer Target young plants as they emerge.

Area	Weed		Comments	Action
			'Bully' – crowds out other vegetation, tough root ball.	S1 – High risk = high priority.

‘Open’ area RIVERINE ZONE **OWNER:** ASIC **MANAGED:** ABR (informal)	African lovegrass (Eragrostis curvula) C		Concentrated near access hand-cut pathway to upper section (south of Old Dead Tree); scattered elsewhere. Target throughout the year and monitor regrowth. 1. Target seed-bearing stalks 2. Cut down stalks and paint poison the stalk 3. Immediately bag grass and any seeds for safe disposal Install terracing where root base is binding soil. Gradually replace with soil-binding vegetation.	HIGH TOXICITY Year-round Eliminate seed base.
	Madeira Vine (Anredera cordifolia) R WoNS		Jan 2022 update – the Madeira ‘edge’ continues being pushed back from the Trail edge. Terrain too steep and soil too poor to dig out: scrape and paint poison necessary. Feb 2019 update – almost eliminated immediately about CC trail (monitoring outbreaks). Extremely highly infested area. Significant reduction between 2017 and 2019 but constant monitoring & removal required. • Hand remove tubers where feasible • Scrape & paint poison difficult-to-remove vines • Bag separately from other weeds and destroy safely. DO NOT LEAVE IN PILES ON GROUND.	S1 - High risk - High priority Year-round MONITOR CONTINUALLY FOR OUTBREAKS.
	Angled Onion (Allium Triquetrum)		Eliminate from asset retention areas first. Colonised in small-medium patches throughout site	S2 - Moderate risk = Moderate priority Early-mid Spring

	R		Ongoing. Gradually eliminate in asset retention areas. • Target plants in spring when stalks & flowers are visible • Dig out entire plant with bulb without disturbing soil. Recover with leaf mulch. Also edible.	
	Asthma Plant (Parientaria Judaica)		Scattered throughout bank High seed bearing Hand remove and bag immediately for removal Do not handle if you have respiratory issues.	S1 – high risk = high priority Year-round Monitor for spreading as other weeds are reduced. Reduce seed bank July-September before seeds drop.
	Couch Grass (Cynodon Dactylon)		Jan 2022 update – continues to be very aggressive coloniser, especially above low retaining wall north of Old Dead Tree. • Hand weed with minimal soil disturbance as possible. OR • Scrape and paint poison where terrain too unstable to dig. • Cover thickly with leaf mulch and plants, terracing, other structural elements. Prioritise areas where indigenous vegetation can take over.	S1 – highly invasive = high risk. Year-round Ongoing
				S2 – medium risk, medium priority

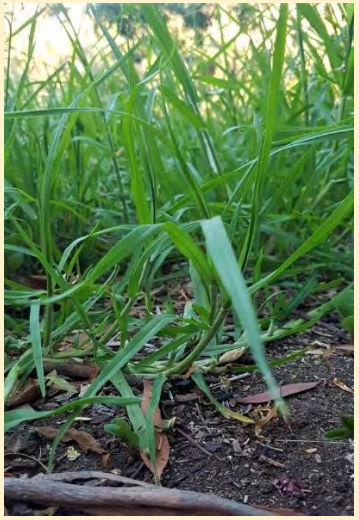
	Drain Flat Sedge (Cyperus Eragrostis)		**Jan 22 update – infestation much reduced. Monitor and remove outbreaks.** Tufted perennial with very short rhizomes. Common and often troublesome weed of wet, open, disturbed environments. Outbreaks emerged late 2019 to early 2020, possibly as a result of hot and humid summer. Seen in flatter areas where moisture accumulates: beside the Trail and flat part of upper bank. Target in summer-autumn and monitor regrowth. • **Carefully hand weed with fork to remove entire plant incl. roots.** • **Bag for removal.**	**Summer** / **Autumn**
	Prickly Pear (Opuntia Stricta)		Isolated stand in site Eradicated from site as at June 2018	S1 - High risk - High priority
	Common Purslane (Portulaca oleracea)		**2022 – infestation much reduced but keep on top of outbreaks, esp. along Trail.** • Hand weed with fork • Pull out from root, minimising soil disturbance. • Pat back soil and cover with leaf mulch.	S3- low risk, low priority **Summer** / **Early Autumn** HOWEVER target to halt spread.
	Tall Fleabane (Conyza Bonariensis		Erect, annual herb to 1 m tall with grey, stiff, bristle-like hairs.	**S3 – Low risk, low priority.** **Summer** / **Autumn**

			Grows around Victoria colonising disturbed space. Seen growing towards top of bank around casuarinas in March 2020. • **Target before buds open/seeds drop** **Hand remove carefully at root. Bag for disposal.**	However, **monitor to see if it spreads**
	White Arum lily (Zantedescia aethiopica) ***photo show young arum lilies emerging in March**		Highly invasive, moderate spreading ability. Colonised in patches throughout open area **Ongoing until eradicated.** 2 suggested approaches: 1. Dig out bulbs 2. Cut off stalks and paint poison Take care around indigenous plantings	**S1-2 – Medium-high risk = medium-high priority** Autumn / Winter
	Wild Radish (Raphanus raphanistrum)			**S2 - Moderate risk = Moderate priority** **Year-round**

			Annual late winter-early spring to summer, throughout bank where there is no indigenous ground competition/vegetation. Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. • Hand remove July-September and January-March as much as feasible before seeds drop and after fresh seedlings emerge. • Cut weed stem near base. Bagging unnecessary if seedpods closed.	HOWEVER, a prolific seeder. Target flowering and seeding plants – get seed off site.
	Oxalis (Oxalis Pes Caprae) R		Bullying weed, almost impossible to eliminate. Colonised entire bank. Cut & paint poison/hand remove bulbs when soil is drier.	U-- ubiquitous Winter / Spring Ongoing
	Common Cat's-ear/Flat-weed (Hypochoeris radicata)		Occurs among sweet vernal grass, Cleavers sticky weed, Common Sow-thistle, fumitory and other annuals in bare, disturbed & degraded sections around Johnston Street Bridge. Part of a group of mainly yellow-flowered daisies in the Tribe Lactuceae. • Remove new growth from asset retention areas during Spring where possible • Hand weed without disturbing soil. Cover with leaf mulch.	U = ubiquitous species Winter / Spring

	Cleavers Stickyweed (Galium aparine)		Smothering but non-bullying annual, hard to eliminate. Fills void late winter early spring where no groundcover or leaf mulch Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. • Eliminate in priority areas with existing vegetation or being prepared for planting • Gradually reduce through hand weeding with fork/knife • DO NOT DRAG stems. This causes seeds to drop.	S2 - medium risk - High priority Autumn / Winter / Spring
	Desert Ash (Fraxinus angustifolia)		Isolated stand in site above path near Old Dead Tree Eradicated from site as at June 2018 Regrowth – scrape & paint poisoned December 2019 Regrowth one location Jan 2020 • Cut back trunk • Brush and paint poison trunk Monitor until eradicated – very persistent	U – ubiquitous species Year-round
	Sweet Vernal Grass (Anthoxanthum odoratum)		Non-bullying annual, hard to eliminate. If a barrier against other weed infestations, leave intact. Annual late winter-early spring, scattered through bank.	U – ubiquitous species Winter-Spring (before seeds drop) / Summer (young plant)

			Will invade low leaf-mulch areas where understory not established and fill void left by other weed removal. • Target in late Winter-Spring and Summer in asset retention areas. • Pull out by hand without disturbing soil. • Re-cover with leaf mulch, replacing with grasses/groundcovers. • CUT OFF SEED HEADS if not possible to remove.	
	White Fumitory (Fumaria capreolata)		Annual late winter-early spring, scattered through bank. Fills void left by other weed removal Ongoing reduction management. Eliminate from asset retention (highest quality) areas first. • Remove as much as feasible before seeds drop. • Target weeds where flowering stems have smothered vegetation • Bag flowering/seeding plants immediately • Replace onsite with leaf mulching and replacement with grasses/groundcovers. DO NOT DRAG stems. This causes seeds to drop.	S2 - Moderate risk = Moderate priority Autumn | Winter | Spring (before seeds drop) Get seed bank off site
	English Ivy (Hedera helix)		WEED OF NATIONAL SIGNIFICANCE – illegal	S1 – High risk = High priority Year-round

			Confined to fallen tree adjacent to Old Dead Tree and in front of Canary Island Palm close by 2017-2019 Gradually cut back and cut-and-paint poisoned 2018-2019 from complete coverage of fallen tree. Ongoing same treatment until eradicated – very persistent.	
	Kikuyu grass (Pennisetum clandestinum)		Colonised most of upper bank between coppice eucalyptuses and low retaining wall below Old Dead Tree. Gradually reduced 2018-19, uncovering stumps & rocks covered by layers of grass; replacing dead grass where leaf mulch can accumulate. Gradually remove, concentrate on vegetation asset retention areas • **Bring down grass level** (brush cut) • **Hand weed** to remove from root using a fork • **Break down dead grass layers** to allow leaf mulch to accumulate. Break up dead grass to use as mulch if leaf mulch unavailable. • **Hand weed & surface spray** emerging weeds. • **Bag all weeds** for immediate removal. Do not spray during times of stress. E.g. extreme temperatures. Poison take-up is poor. Do not spray during times of stress. E.g. extreme temperatures. Poison take-up is poor. Monitor for regrowth & outcompeting grasses LEAVE where it's acting as a weed buffer.	S1 - High risk = High priority Spring | Summer | Early autumn
	Blackberry (Rubus vestitus)		Some remnant patches upper bank 2022	S1 high risk = high priority Year-round

	WoNC C		Reduced to a few patches near old dead tree between 2017-19 Reduced gradually from wider coverage around basalt stone pile and allocasuarina littoralis trees 2017-2019. 1) Cut branches back to stump/s 2) Scrape and paint poison stump/s 3) Cut branches into small pieces for immediate removal 4) Follow up regrowth until plant is dead POISON WITHIN 10 SECONDS OF SCRAPING/CLIPPING, as protective film quickly develops.	Monitor for regrowth patches, esp. around Old Dead Tree, acacia melanoxlylons and allocasuarinas.
	Small-flowered Mallow (Malva parviflora)		Late winter-early spring, scattered through bank. Explosion of growth in Summer 2019-20 Ongoing • Pull out as they emerge and before seeds drop. • Hand weed with fork/knife without disturbing soil. • Recover with leaf mulch.	S2 – Moderate risk = Moderate priority Year-round But target regrowth in previously sparse areas.
	Common Thorn Apple (Datura stramonium)		Jan 2022 update – monitor for re-emergence and immediately remove.	S3 – low priority. Summer / Autumn

	C		Emerged in summer 2019-20. Under 20 plants identified and immediately dug out at root. • **Remove at root with fork or knife** • **Keep soil disturbance at a minimum** • **Recover with leaf mulch.**	Monitor. POISONOUS ☠
	White clover (Trifolia repens)		**Jan 2022 update – control this aggressive coloniser where it re-emerges.** Emerged in patches across zone, spread during 2021 Covid lockdown when Parks Vic prohibited zone access. Spreads through creeping stems at ground level, producing multiple roots and taking over as they spread. • Carefully hand weed using fork. • Minimal soil disturbance, pat back soil, mulch / replace with indigenous ground cover.	S 2 – medium risk = medium priority Winter-Spring / Late summer-autumn **Monitor for spreading.**

Area	Weed		Comments	Action
	African Lovegrass (Eragrostis curvula)		'Bully' – crowds out other vegetation, tough hard root ball hard to pull out.	S1 - High risk = High priority Year-round

<table>
<tr><td rowspan="3">Old dead tree to Cypress tree

RIVERINE ZONE

OWNER:
ASIC
MANAGED:
ABR (informal)</td><td>C</td><td>  </td><td>Scattered throughout site.
1. Cut down stalks and paint poison the stalk
2. Immediately bag grass and any seeds for safe disposal
3. Target throughout the year and monitor regrowth.
Install terracing where root base is holding soil together and gradually replace with soil-binding grasses & groundcover.</td><td></td></tr>
<tr><td>Black nightshade (S nigrum) – high impact weed</td><td>  </td><td>Mostly clustered near the cypress tree and isolated elsewhere.
Eliminate from retention (highest quality) areas first.
• Carefully cut back flowering woody stems. Bag if seed pods are open.
• Paint poison/dig up root.
• Hand weed young plants with fork/knife. Bag immediately.</td><td>S2 - Moderate risk = Moderate priority
Winter | Spring
Target seeding plants – get seed off site.</td></tr>
<tr><td>Desert Ash (Fraxinus augustifolia)</td><td></td><td></td><td>S1 – Low risk = low priority
Year-round</td></tr>
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	WoNS		Jan 2022 update – Desert ash re-emerged between Sweet bursarias. Remove and monitor for re-emergence elsewhere. March 2021 – Desert Ash growing beside Sweet Bursarias Isolated plant emergence across bank. Highly invasive in riparian areas. • Cut back trunk • Brush and paint poison trunk Monitor until eradicated – very persistent	HOWEVER monitor for possible re-emergence.
	Prickly Pear (Opuntia Stricta) WoNS		Isolated stands in site. Eradicated in site as at June 2018. RE-Eradicated onsite as at December 2020 Monitoring for outbreaks.	S1 - High risk - High priority
	Cleavers Stickyweed (Galium aparine)		Jan 2022 update – much reduced in this zone. Continue to target. Smothering but non-bullying annual, hard to eliminate. Scattered through bank. Fills void left by other weed removal Ongoing • Focus on priority areas with existing vegetation or being prepared for planting • Gradually reduce through hand weeding with fork/knife • DO NOT DRAG stems. This causes seeds to drop. • Bag immediately.	S2 - Moderate risk = Moderate priority Winter / Spring
				S2 - Moderate risk = Moderate priority

	Sweet Vernal Grass (Anthoxanthum odoratum)		**Jan 2022 update – continue to hand weed, eliminating from retention (highest quality) areas first.** Scattered through bank, extensive seed bank. *Spraying in 2018-19 by Helen Macrae was ineffective and time wasting. Grasses regrew densely around the low retaining wall near the Old Dead Tree. Under weed management, the seed bank is being gradually reduced through hand-weeding.* **Weeding options:** • Hand weed gradually using fork • Carefully uproot young plants in clumps. • Cut mature plants at base and brush with poison • Remove grass heads where impossible to weed everything Pat down disturbed soil and cover with leaf/other mulch	**Winter-Spring (before seed drop)** / **Summer (young plant)** Ongoing reduction management and replacement with indigenous groundcover.
	Trad (Tradescantia fluminensis)		Colonised terrain from (scattered) Old Dead Tree to (predominating) beginning of giant retaining wall. • Hand weed with fork • Take care not to drop pieces of stem. They will regrow. • Bag immediately for disposal	**S1 - High risk = High priority** **Year-round** However, in 2019-20, currently buffer against erosion & other weeds.
	Madeira Vine (Anredera cordifolia)		WEED OF NATIONAL SIGNIFICANCE – illegal	**S1 - High risk = High priority** **Year-round**

	R WoNS		Infestation across entire area, endangering vegetation assets (e.g. stands of melaleuca ericafolia, bursaria spinosa). Year-round management until eradicated: • hand remove tubers • scrape & paint poison difficult-to-remove vines • Bag immediately DO NOT LEAVE IN PILES ON GROUND	
	(Malva parviflora)		Late winter through to autumn, concentrated along pathway and near drainage. Colonisation has exploded in summer 2019-20. This has ramped up the priority rating. • Remove by hand using fork. • Keep soil disturbance to a minimum. Recover with leaf/dead grass/palm mulch sourced nearby.	S1-S2 – Moderate to high priority Winter- Spring (before seed drop) / Summer-Autumn (young plant) Target seeding plants – get seed off site.
	White Fumitory (Fumaria capreolata)		Annual late winter-early spring, scattered through bank. Fills void left by other weed removal	S2 - Moderate risk = Moderate priority Autumn / Winter / Spring

			Ongoing • Remove as much as feasible before seeds drop. • Target weeds where flowering stems have smothered vegetation • Bag flowering/seeding plants immediately • Replace onsite with leaf mulching and replacement with grasses/groundcovers. • DO NOT DRAG stems. This causes seeds to drop.	Target seeding plants – get seed off site.
	Wild Radish (Raphanus raphanistrum)		Prolific seeder – up to 6 years germination. Annual late winter-early spring, throughout bank where there is no indigenous ground competition/vegetation at all. Ongoing reduction management as indigenous vegetation & mulch cover bank. • Hand remove July-September and January-February as much as feasible before seeds drop and after fresh seedlings emerge. • Cut weed stem near base. Bag if seed pods are open • Eliminate from asset retention areas first. March 2021 – much reduced onsite but continue to address. March 2022 – Further reduced onsite, continue to manage.	S2 - Moderate risk = Moderate priority Winter-Spring | Mid-late Summer Target seeding plants – get seed off site.
				S2 - Moderate risk = Moderate priority

	Black nightshade (Solanum nigrum)		Heavy infestation around cypress tree and some infestation near Canary Island palms. • Hand remove July-September as much as feasible before seeds drop. • Carefully cut back flowering woody stems. Bag if seed pods are open. • Paint poison/dig up root. • Hand weed young plants with fork/knife. Bag immediately. Eliminate from asset retention (highest quality) areas first.	Winter / Spring Target seeding plants – get seed off site.
	Angled Onion (Allium Triquetrum) R		Colonised in large patches throughout site Ongoing. Gradually eliminate in asset retention areas. • Target plants in spring when stalks & flowers are visible • Dig out entire plant with bulb without disturbing soil. Recover with leaf mulch. Also edible.	S2 - Moderate risk = Moderate priority Winter / Spring Eliminate from asset retention areas first.

Area	Weed		Comments	Action
Cypress tree to retaining wall	Asthma Weed (Parietaria Judaica)		Extensive patches throughout zone. • Hand remove seedlings; surface spray large infestations.	S2-S1 - Moderate to high risk = Moderate priority Autumn / Winter / Spring

RIVERINE ZONE **OWNER:** ASIC **MANAGED:** ABR (informal)			• Bag up any plants with seeds to prevent spreading. Do not handle if you have respiratory issues.	Monitor as other weeds are reduced. **Reduce seed bank before seeds drop.**
	African Lovegrass (Argrostis curvula)		Scattered throughout site. Bully – crowds out other vegetation, tough hard root ball hard to pull out. 1. **Cut down stalks and paint poison the stalk** 2. **Immediately bag grass and any seeds for safe disposal** 3. **Target throughout the year and monitor regrowth** Target seeding plants to reduce seedbank and prioritise plants for removal. **Install terracing where root base is holding soil together and gradually replace with soil-binding grasses & groundcover.**	**S1 - High risk = High priority** **Year-long**
	Madeira Vine (Anredera cordifolia)		**Jan 2022 update**	**S1 - High risk - High priority** **Year-long**

	R WoNS		Moderately infested area. Significant reduction between 2017 and 2022 but constant monitoring & removal required. • Hand remove tubers where feasible • Scrape & paint poison difficult-to-remove vines Bag separately from other weeds and destroy safely. DO NOT LEAVE IN PILES ON GROUND.	
	Wild Radish (Raphanus raphanistrum)		Prolific seeder – up to 6 years germination. Annual late winter-early spring, restricted to patches below small retaining wall, around drainage outlets and elsewhere high up on the upper bank where there is almost no indigenous vegetation. Heavy infestation between Old Dead Tree and old cypress tree against retaining wall. Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. • Hand remove July-September and January-February as much as feasible before seeds drop and after fresh seedlings emerge. • Cut weed stem near base. Bagging unnecessary if seedpods closed • Eliminate from asset retention areas first.	S2 - Moderate risk = Moderate priority Year-round Eliminate from retention areas first. Target seeding plants – get seed off site.

			Replace onsite with leaf mulching and replacement with grasses/groundcovers	
	Cleavers Stickyweed (Galium aparine)		**Smothering but non-bullying annual, hard to eliminate.** Fills void late winter early spring where no groundcover or leaf mulch Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. • **Eliminate in priority areas with existing vegetation or being prepared for planting** • **Gradually reduce through hand weeding with fork/knife** • DO NOT DRAG **stems. This causes seeds to drop.**	**S2 - Moderate risk = Moderate priority** Winter / Spring
	Trad (Tradescantia fluminensis)		**However: currently buffer against erosion & other weeds** Colonised terrain from (scattered) Old Dead Tree to (predominating) beginning of giant retaining wall. • Hand weed with fork • Take care not to drop pieces of stem. They will regrow. • Bag immediately for disposal	**S1 - High risk = High priority** Year-round
	Madeira Vine (Anredera cordifolia)			**S1 - High risk = High priority** Year-round

	R WoNS		Infestation across entire area, endangering vegetation assets (e.g. coppice eucalyptus trees in front of retaining wall, pictured) Ongoing until eradicated. **Year-round management until eradicated:** • **hand remove tubers** • **scrape & paint poison hard-to-remove vines** • **Bag immediately** DO NOT LEAVE IN PILES ON GROUND	
	Sweet vernal grass (Anthoxanthum odoratum)		**Target in spring in retention areas.** Annual late Winter-early Spring and Summer, scattered through bank. **Invades low leaf-mulch areas where understory not established. Fills void left by other weed removal.** Hard to eliminate. Ongoing reduction management. **If a barrier against other weed infestation, leave intact/brush cut.**	U – ubiquitous species **Winter-Spring (before seed drop)** / **Summer (young plant)** Gradually remove through hand weeding, leaf mulching, replacing with grasses/groundcovers.
	White Fumitory (Fumaria capreolata)		Annual late winter-early spring, scattered through bank. Fills void left by other weed removal Ongoing • **Remove as much as feasible before seeds drop.** • **Target weeds where flowering stems have smothered vegetation** • **Bag flowering/seeding plants immediately** • **Replace onsite with leaf mulching and replacement with grasses/groundcovers.** DO NOT DRAG **stems.** This causes seeds to drop.	S2 - Moderate risk = Moderate priority Winter / Spring / Early Autumn Eliminate from retention areas first. **Target seeding plants – get seed off site.**
	Wild Radish (Raphanus raphanistrum)		Annual late winter-early spring throughout bank where there is no indigenous ground competition/vegetation. Prolific seeder (up to 6 years germination)	S2-S1 - Moderate to high risk = Moderate priority **Winter-Spring** / **Mid-late Summer**

			• Hand remove July-September and January-February as much as feasible before seeds drop and after fresh seedlings emerge. • Cut weed stem near base. Bagging unnecessary if seedpods closed • Eliminate from asset retention (highest quality) areas first. Replace onsite with leaf mulching and replacement with grasses/groundcovers.	High priority to reduce seed bank July-September before seeds drop.

Area	Weed		Comments	Action
'Shady' zone RIPARIAN OWNER: ASIC MANAGED: MELBOURNE WATER	Angled Onion (Allium Triquetrum) R		Colonised in small-medium patches throughout site Ongoing. Gradually eliminate in asset retention areas. • Target plants in spring when stalks & flowers are visible • Dig out entire plant with bulb without disturbing soil. Recover with leaf mulch. Also edible.	S2 - Moderate risk = Moderate priority Early-mid Spring Eliminate from asset retention areas first.
	Asthma Weed (Parietaria Judaica)		Colonised extensively around river edge and at top of riparian bank just below path. • Hand remove seedlings; surface spray large infestations. • Bag up any plants with seeds to prevent spreading. Do not handle if you have respiratory issues.	S2-S1 - Moderate to high risk = Moderate priority for this area. Autumn | Winter | Spring Monitor as other weeds are reduced. Reduce seed bank July-September before seeds drop.

	Cocksfoot (Dactylis glomerate)		• Scattered along top of riparian ridge close to Capital City Trail • **Potential to become a high risk if colonising beyond current locations.** • ***If unable to identify without seed head:*** **Cut weed stem near base and paint poison base.** • ***If able to identify with seed head:*** **Surface spray with glyphosate**	**S1-2 – moderate risk in this section, highly invasive** **Autumn** | **Early Summer** Target seeding plants – get seed base off site.
	Curled dock (Rumex crispus)		Weed of riparian zones & disturbed woodlands. ***One of the world's 'worst weeds' (Herbiguide).** Scattered plentifully throughout site, particularly at water's edge. • **Target early summer before flowers open** • **Cut to base of plant and paint poison** **Bag stems for removal**	**S1 – high risk = high priority** **Late Spring** | **Early Summer**

	Dandelion (Taraxacum Officinale)		Scattered throughout site. Increased growth in Summer 2019-20. Recommended removal: cut to base before seed heads emerge and poison paint. Monitor for re-growth and any invasive tendencies.	S1-S2 Moderate to high risk. SEE BELOW. Spring | Summer However, dandelion growth has been aggressive along the Capital City Trail in summer 2019-20. Monitor for further spread.
	English Elm (Ulmus procera)		Highly invasive, slow rate of dispersal. Colonised patches at river edge (e.g. to the right of kayak launch); possibly elsewhere. Target suckers Scrape and paint poison during dry periods Monitor for progress & outbreaks* *best season not yet established but assumption is for Summer. Melbourne Water is targeting elm suckers as part of campaign on both sides of the river.	S1 – High risk = High priority Summer Monitor for emerging suckers. Melbourne Water is doing elm removal so may not be necessary.
				S1 – high risk = high priority. Sept. | Dec. | Mar.

	Kikuyu grass (Pennisetum clandestinum)		Colonised much of riparian zone below pathway and around trees at water edge (e.g. Eucalyptus camaldulenses). Gradually remove, concentrate on asset retention areas • **Bring down grass level** (brush cut) • **Hand weed** to remove from root using a fork • **Break down dead grass layers** to allow leaf mulch to accumulate. Break up dead grass to use as mulch if leaf mulch unavailable. • **Hand weed & surface spray** emerging weeds. • **Bag all weeds** for immediate removal. Do not spray during times of stress. E.g. extreme temperatures. Poison take-up is poor. **Monitor for regrowth & outcompeting grasses**	
	White Clover (Trifolium repens)			**S3 – low risk = low priority** **Winter-Spring** / **Mid-late Summer**

Area	Weed		Comments	Action
	Angled Onion (Allium Triquetrum)		Colonised in small-medium patches throughout site Ongoing. Gradually eliminate, prioritising vegetation asset areas.	**S1 – High risk = High priority** **Early-mid Spring**

Flood plain below concrete retaining wall RIPARIAN ZONE OWNER: CROWN LAND MANAGED: MELBOURNE WATER	WoNS, R		• Target plants in spring when stalks & flowers are visible • Dig out entire plant with bulb without disturbing soil. Recover with leaf mulch. Also edible.	Eliminate from asset retention areas first.
	Asthma Weed (Parietaria Judaica)		January 2022 update – Extensively reduced 2020-21. **Monitor for outbreaks and remove.** Colonised extensively around river edge and at top of riparian bank just below path. • Hand remove seedlings; surface spray large infestations. • Bag up any plants with seeds to prevent spreading. Do not handle if you have respiratory issues.	S2-S1 - Moderate to high risk = Moderate priority for this area. Autumn | Winter | Spring Monitor as other weeds are reduced. **Weed before seeds drop.**
	Black nightshade (Solanum nigrum) – high impact weed		January 2022 update – Extensively reduced 2020-21. **Monitor for outbreaks and remove.** Scattered where other weeds (e.g. kikuyu) have thinned out. • **Eliminate from retention (highest quality) areas first.** Monitor for potential spread.	S2 - Moderate risk = Moderate priority Winter | Spring Target seeding plants – get seed off site.
				S1 – high risk, highly invasive.

	Chinese wormwood/mugwort (Artemisia verlotiorum) R		**Jan 2022 update – Careful weeding and brushcut management where they are not preventing erosion.** Scattered throughout zone, especially in sunnier patches. Outcompetes other plants for moisture. • Melbourne Water crew targeting wormwood in the area. • Hand weed where they are not preventing erosion (e.g. around dead Acacia tree). • High brushcut other infestation areas (e.g. south end of zone).	Early Summer Monitor for infestation spread.
	Cocksfoot (Dactylis glomerate)		**Potential to become a high risk if colonising beyond current locations.** • Scattered along top of riparian ridge close to Capital City Trail • ***If unable to identify without seed head:*** **Cut weed stem near base and paint poison base.** • ***If able to identify with seed head:*** **Surface spray with glyphosate**	**S1 – high risk** Autumn / Early Summer Not a priority weed in 2020.
	Cleavers Stickyweed (Galium aparine)		Smothering but non-bullying annual, hard to eliminate. Fills void late winter early spring where no groundcover or leaf mulch Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank. • **Eliminate in priority areas with existing vegetation or being prepared for planting** • **Gradually reduce through hand weeding with fork/knife** • DO NOT DRAG **stems. This causes seeds to drop.**	**U – ubiquitous species** Winter / Spring / Early Summer Target seeding plants – get seed off site.

	Common Purslane (Portulaca oleracea)		2022 – starting to re-emerge along river edge esp. along planting zone below Trail. Keep on top of isolated outbreaks, esp. along Trail. • Hand weed with fork • Pull out from root, minimising soil disturbance. • Pat back soil and cover with leaf mulch.	S3 - Low risk = low priority Summer | Early Autumn HOWEVER target to halt spread.
	Creeping Buttercup (Ranuncula repens)		Jan 2022 update – continues to be aggressive coloniser in dry to damp ephemeral zone. Acts as a terrain stabiliser in this flash-flood impacted zone in the absence of indigenous vegetation. Also provides spots to walk on without damaging young indigenous vegetation. • Monitor for spread. • Hand weed with minimal soil disturbance. Prioritise areas where indigenous vegetation can take over.	S2 – medium risk = medium priority Spring | Summer | Early Autumn
	Couch Grass (Cynodon dactylon)		Jan 2022 update – continues to be very aggressive coloniser in ephemeral zone below planting area below Trail. • Monitor for spread. • Hand weed with minimal soil disturbance. • Prioritise areas where indigenous vegetation can take over.	S1 – highly invasive = high risk. Year-round Ongoing
	Curled dock (Rumex crispus)		Jan 2022 – volume of mature plants much reduced. Target young plants as they emerge.	S1 – highly invasive = high risk. Late Spring | Early Summer

			Weed of riparian zones & disturbed woodlands. *One of the world's 'worst weeds' (Herbiguide). 2018-2020 - scattered plentifully throughout site, particularly at water's. • Target early summer before flowers open • Hand remove smaller plants • Cut larger plants to base of plant and paint poison • Bag stems for removal	TARGET to halt spread.
	English Elm (Ulmus procera)		**Jan. 2022 update – re-emerging suckers to cut and paint poison.** Mar 2020 update: Melbourne Water is poisoning the suckers. Highly invasive, slow rate of dispersal. Colonised patches at river edge (e.g. to the right of kayak launch); possibly elsewhere. **Target suckers** **Scrape and paint poison suckers** **Cut close to ground and paint IMMEDIATELY, as plant's protective mechanisms emerge quickly.**	S2 – Moderate risk Late Summer | Early Autumn Moderate priority in as fresh suckers re-emerge. *Replace with indigenous riparian plants as feasible in this high-traffic area*
	Great Bindweed (Calystegia sylvatica)		**Jan 2022 update – ongoing, in larger quantities than 2021. Still outcompeted by Persicaria.**	S1 - high risk = high priority. Summer | Early Autumn

			Feb 2021 – strong presence onsite but outcompeted by Persicaria decipiens and hydropiper. Spring 2019 – Quickly spread, with fallen Acacia mearnsii trunk a major locus of colonisation and spread. Runners going up bank & down to river edge. Potential to spread rapidly. **Isolate and eradicate before seeds drop & spread.** • **Carefully hand remove stems & bag for removal** • **Monitor outbreaks; surface spray/cut & paint poison.**	**Continue to address during warm months.**
	Kikuyu grass (Pennisetum clandestinum)		Jan 2022 update – Monitor and contain regrowth & spread in planting zone below Capital City Trail. Colonised much of riparian zone below pathway and around trees at water edge (e.g. Eucalyptus camaldulenses). Gradually remove, concentrate on asset retention areas • **Hand weed** to remove from root using a fork • **Break down dead grass layers** to allow leaf mulch to accumulate. Break up dead grass to use as mulch if leaf mulch unavailable. • **Bag all weeds** for immediate removal. • **Replace** with plants and plant stakes as much as possible **Monitor for regrowth & outcompeting grasses**	S1 – High risk = High priority Sept. | Dec. | Mar. DO NOT REMOVE WHERE IT IS HOLDING THE BANK TOGETHER This risks bank collapse HIGH BRUSH CUT ONLY in these areas (E.g. near old dead Acacia tree) ☠
	Oxalis (Oxalis Pes-Caprae) R		**Jan 2022 – Keep targeting to reduce occurrence** • Bullying tendencies around young plants • Viable bulbs through area but fluctuating emergence between 2018 (high) and 2019 (low) 1. **Cut & paint poison, or** 2. **Dig out bulbs ad hoc when soil dries out**	U – ubiquitous species Winter | Spring | Early Summer
			Jan 2022 update – coordinate with Melbourne Water crew to manage and gradually remove around vegetation assets.	S2 – High risk = high priority Year-round

	Pampas Lily of the Valley (Salpichroa Origanifolia) C (R elsewhere in Victoria)		Restricted to river edge area between Turner St exit ramp and 'sea kayak landing. Dominant understorey with Tradescantia fluminensis. Melbourne Water weed control priority. https://www.vgls.vic.gov.au/client/en_AU/search/asset/1014021/0	HOWEVER * DO NOT REMOVE where there is no replacement vegetation in this flash flood zone. Monitor and gradually remove as vegetation is replaced.
	Scarlet Pimpernel (Anagallis Arvensis)		Non-bullying annual, hard to eliminate. Late Spring-early Summer, scattered through bank **Remove by hand (Spring or mid-late Summer if recurring) without disturbing soil. Recover with leaf mulch.**	U – ubiquitous species Late Spring | Early Summer Ongoing
	Small-flowered Mallow (Malva parviflora)		**Jan 2022 update – monitor for new outbreaks** Scattered through bank. Non-bullying annual, hard to eliminate. • Remove by hand without disturbing soil. • Recover with leaf mulch.	U – ubiquitous species Early Spring | Mid-late Summer Ongoing
	Wandering Trad (Tradescantia fluminensis)		**Jan 2022 update – GRADUALLY remove in planting areas** Priority for gradual removal around existing vegetation assets and where replacement indigenous plants become established. Colonised shady area in patches across the whole zone. • Hand weed with fork • Take care not to drop pieces of stem. They will regrow. • Bag immediately for disposal.	S1 - High risk = High priority Year-round LEAVE Trad where it is the major understorey in flash flood zone / acts as a weed buffer.

	White Fumitory (Fumaria capreolata)		Annual late winter-early spring, scattered through zone. Fills void left by other weed removal, grows around tree trunks. Ongoing reduction management. Eliminate from asset retention (highest quality) areas first. • **Remove as much as feasible before seeds drop.** • **Target weeds where flowering stems have smothered vegetation** • **Bag flowering/seeding plants immediately** • **Replace onsite with leaf mulching and replace with grasses/groundcovers.** DO NOT DRAG **stems.** This causes seeds to drop.	**S2 - Moderate risk = Moderate priority** Autumn / Winter / Spring
	Wild Radish (Raphanus raphanistrum)		**Jan 2022 update – much reduced in area. Keep up removal.** Scattered throughout zone. Prolific seeder – up to 6 years germination. • Hand remove as much as feasible before seeds drop and after new seedlings emerge. • Cut weed stem near base. Bagging unnecessary if seedpods closed.	**S2 - Moderate risk = Moderate priority.** Winter-Spring / Mid-late Summer **Ongoing reduction to reduce seed bank**
	Wild Turnip (Brassica tournifortii) **See right for difference with Wild Turnip)**		**As above. Ongoing reduction management.** 	**S2 – medium risk = medium priority** Winter-Spring / Summer **Less prolific than Wild Radish, but monitor for spread.**

Area	Weed		Comments	Action
'Turner Street Triangle' up to open bluestone drain RIVERINE ZONE OWNER: CROWN LAND MANAGED: CITY OF YARRA / MELBOURNE WATER	Asthma Weed (Parietaria Judaica)		Minor infestation in patches throughout zone. • Hand remove seedlings; surface spray large infestations. • Bag up any plants with seeds to prevent spreading. • Do not handle if you have respiratory issues.	S2-S1 - Moderate to high risk = Moderate priority. Autumn | Winter | Spring Monitor as other weeds are reduced.
	Black nightshade (Solanum nigrum)		Infestation in patches between bluestone drain open area through to Helen's patch. Monitor for possible spread. • Hand remove July-September as much as feasible before seeds drop. • Cut weed stem near base. Bagging unnecessary if seedpods closed Eliminate from asset retention (highest quality) areas first.	S2 – moderate risk = moderate priority Winter | Spring | Early summer
	Common Buckwheat (Fagopyrum escolentum)		• Carefully hand remove July-September before seeds drop. • Ensure replacement with mulch, stakes, replacement plants in this gravelly erosion-prone soil below the Main City Trail 2018-2021 – quite heavy infestation around the elm tree below the Main City Trail. Gradually removed. Some plants remaining Autumn 2022.	S2 – moderate risk = moderate priority Winter | Spring
	Wild Fennel (Foeniculum vulgare)		In 2022 Fennel continues to infest the upper section of the riverine zone, esp. northern section	S2 – high risk = high priority Year-round

	R			In highly disturbed soil with Parks Vic asbestos caveat, cut to base and paint poison. Monitor for re-emergence.
	Kikuyu grass (Pennisetum clandestinum)		Colonised upper bank between callistemon stand and the left of bluestone open drain (continuing across the bank on the other side of the drain). Gradually remove dead grass to allow leaf mulch to accumulate. **Monitor feasibility of removing kikuyu completely in this drainage area, given erosion tendencies and water overflow from drain without other vegetation to hold in the soil.** Weeding options: 1. Reduce grass level (around drain, other erosion-prone sections) • **Bring down grass level** (brush cut) 2. Remove kikuyu grass (closer to the path where there are plantings) • **Hand weed** to remove from root using a fork • **Break down dead grass layers** to allow leaf mulch to accumulate. Break up dead grass to use as mulch if leaf mulch unavailable. • **Hand weed & surface spray** emerging weeds. • **Bag all weeds** for immediate removal. Do not spray during times of stress. E.g. extreme temperatures. Poison take-up is poor. **Brush cut, targeted surface spray new growth**	**S1 - High risk = High priority** **High risk in mass planting** area. In other areas, **a buffer against erosion & other weeds** Sept. | Dec. | Mar. **High priority to reduce and gradually eliminate kikuyu so indigenous plants can outcompete and less aggressive weeds can colonise.**

			1. Gradually reduce level and remove as asbestos problem is addressed and revegetation is gradually extended. **Brush cut, targeted surface spray new growth** Gradually break up dead grass build-up to allow leaf mulch to accumulate Don't spray during times of stress. E.g. extreme temperatures. Poison take-up is poor.	
	Madeira Vine (Anredera cordifolia) R WoNS		WEED OF NATIONAL SIGNIFICANCE – illegal Almost eradicated in 'pointy end' of Turner St Triangle 2016-19 Combined infestation elsewhere tangled with Kikuyu grass. Infesting existing trees, tall and medium shrubs. Ongoing until eradicated • Target for eradication around important vegetation assets (e.g. stands of eucalyptus camaldulensis, eucalyptus melliodora, allocasuarina verticillata. • Brush-and-paint poison given asbestos in the soil • Experiment with targeted surface spray on shallow regrowth.	S1 - High risk = High priority Year-round
	Common Purslane (Portulaca oleracea)		2022 – infestation much reduced but keep on top of isolated outbreaks, esp. along Trail.	S3 - Low risk Summer

			• Hand weed with fork • Pull out from root, minimising soil disturbance. Pat back soil and cover with leaf mulch.	BUT expanding rapidly from end 2019. Target to halt spread.
	Wild Radish (Raphanus raphanistrum)		S2-S1 - Moderate to high risk = Moderate priority for this area. Annual late winter-early spring throughout bank where there is no indigenous ground competition/vegetation at all. Prolific seeder (up to 6 years germination) Not many plants in this area. • Hand remove July-September and January-February as much as feasible before seeds drop and after fresh seedlings emerge • Cut weed stem near base. Bagging unnecessary if seedpods closed • Eliminate from asset retention (highest quality) areas first. Replace onsite with leaf mulching and replacement with grasses/groundcovers.	S2-S1 - Moderate to high risk = Moderate priority Winter-Spring | Mid-late Summer Monitor as other weeds are reduced. Reduce seed bank July-September before seeds drop.
	Oxalis (Oxalis Pes Caprae)		Jan 2022 update – continue to steadily target Bullying annual, almost impossible to eliminate	S2 - Moderate risk Winter | Spring

	R		Colonised entire bank **Cut & paint poison/hand weed bulbs when soil is drier**	Ongoing
	Common Cat's-ear/Flat-weed (Hypochoeris radicata)		Hard to eliminate. Non-bully annuals Occurs among sweet vernal grass, Cleavers sticky weed, fumitory and other annuals in bare, disturbed & degraded sections around Johnston Street Bridge. • **Pull out by hand without disturbing soil.** • **Pat soil down and cover with leaf mulch.**	**U – ubiquitous species** Winter / Spring Ongoing reduction management as indigenous grasses, ground cover & mulch cover bank.
	Small-flowered Mallow (Malva parviflora)		Late winter-early autumn, concentrated along pathway and near drainage. Colonisation has increased in 2019. Ongoing – easily managed as this is a highly monitored area • **Remove out early Spring or mid-late Summer if recurring.** • **Remove by hand without disturbing soil. Recover with leaf mulch.**	**S2-S1 - Moderate risk = Moderate priority** Late Winter / Early Autumn **Target mature plants July-September before seeds drop.**
	Stinging nettle (Urtica Urens)		Late winter-early spring, concentrated along pathway and near drainage. Colonisation has increased in 2019. . **Hand weed, pat back disturbed soil & cover with leaf mulch**	**S2-S1 - Moderate risk = Moderate priority.** Winter / Spring **Reduce seed bank July-September before seeds drop.**
				S2 - Moderate risk = Moderate priority

	White Fumitory (Fumaria capreolata)		Annual late winter-early spring, scattered through bank. Fills void left by other weed removal Ongoing • Remove as much as feasible before seeds drop. • Target weeds where flowering stems have smothered vegetation. • Bag flowering/seeding plants immediately • Replace onsite with leaf mulching and replacement with grasses/groundcovers. DO NOT DRAG stems. This causes seeds to drop.	Winter	Early-mid Spring	Early Autumn
				Target flowering plants. Get seedbank off site.		

Area	Weed		Comments	Action	
Turner St Triangle RIPARIAN ZONE OWNER: CROWN LAND MANAGED: MELBOURNE WATER	Curled Dock (Rumex Crispus)		Weed of riparian zones & disturbed woodlands. *One of the world's 'worst weeds' (Herbiguide). Scattered plentifully throughout site, particularly at water's edge. • Target early summer before flowers open • Cut to base of plant and paint poison Bag stems for removal.	S1 – highly invasive = high risk.	
				Early Summer	Autumn
				S1 - High risk = High priority	

	Kikuyu grass (Pennisetum clandestinum)		**January 2022 update – gradually reduce level and remove as terracing is installed against erosion and revegetation is gradually extended.** **More feasible now after major drainage works in 2021, reducing the possibility of runoff.** Kikuyu has colonised the bank between the left of open drain and the north end of our operational area. **Major component against erosion, outcompetes other weeds.** **Two approaches recommended:** 1. **Brush cut to reduce thick grass to a manageable level for future hand weeding & revegetation** 2. **Hand weed** from root, using fork **Bag all weeds** for immediate removal.	**Year-round** **aHigh priority to reduce and gradually eliminate kikuyu so indigenous plants can outcompete.** Monitor as other weeds are reduced. DO NOT REMOVE IF ANY EROSION RISK EXISTS
	Common Purslane (Portulaca oleracea)		**2022 – infestation much reduced but keep on top of isolated outbreaks, esp. along Trail.** • Hand weed with fork • Pull out from root, minimising soil disturbance. Pat back soil and cover with leaf mulch.	**S3 - Low risk** **Summer** | **Autumn** BUT expanding rapidly from end 2019. Target to halt spread.

	Ribwort plantain (Plantago lanceolata)			
	Small-flowered Mallow (Malva parviflora)		Concentrated along pathway and near drainage. Colonisation has increased in 2019. Ongoing – easily managed as this is a highly monitored area • Remove out early Spring or mid-late Summer if recurring. • Remove by hand without disturbing soil. Recover with leaf mulch.	S2-S1 - Moderate risk = Moderate priority for this area. Late Winter | Early Spring | Mid-late Summer Reduce seed bank July-September before seeds drop.
	Stinging nettle (Urtica Urens)		Concentrated along pathway and near drainage. Colonisation has increased in 2019. Ongoing – easily managed as this is a highly monitored area • Remove July-September Hand weed, pat back disturbed soil & cover with leaf mulch	S2-S1 - Moderate risk = Moderate priority for this area. Winter | Spring Reduce seed bank July-September before seeds drop.
			Scattered through bank. Fills void left by other weed removal	S2 - Moderate risk = Moderate priority Winter | Spring | Early Autumn

	White Fumitory (Fumaria capreolata)		Ongoing • Remove July-September as much as feasible before seeds drop. • Target weeds where flowering stems have smothered vegetation • Bag flowering/seeding plants immediately • Replace onsite with leaf mulching and replacement with grasses/groundcovers. DO NOT DRAG stems. This causes seeds to drop.	

Area	Weed		Comments	Action
Many weeds in this section (e.g. kikuyu grass) act as a temporary buffer against other weeds. Prioritise smothering weeds like Anredera cordifolia and eliminate lyceum ferocissimum.				
Open area (open bluestone drain to end of ARB site at bluestone drain to river) RIVERINE ZONE **OWNER:** CROWN LAND	Asthma Weed (Parietaria Judaica)		Extensive patches throughout zone. • Hand remove seedlings; surface spray large infestations. • Bag up any plants with seeds to prevent spreading. Do not handle if you have respiratory issues.	S2-S1 - Moderate to high risk = Moderate priority for this area. Autumn | Winter | Spring Monitor as other weeds are reduced. Reduce seed bank July-September before seeds drop.
	Black nightshade (solanum nigrum)		Scattered throughout zone	S3 – low risk = low priority Winter | Spring

<table>
<tr><td rowspan="3">MANAGED:
PARKS VICTORIA
WATER MANAGER:
Melbourne Water</td><td></td><td>  </td><td>BUT monitor for spread in sprayed areas lacking vegetation and leaf mulch
Hand remove July-September as much as feasible before seeds drop.
Carefully cut back flowering woody stems. Bag if seed pods are open.
Paint poison/dig up root.
Hand weed young plants with fork/knife. Bag immediately.</td><td>However, monitor for potential spread.</td></tr>
<tr><td>Common Purslane (Portulaca Oleracea)</td><td></td><td>Hand weed with fork
Pull out from root
Minimise soil disturbance. Pat back soil and cover with leaf mulch.
Also edible.</td><td>S3 – Low risk= low priority
Summer | Autumn
BUT expanding rapidly from summer 2019. Target to halt spread.</td></tr>
<tr><td>Common (or narrow-leafed) Vetch (Vicia Sativa)</td><td>  </td><td>Colonised patches of riverine zone
Hand remove plants in Spring before flowering
Also spray Autumn-winter
DO NOT USE GLYPHOSATE, use TORDON as most effective for grass dominant areas</td><td>S2 – Moderate risk = Moderate priority
Autumn | Winter | Spring</td></tr>
</table>

	Desert Ash (Fraxinus Angustifolia)		WEED OF NATIONAL SIGNIFICANCE – illegal Identified isolated stand in Eucalyptus melliodora/Allocasuarina verticillata belt below Turner St Feb. 2020) • Cut back trunk • Brush and paint poison trunk Monitor until eradicated – very persistent	S1 – high risk = high priority Year-round Remove from site
	Madeira Vine (Anredera cordifolia) R WoNS		WEED OF NATIONAL SIGNIFICANCE – illegal Colonised grassy riverine slope and infested trees. Combined infestation elsewhere tangled with Kikuyu grass. Infesting existing trees, tall and medium shrubs. Year-round management until eradicated. Brush-and-paint poison given asbestos in the soil ☠ Experiment with targeted surface spray on shallow regrowth. • DO NOT SPRAY VINES. Poison does not penetrate. • DO NOT MOW. a) This causes heavier infestation b) It can scatter aerial tubers • Scrape & paint poison hard-to-remove vines with glyphosate. Studies have found other pesticides ineffectual. • Secateur-cut and paint poison emerging plants • Bag immediately DO NOT LEAVE IN PILES ON GROUND DO NOT PUT IN COMPOST • 1st priority: trees and other existing vegetation, which get smothered (cut ends with secateurs, brush & paint poison).	S1 - High risk = High priority Year-round

	Kikuyu grass (Pennisetum clandestinum)		**Currently buffer against erosion & other weeds** Colonised grassy slope to left of revegetated area and higher up the bank behind Wominjeka Wall; infestation further up the bank towards Dights Falls. • **Bring down grass level** (brush cut) • **Hand weed** to remove from root using a fork • **Break down dead grass layers** to allow leaf mulch to accumulate. Break up dead grass to use as mulch if leaf mulch unavailable. • **Hand weed & surface spray** emerging weeds. • **Bag all weeds** for immediate removal. Do not spray during times of stress. E.g. extreme temperatures. Poison take-up is poor.	S1 - High risk = High priority Sept. | Dec. | Mar.
	African Box Thorn (Lyceum Ferocissimum) WoNC C		WEED OF NATIONAL SIGNIFICANCE – illegal **Year-round management until eradicated.** • Cut branches back to stump/s • Scrape and paint poison stump/s • Cut branches into small pieces, immediately take off site. Follow up regrowth with more poison until plant is dead	S1 - High risk = High priority Year-round
	Scotch Thistle		Scattered throughout site	S3 – Low risk = low priority Winter | Spring

			Hand remove July-September as much as feasible before seeds drop.	Reduce seed bank
	White fumitory (Fumaria Capreolata)		Annual early autumn-early spring, scattered through bank. Fills void left by other weed removal. **Very persistent, extensive seedbank.** Ongoing • **Remove as much as feasible before seeds drop.** • **Target weeds where flowering stems have smothered vegetation** • **Bag flowering/seeding plants immediately** • **Replace onsite with leaf mulching and replacement with grasses/groundcovers.** DO NOT DRAG **stems.** This causes seeds to drop.	**S2 – moderate risk** Autumn / Winter / Spring **Target flowering/seeding plants. Get seed bank off site.**
	Wild Radish (Raphanus raphanistrum)		Not many plants in this area.	**S2-S1 - Moderate risk = Moderate priority** Winter-Spring / Mid-late Summer

			Annual late winter-early spring throughout bank where there is no indigenous ground competition/vegetation at all. Prolific seeder (up to 6 years germination) • Hand remove July-September and January-February as much as feasible before seeds drop and after new seedlings emerge. • Eliminate from asset retention (highest quality) areas first. • Cut weed stem near base. Bagging unnecessary if seedpods closed	Monitor as other weeds are reduced. Reduce seed bank.

Area	Weed		Comments	Action
Open area (open bluestone drain to end of ARB site at bluestone drain to river) RIPARIAN ZONE OWNER:	Chilean Needle Grass (Nassella neesiana) R		• Isolated patches near northern end of site close to bluestone drain • Identified and removed by Melbourne Water crew 2020-21. • Continue to monitor for outbreaks.	S1 – highly invasive = high risk. Year-round
	Common (or narrow leafed) Vetch (Vicia Sativa)			S2 – Moderately invasive = moderate risk Autumn / Winter / Spring

CROWN LAND **MANAGED:** PARKS VICTORIA **WATER MANAGER:** Melbourne Water	Curled Dock (Rumex Crispus)		Weed of riparian zones & disturbed woodlands. ***One of the world's 'worst weeds' (Herbiguide).** Scattered plentifully throughout site, particularly at water's edge. • **Target early summer before flowers open** • **Cut to base of plant and paint poison** **Bag stems for removal**	**S1 – highly invasive = high risk.** **Early Summer**
	Kikuyu grass (Pennisetum clandestinum)		• **High risk in mass planting** area • In other areas it is **currently a buffer against erosion & other weeds** Kikuyu has colonised entire upper bank between the immediate left of open drain and stairs abutting Helen's patch. Gradually reduce level and remove as asbestos problem is addressed and revegetation is gradually extended. **Two approaches recommended:** 1. Monitor in mass planting areas where	**S1 - High risk = High priority** **Sept.** | **Dec.** | **Mar.** **High priority to reduce and gradually eliminate kikuyu so indigenous plants can outcompete and soil quality can improve.**

			plants cannot outcompete. Gradually remove dead grass to allow leaf mulch to accumulate. 2. **Brush cut to reduce thick grass to a manageable level for hand weeding.** Weeding: • **Hand weed** to remove from root using a fork • **Break down dead grass layers** to allow leaf mulch to accumulate. Break up dead grass to use as mulch if leaf mulch unavailable. • **Hand weed & surface spray** emerging weeds. • **Bag all weeds** for immediate removal. Do not spray during times of stress. E.g. extreme temperatures. Poison take-up is poor. times of stress. E.g. extreme temperatures. Poison take-up is poor.	
	Common Purslane		2022 – infestation much reduced but keep on top of	S3 - Low risk = low priority Summer / Autumn

	(Portulaca oleracea)		**isolated outbreaks, esp. along Trail.** • Hand weed with fork • Pull out from root, minimising soil disturbance. Pat back soil and cover with leaf mulch.	BUT expanding rapidly from end 2019. Target to halt spread.
	Oxalis (Oxalis Pes Caprae) R		**Non-bullying annual, almost impossible to eliminate.** Colonised entire bank. **Low priority 2019-20** **Cut & paint poison/extract bulbs on ad hoc basis**	**S2 - Moderate risk** Winter | Spring
	Purple top (Verbena Bonariensis)		**January 2022 update –** Multiplied in volume between Trail and river during 2020-20 Covid lockdown. Starting to address through scrape and paint poisoning to eradicate plants in situ to keep lower bank intact.	**S2 - Moderate risk** Summer **Address before flowers have matured and seeds have dropped.**
	Small-flowered Mallow		Concentrated along pathway and near	**S2-S1 - Moderate risk = Moderate priority for this area.** Late Winter | Early Spring | Mid-late Summer

	(Malva parviflora)		drainage. Colonisation has increased in 2019. Ongoing – easily managed as this is a highly monitored area • **Remove out early Spring or mid-late Summer if recurring.** • **Remove by hand without disturbing soil. Recover with leaf mulch.**	**Reduce seed bank July-September before seeds drop.**
	Stinging nettle (Urtica Urens)		Concentrated along pathway and near drainage. Colonisation has increased in 2019. Ongoing – easily managed as this is a highly monitored area • **Remove July-September** **Hand weed, pat back disturbed soil & cover with leaf mulch**	**S2-S1 - Moderate risk = Moderate priority for this area.** **Winter** | **Spring** **Reduce seed bank July-September before seeds drop.**
	White Fumitory			**S2 - Moderate risk = Moderate priority** **Winter** | **Spring** | **Early Autumn**

	(Fumaria capreolata)		Scattered through bank. Fills void left by other weed removal Ongoing • **Remove as much as feasible before seeds drop.** • **Target weeds where flowering stems have smothered vegetation** • **Bag flowering/seeding plants immediately** • **Replace onsite with leaf mulching and replacement with grasses/groundcovers.** DO NOT DRAG **stems.** This causes seeds to drop.	