



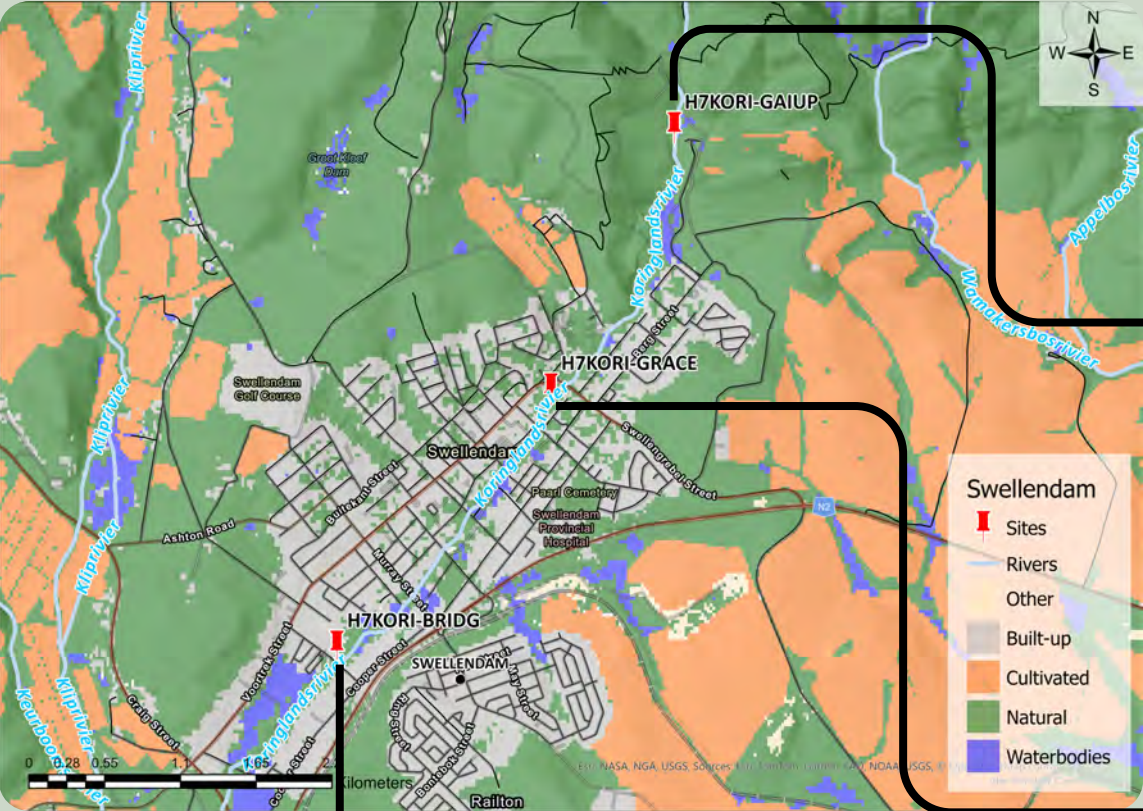
GROOTVADERSBOSCH
CONSERVANCY

STATE OF OUR RIVERS



SWELLENDAM

KORINGLANDS RIVER



INDEX



ECOLOGICAL CATEGORY
(Average species per Taxon (ASPT) is a biological index used to assess river health by averaging the sensitivity scores assigned to each macro-invertebrate family found in a sample. Based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines.

Ecological categories are based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines

A - Natural **B - Good** **C - Fair** **D - Poor** **E/F - Seriously/Critically Modified**



RIPARIAN VEGETATION HEALTH

(based on a visual estimate of invasive plants)

A – Healthy: Mostly indigenous plants (invasives < 5%).
B – Good: Indigenous plants dominate, but invasives are present (5–50%).
C – Poor: Invasive plants dominate, but some indigenous remain (< 50% indigenous).
D – Very Poor: Almost entirely invasive plants (indigenous < 5%).

Adjustments

A minus (-): Indigenous plants have low diversity (3 or fewer species).

A plus (+): High plant diversity (4 or more indigenous species).



VISIBLE DISTURBANCE

A – Healthy: No visible disturbance or pollution.
B – Fair: One visible disturbance (e.g. pipes, abstraction, riverbed disturbance, cattle, litter).
C – Poor: Two to three visible disturbances.
D – Very Poor: Multiple types of disturbances present.

Adjustments

A minus (-): Signs of pollution (e.g. algae growth, bad smells).

A plus (+): Mitigation measures in place (e.g. fencing, rehabilitation, controlled access).



TREND

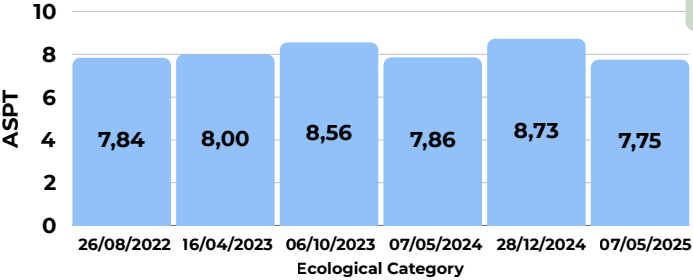
The trend for ecological category, is determined based on consistence trend over the last 2 results with a 0.5 increase or decrease. Other trends are based on comparison with previous years and known changes.



Trend

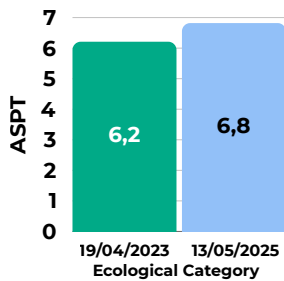
Improved **Declined** **No change**

H7KORI-GAIUP



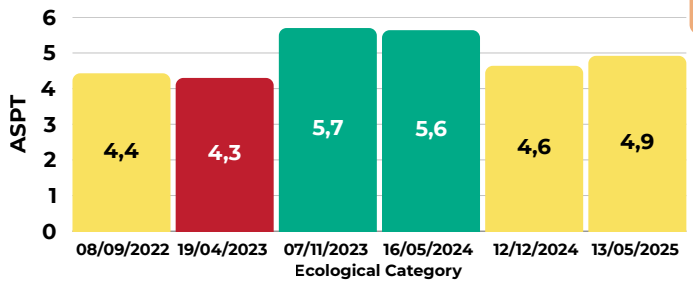
	26/08/2022	16/04/2023	06/10/2023	07/05/2024	28/12/2024	07/05/2025
Temp (°C)	10,47	14,04	16,35	14,24	15,2	14,54
pH	4,42	5,12	5,35	5,37	3,34	3,82
DO (mg/L)	5,66	8,5	4,91	6,19	1,5	11,85
EC (mS/m)	4,8	4,5	6,7	-	5,2	4,7

H7KORI-GRACE



	19/04/2023	13/05/2025
Temp (°C)	15	13,49
pH	7,01	6,2
DO (mg/L)	4,08	7,52
EC (mS/m)	71	7,3

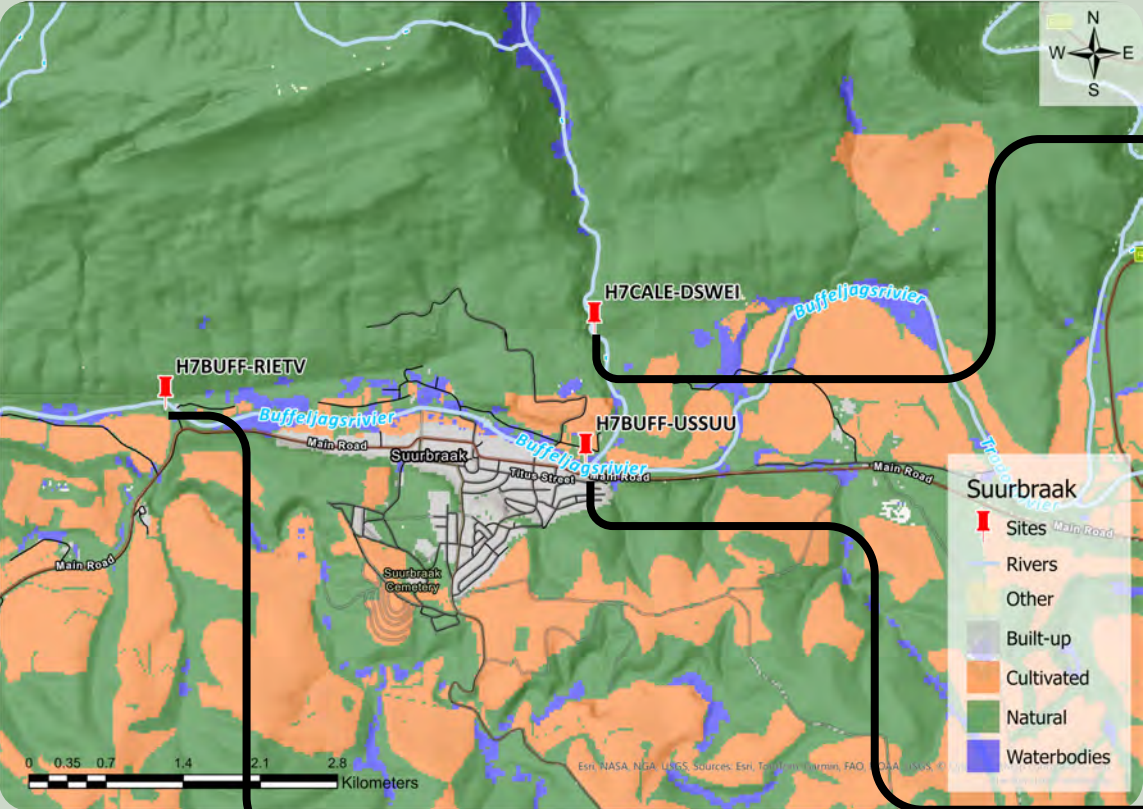
H7KORI-BRIDG



	08/09/2022	19/04/2023	07/11/2023	16/05/2024	12/12/2024	13/05/2025
Temp (°C)	13,66	18,1	19,9	16,2	25,2	12,9
pH	7,31	7,7	7,29	6,75	7,87	6,8
DO (mg/L)	3,9	5,75	5,15	9,39	2,14	5,07
EC (mS/m)	29,1	21,8	39	24,7	29,6	24,7

SUURBRAAK

GROOTVADERSBOSCH RIVER



INDEX



ECOLOGICAL CATEGORY
(Average species per Taxon (ASPT) is a biological index used to assess river health by averaging the sensitivity scores assigned to each macro-invertebrate family found in a sample. Based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines.

Ecological categories are based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines

A - Natural **B - Good** **C - Fair** **D - Poor** **E/F - Seriously/Critically Modified**



RIPARIAN VEGETATION HEALTH
(based on a visual estimate of invasive plants)

A – Healthy: Mostly indigenous plants (invasives < 5%).
B – Good: Indigenous plants dominate, but invasives are present (5–50%).
C – Poor: Invasive plants dominate, but some indigenous remain (< 50% indigenous).
D – Very Poor: Almost entirely invasive plants (indigenous < 5%).

Adjustments
A minus (-): Indigenous plants have low diversity (3 or fewer species).
A plus (+): High plant diversity (4 or more indigenous species).



FISH HEALTH
(based on 2 fyke netting results in April/May and October/November)

A – Healthy: Only indigenous fish present.
B – Fair: Indigenous fish present, but invasives also occur.
C – Poor: Only invasive fish present.
D – Very Poor: No fish present, but indigenous fish were historically known from the site. (Do not use D if the site is naturally fish-free.)

Adjustments
A minus (-): Fish unhealthy or with parasites; only small size classes; or very low numbers (< 5 individuals over both samples in a given year).
A plus (+): High diversity (2+ indigenous species), many size classes (including large/breeding fish), and abundant numbers (20+ individuals over both samples in a given year).



VISIBLE DISTURBANCE

A – Healthy: No visible disturbance or pollution.
B – Fair: One visible disturbance (e.g. pipes, abstraction, riverbed disturbance, cattle, litter).
C – Poor: Two to three visible disturbances.
D – Very Poor: Multiple types of disturbances present.

Adjustments
A minus (-): Signs of pollution (e.g. algae growth, bad smells).
A plus (+): Mitigation measures in place (e.g. fencing, rehabilitation, controlled access).

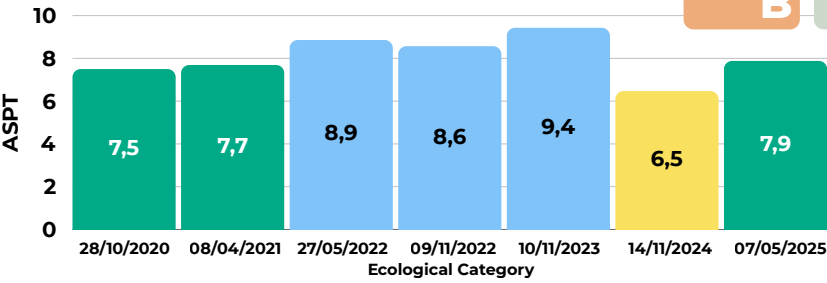


TREND
The trend for ecological category, is determined based on consistence trend over the last 2 results with a 0.5 increase or decrease. Other trends are based on comparison with previous years and known changes.



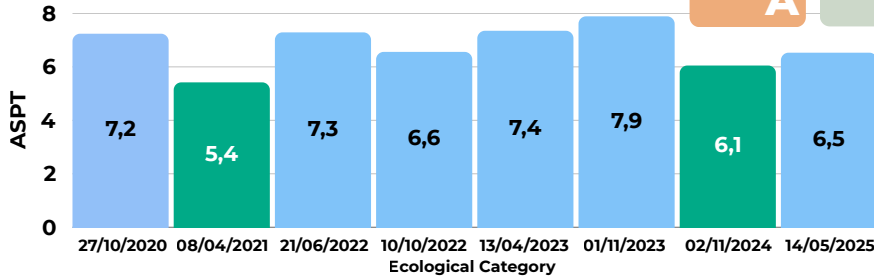
Trend
Improved Declined No change

H7CALE-DSWEI



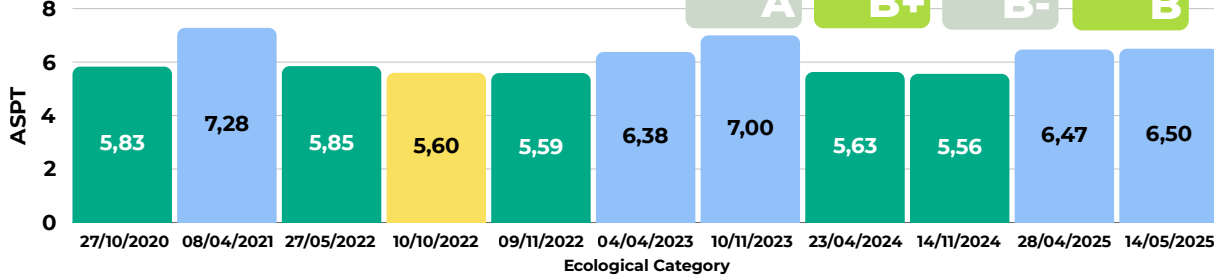
	08/04/2021	27/05/2022	09/11/2022	10/11/2023	07/05/2025
Temp (°C)	15,7	13,59	17,81	17,5	13,26
pH	3,96	4,2	4,07	5,6	3,83
DO (mg/L)	8,93	12,25	3,38	3,7	9,29
EC (mS/m)	-	4,8	5,2	4,5	5,3

H7BUFF-USSUU



	21/06/2022	10/10/2022	13/04/2023	01/11/2023	02/11/2024	14/05/2025
Temp (°C)	11,8	20,13	16,3	18,8	21,96	13,24
pH	7,6	7,26	7,06	6,83	7,15	6,13
DO (mg/L)	14	3,04	3,66	5,19	-	7,87
EC (mS/m)	29,2	38	19,3	29,5	48	26,1

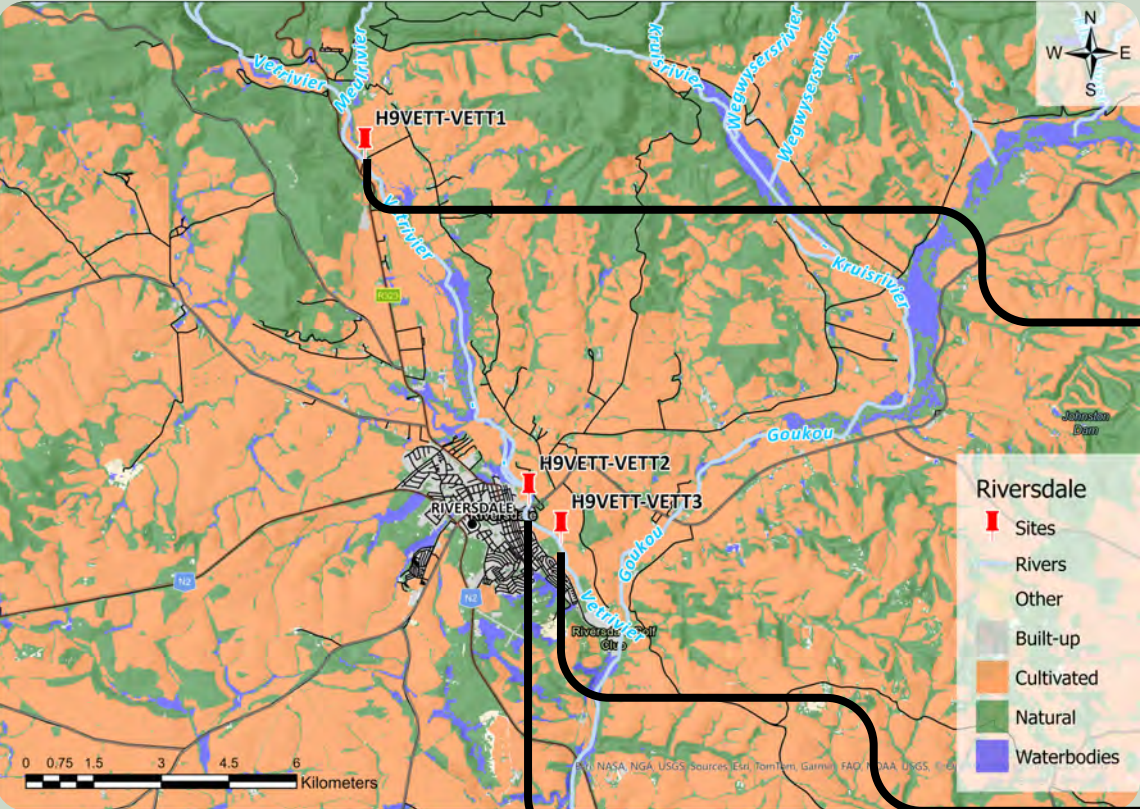
H7BUFF-RIETV



	27/10/2020	13/04/2022	11/10/2022	04/04/2023	10/11/2023	23/04/2024	28/04/2025	14/05/2025
Temp (°C)	20,63	19,18	23,12	18,25	21,8	19,26	19,24	14,4
pH	6,29	5	7,28	7,35	6,92	7,14	6,56	6,9
DO (mg/L)	18,29	-	2,93	3,75	5,54	3,38	8,48	8,32
EC (mS/m)	14,1	25,83	33,3	15,7	43,5	39,1	21,4	38,8

RIVERSDALE

VETTE RIVER



INDEX



ECOLOGICAL CATEGORY
(Average species per Taxon (ASPT) is a biological index used to assess river health by averaging the sensitivity scores assigned to each macro-invertebrate family found in a sample. Based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines.

Ecological categories are based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines

A - Natural **B - Good** **C - Fair** **D - Poor** **E/F - Seriously/Critically Modified**



RIPARIAN VEGETATION HEALTH
(based on a visual estimate of invasive plants)

A – Healthy: Mostly indigenous plants (invasives < 5%).
B – Good: Indigenous plants dominate, but invasives are present (5–50%).
C – Poor: Invasive plants dominate, but some indigenous remain (< 50% indigenous).
D – Very Poor: Almost entirely invasive plants (indigenous < 5%).

Adjustments
A minus (-): Indigenous plants have low diversity (3 or fewer species).
A plus (+): High plant diversity (4 or more indigenous species).



VISIBLE DISTURBANCE

A – Healthy: No visible disturbance or pollution.
B – Fair: One visible disturbance (e.g. pipes, abstraction, riverbed disturbance, cattle, litter).
C – Poor: Two to three visible disturbances.
D – Very Poor: Multiple types of disturbances present.

Adjustments
A minus (-): Signs of pollution (e.g. algae growth, bad smells).
A plus (+): Mitigation measures in place (e.g. fencing, rehabilitation, controlled access).



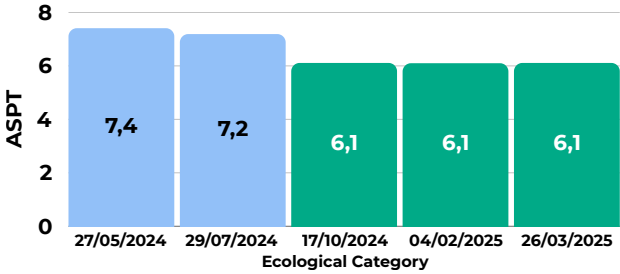
TREND

The trend for ecological category, is determined based on consistence trend over the last 2 results with a 0.5 increase or decrease. Other trends are based on comparison with previous years and known changes.



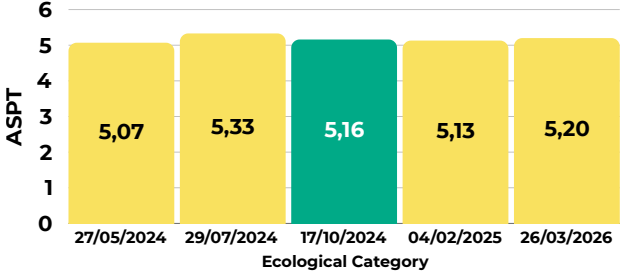
Trend
Improved Declined No change

H9VETT-VETT1



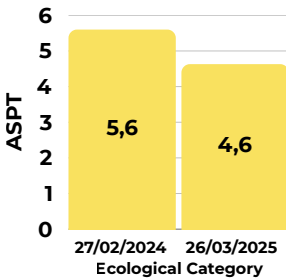
	27/05/2024	29/07/2024	17/10/2024	04/02/2025	26/03/2025
Temp (°C)	15,5	11,02	17,76	20,76	19,2
pH	6,32	5,75	5,82	5,7	5,2
DO (mg/L)	8,57	7,8	7,07	7,31	8,83
EC (mS/m)	14,3	12,7	15,2	11,2	9,8

H9VETT-VETT2



	27/05/2024	29/07/2024	17/10/2024	04/02/2025	26/03/2026
Temp (°C)	14,33	10,6	18,59	23,93	21,26
pH	7,6	7,4	7,33	6,77	6,96
DO (mg/L)	0	7,28	5,86	6,67	5,83
EC (mS/m)	147,6	80,7	148,8	52	64,4

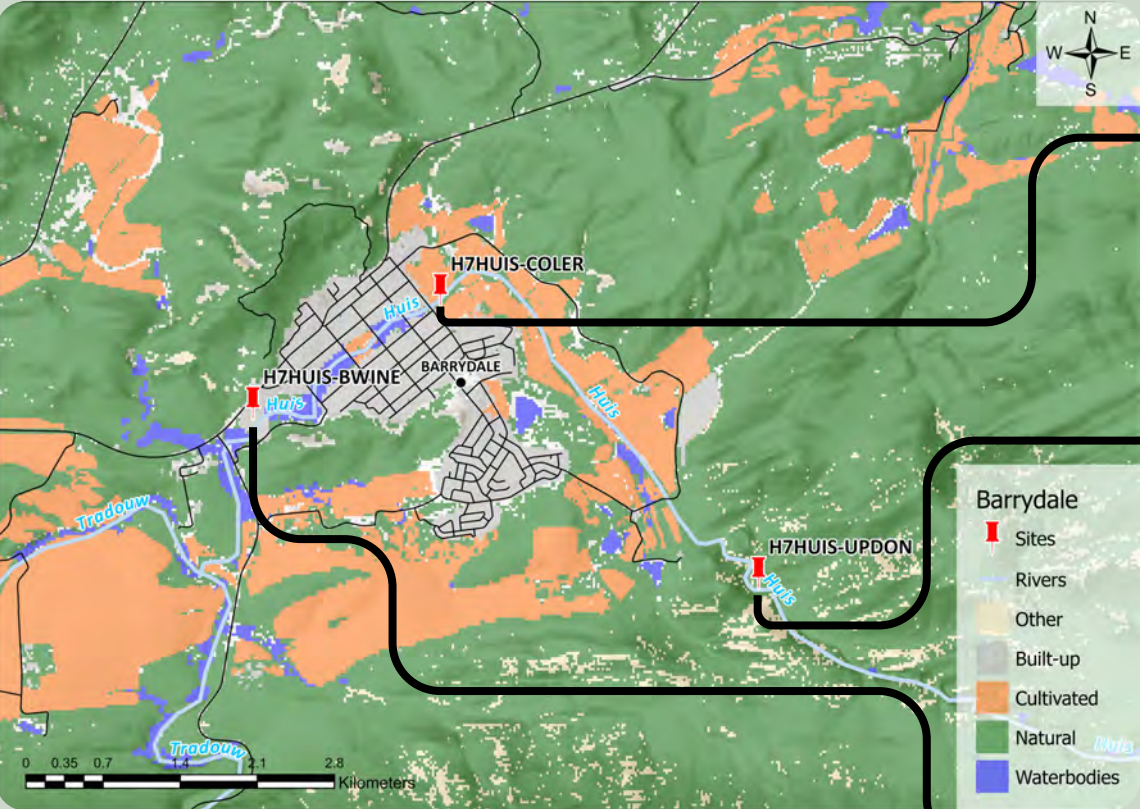
H9VETT-VETT3



	27/02/2024	29/07/2024	26/03/2025
Temp (°C)	14,22	10,93	21,5
pH	7,82	7,6	7,04
DO (mg/L)	7,44	7,5	5,48
EC (mS/m)	163,2	182,7	67

BARRYDALE

HUIS RIVER



INDEX

ECOLOGICAL CATEGORY
(Average species per Taxon (ASPT) is a biological index used to assess river health by averaging the sensitivity scores assigned to each macro-invertebrate family found in a sample. Based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines.

Ecological categories are based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines

A - Natural **B - Good** **C - Fair** **D - Poor** **E/F - Seriously/Critically Modified**

RIPARIAN VEGETATION HEALTH
(based on a visual estimate of invasive plants)

A – Healthy: Mostly indigenous plants (invasives < 5%).
B – Good: Indigenous plants dominate, but invasives are present (5–50%).
C – Poor: Invasive plants dominate, but some indigenous remain (< 50% indigenous).
D – Very Poor: Almost entirely invasive plants (indigenous < 5%).

Adjustments
A minus (-): Indigenous plants have low diversity (3 or fewer species).
A plus (+): High plant diversity (4 or more indigenous species).

FISH HEALTH
(based on 2 fyke netting results in April/May and October/November)

A – Healthy: Only indigenous fish present.
B – Fair: Indigenous fish present, but invasives also occur.
C – Poor: Only invasive fish present.
D – Very Poor: No fish present, but indigenous fish were historically known from the site. (Do not use D if the site is naturally fish-free.)

Adjustments
A minus (-): Fish unhealthy or with parasites; only small size classes; or very low numbers (< 5 individuals over both samples in a given year).
A plus (+): High diversity (2+ indigenous species), many size classes (including large/breeding fish), and abundant numbers (20+ individuals over both samples in a given year).

VISIBLE DISTURBANCE

A – Healthy: No visible disturbance or pollution.
B – Fair: One visible disturbance (e.g. pipes, abstraction, riverbed disturbance, cattle, litter).
C – Poor: Two to three visible disturbances.
D – Very Poor: Multiple types of disturbances present.

Adjustments
A minus (-): Signs of pollution (e.g. algae growth, bad smells).
A plus (+): Mitigation measures in place (e.g. fencing, rehabilitation, controlled access).

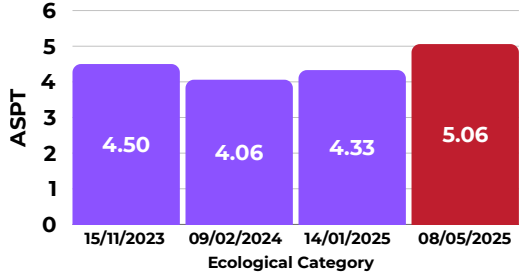
TREND
The trend for ecological category, is determined based on consistence trend over the last 2 results with a 0.5 increase or decrease. Other trends are based on comparison with previous years and known changes.



Trend

Improved **Declined** **No change**

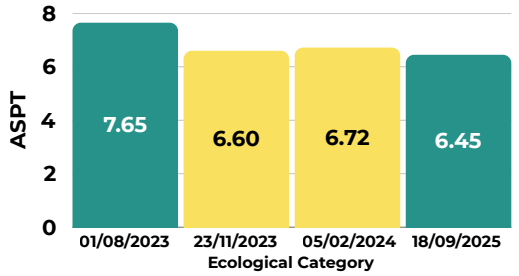
H7HUIS-COLER



	15/11/2023	09/02/2024	14/01/2025	08/05/2025
Temp (°C)	20,7	23,7	23,88	14,43
pH	8,12	8,2	7,94	7,26
DO (mg/L)	8,25	13,47	9,76	11,05
EC (mS/m)	7,49	40,5	52,1	26,9



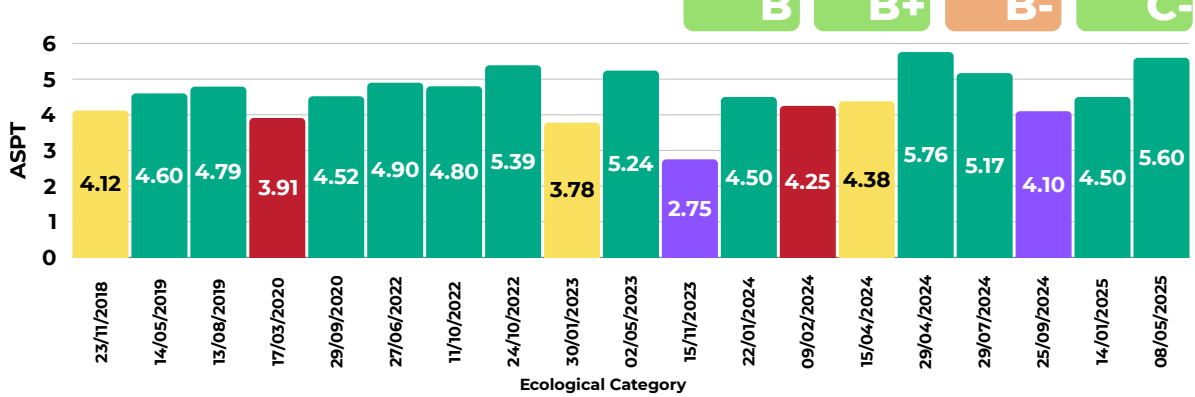
H7HUIS-UPDON



	01/08/2023	23/11/2023	05/02/2024	18/09/2025
Temp (°C)	10,8	20,48	24,67	13,63
pH	4,18	4,9	4,46	4,27
DO (mg/L)	-	2,45	9,01	7,49
EC (mS/m)	6	13,2	6,1	5,6



H7HUIS-BWINE

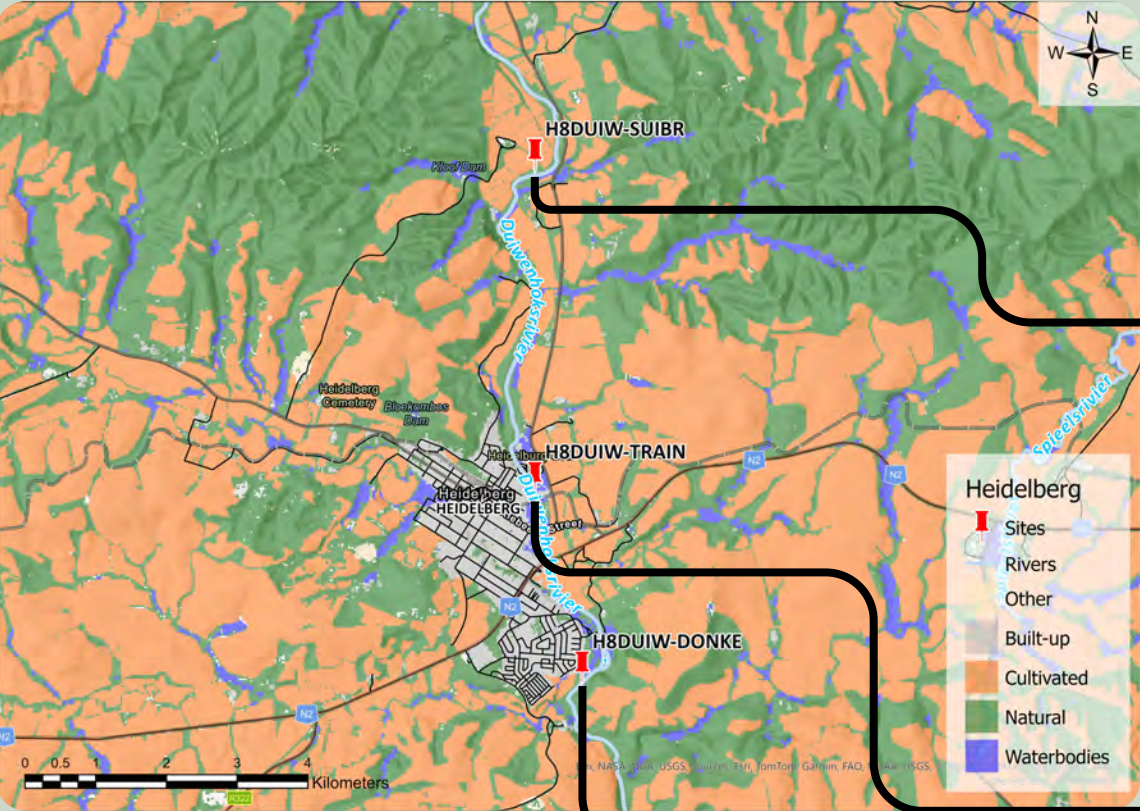


	23/11/2018	27/06/2022	12/10/2022	02/05/2023	15/11/2023	09/02/2024	15/04/2024	29/04/2024	25/09/2024	14/01/2025	08/05/2025
Temp (°C)	19,7	9,7	18,3	15,86	23,74	24,9	16,15	17,8	15,35	25,27	13,9
pH	6,09	7,81	8,16	8,41	9,28	8,29	7,23	8,7	7,78	6,51	6,88
DO (mg/L)	6,6	12,2	4,84	3,89	9,03	12,88	3,56	9,5	10,28	10,98	12,32
EC (mS/m)	-	17,2	48,6	27,4	10,09	40,1	24,5	-	33,7	15,4	27,36



HEIDELBERG

DUIWENHOKS RIVER



INDEX



ECOLOGICAL CATEGORY
(Average species per Taxon (ASPT) is a biological index used to assess river health by averaging the sensitivity scores assigned to each macro-invertebrate family found in a sample. Based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines.

Ecological categories are based on interpretation of SASS data using Dallas (2007) SASS data interpretation guidelines

A - Natural **B - Good** **C - Fair** **D - Poor** **E/F - Seriously/Critically Modified**



RIPARIAN VEGETATION HEALTH

(based on a visual estimate of invasive plants)

A – Healthy: Mostly indigenous plants (invasives < 5%).
B – Good: Indigenous plants dominate, but invasives are present (5–50%).
C – Poor: Invasive plants dominate, but some indigenous remain (< 50% indigenous).
D – Very Poor: Almost entirely invasive plants (indigenous < 5%).

Adjustments

A minus (-): Indigenous plants have low diversity (3 or fewer species).

A plus (+): High plant diversity (4 or more indigenous species).



VISIBLE DISTURBANCE

A – Healthy: No visible disturbance or pollution.
B – Fair: One visible disturbance (e.g. pipes, abstraction, riverbed disturbance, cattle, litter).
C – Poor: Two to three visible disturbances.
D – Very Poor: Multiple types of disturbances present.

Adjustments

A minus (-): Signs of pollution (e.g. algae growth, bad smells).

A plus (+): Mitigation measures in place (e.g. fencing, rehabilitation, controlled access).



TREND

The trend for ecological category, is determined based on consistence trend over the last 2 results with a 0.5 increase or decrease. Other trends are based on comparison with previous years and known changes.

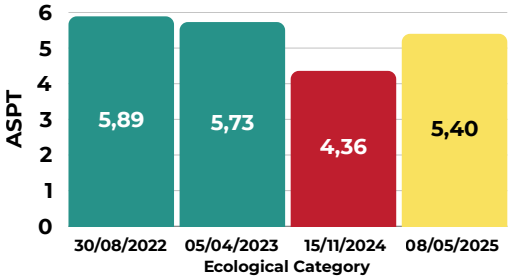


Trend

Improved **Declined** **No change**



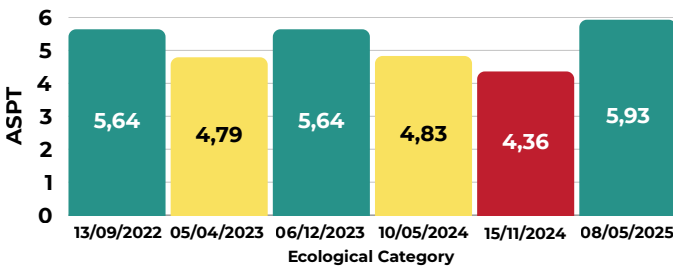
H8DUIW-SUIBR



	30/08/2022	05/04/2023	15/11/2024	08/05/2025
Temp (°C)	14	19,19	19,32	14,49
pH	7	6,4	5,6	5,79
DO (mg/L)	-	5,08	7,2	14,62
EC (mS/m)	11	11,4	15,4	13,6



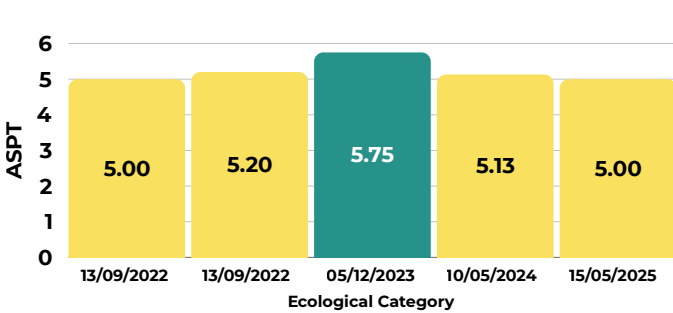
H8DUIW-TRAIN



	13/09/2022	05/04/2023	10/05/2024	15/11/2024	08/05/2025
Temp (°C)	17,53	20,33	16,5	21,46	15,48
pH	7,23	4,62	6,58	6,15	5,93
DO (mg/L)	11,25	3,31	9,1	6,5	14,93
EC (mS/m)	32,7	8,1	39,9	179	17,8



H8DUIW-DONKE



	13/09/2022	05/04/2023	05/12/2023	10/05/2024	15/05/2025
Temp (°C)	15	17,5	23,99	-	16,6
pH	7,41	7,39	7,53	7,6	6,5
DO (mg/L)	8,83	5,3	-	10,25	11,54
EC (mS/m)	75,1	21,2	-	132,8	56,2

STATE OF THE KORINGLANDS RIVER

The upper section of the river is in a near natural state with minimal invasive species. Although no fyke net monitoring was undertaken, indigenous fish are known to occur in this reach.

Further downstream, invasive vegetation becomes more prevalent, though the river remains in fairly good condition. In the lower sections of town, the ecological state declines to fair condition. Here, invasive plants dominate and visible disturbances, including litter, become more common. Activities such as washing cars close to the river are observed.

Recommended actions to be taken:

- Prioritise the removal of invasive vegetation and re-establish natural riparian buffers.
- Raise awareness on littering and other disturbances to river health.
- Educate communities about invasive plants, especially those spread from gardens into the riparian area.
- Discourage harmful activities such as car washing at lower river sites.
- Re-establish natural riparian buffer zones which will assist to stabilise river banks

STATE OF THE GROOTVADERSBOSCH RIVER

The upper tributary of the river is in good ecological condition. Although invasive vegetation is widespread, the system remains close to a natural state and supports a healthy population of indigenous fish, although invasives species numbers are increasing.

Despite slight declines in ASPT, the river health through the town of Suurbraak is still very good. Invasive alien plants are present but not dominant, and indigenous riparian vegetation remains fairly strong. Indigenous fish occur, but invasive fish species are dominant. Occasional cattle access the river and scattered litter are visible impacts at this site.

The site downstream of the town is also in good condition, with limited invasive vegetation. However, invasive fish species remain dominant in this section.

Recommended actions to be taken:

- Clear invasive vegetation, particularly in the upper reaches.
- Prevent cattle access to the river to reduce bank erosion and pollution.
- Control the spread of invasive fish by preventing their transport, especially to upstream areas that remain free of invasives.
- Raise community awareness about the importance of invasive plant clearing and keeping the river free of litter

STATE OF THE VETTE RIVER

The ecological condition of the Vette River varies along its course. The upper section is generally in natural to good condition. In contrast, the lower section is in fair condition. Riparian zones throughout the river are heavily invaded by alien species such as black wattle, gum trees, and reeds, which have degraded both riparian and instream ecosystems. Agricultural activities contribute further impacts through channel and bed modification as well as water quality changes.

At the lower sites, additional pressures include littering, dumping, and car washing, while instream structures such as low-lying bridges influence natural flow and habitat availability, even in the upper reaches.

Recommended actions to be taken:

- Control alien invasive vegetation and re-establish indigenous riparian species.
- Maintain riparian buffers to reduce agricultural impacts.
- Promote community awareness and discourage harmful practices (e.g., car washing, dumping).
- Implement litter management measures, including signage and regular clean-ups.

STATE OF THE HUIS RIVER

The upper section of the river is in excellent condition, with diverse indigenous vegetation and only minimal invasive plants. It still supports a healthy population of critically endangered indigenous fish. A potential emerging threat is litter linked to unauthorised access.

As the river approaches the town, agricultural pressures become evident, with a noticeable increase in invasive plants and other disturbances, including litter and human waste. Ecological health declines further within the town. Indigenous fish are still present, but their health is affected by parasites and invasive fish. Downstream of the town, impacts remain present but are somewhat reduced due to ongoing riparian restoration and invasive plant management.

Recommended actions to be taken:

- Secure the upper catchment with exclusion fencing and signage to limit access and disturbance.
- Continue removing invasive plants in agricultural and urban areas.
- Restore and maintain riparian buffers to reduce impact of runoff from agricultural and urban activities.
- Monitor and maintain septic tanks to prevent leaks and flooding.
- Raise awareness on responsible detergent and chemical use and proper septic tank care.
- Educate communities to prevent the spread of invasive fish.

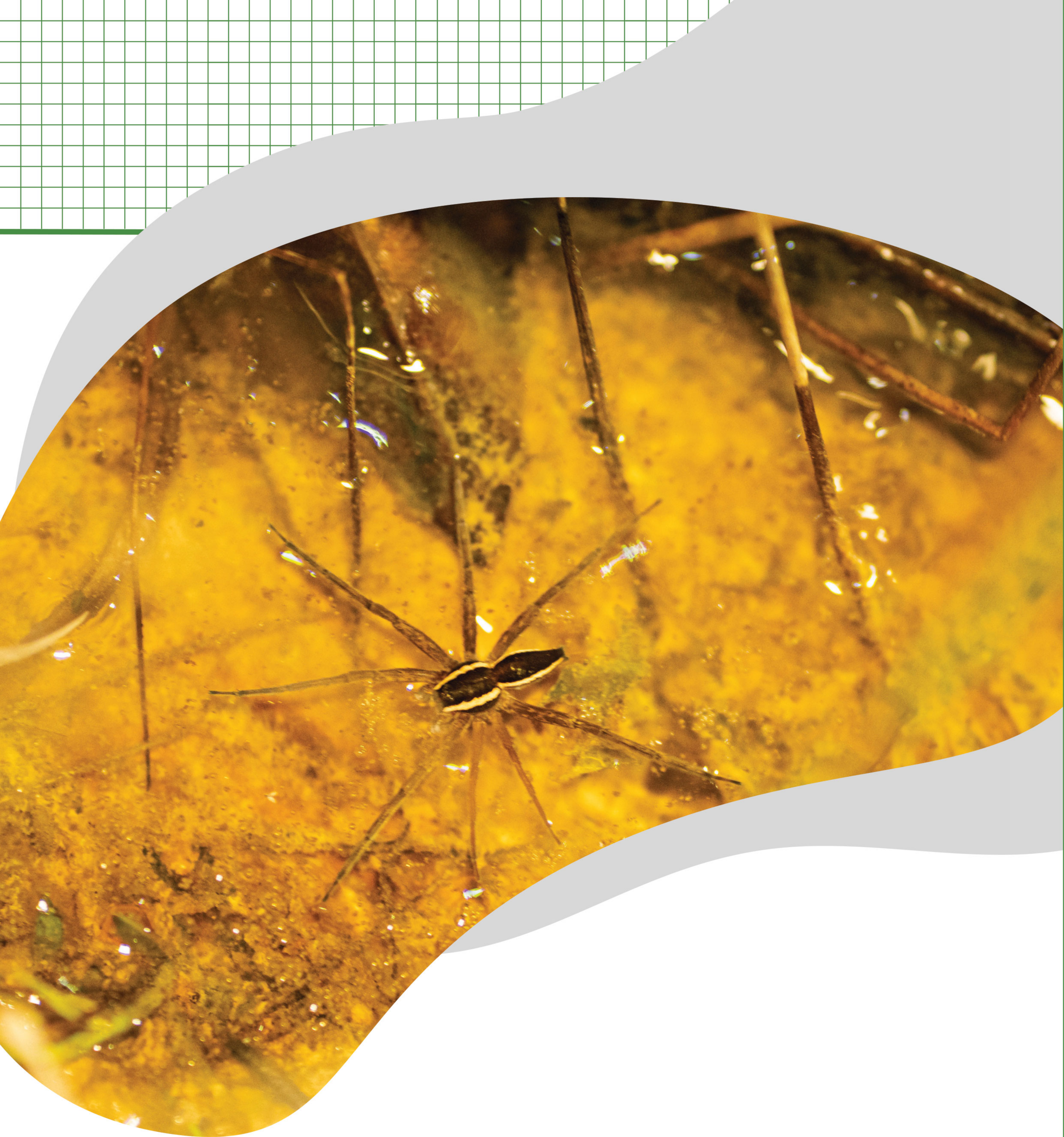
STATE OF THE DUIWENHOKS RIVER

The upper section of the river is in fair ecological condition, though there are signs of decline compared to the past two years. Significant invasive vegetation is present, along with evidence of sand extraction from the river.

The lower sections remain in relatively good condition but are dominated by invasive vegetation. Further downstream, pressures increase, with visible dumping, littering, car washing, and use of the river for cleaning household items. Livestock are also present in the floodplain. In some stretches, the floodplain is severely eroded, with high, deeply cut riverbanks.

Recommended actions to be taken:

- Eradicate invasive alien vegetation along the river and floodplain.
- Curb dumping and littering through enforcement and awareness.
- Restrict unauthorized access to the river, including vehicles, machinery, and inappropriate human use.
- Discourage harmful community practices such as car washing and cleaning in the river.
- Stabilise eroded banks and restore riparian vegetation to protect against further degradation.



info@gvbconservancy.co.za