

Compliance Review of Watercourse Impacts

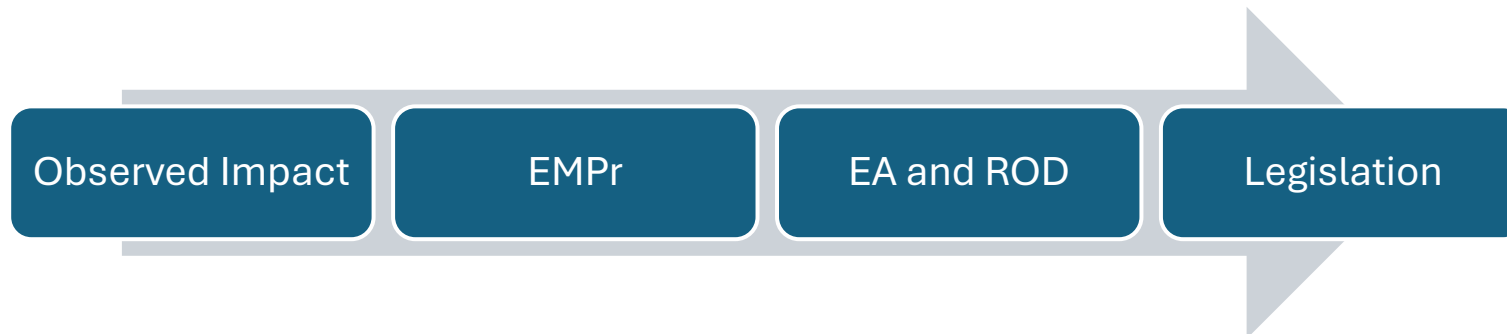
Findings from a field assessment of selected watercourses within a 500m radius of the N2 Wild Coast Toll Highway Project (Greenfields Section)

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Purpose of presentation

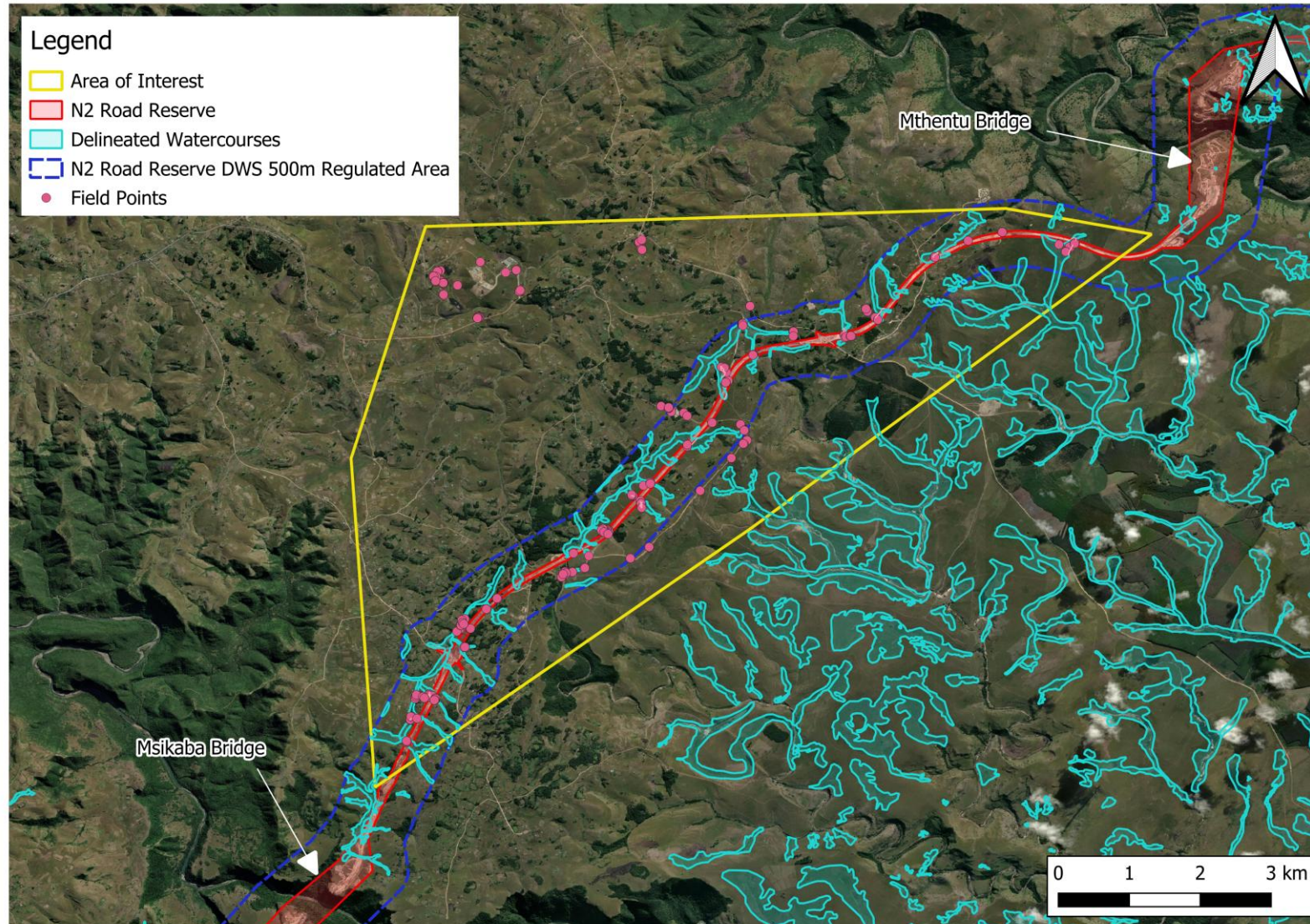
- Independent compliance review requested by Khanyayo and Amadiba Crisis Committees through their technical teams
- Focus is on watercourses and specifically wetlands and rivers
- Comparison against:
 - Environmental Authorisation and Record of Decision
 - Environmental Management Programme (EMPr) and Aquatic EMPr
 - National Environmental Management Act
 - National Water Act



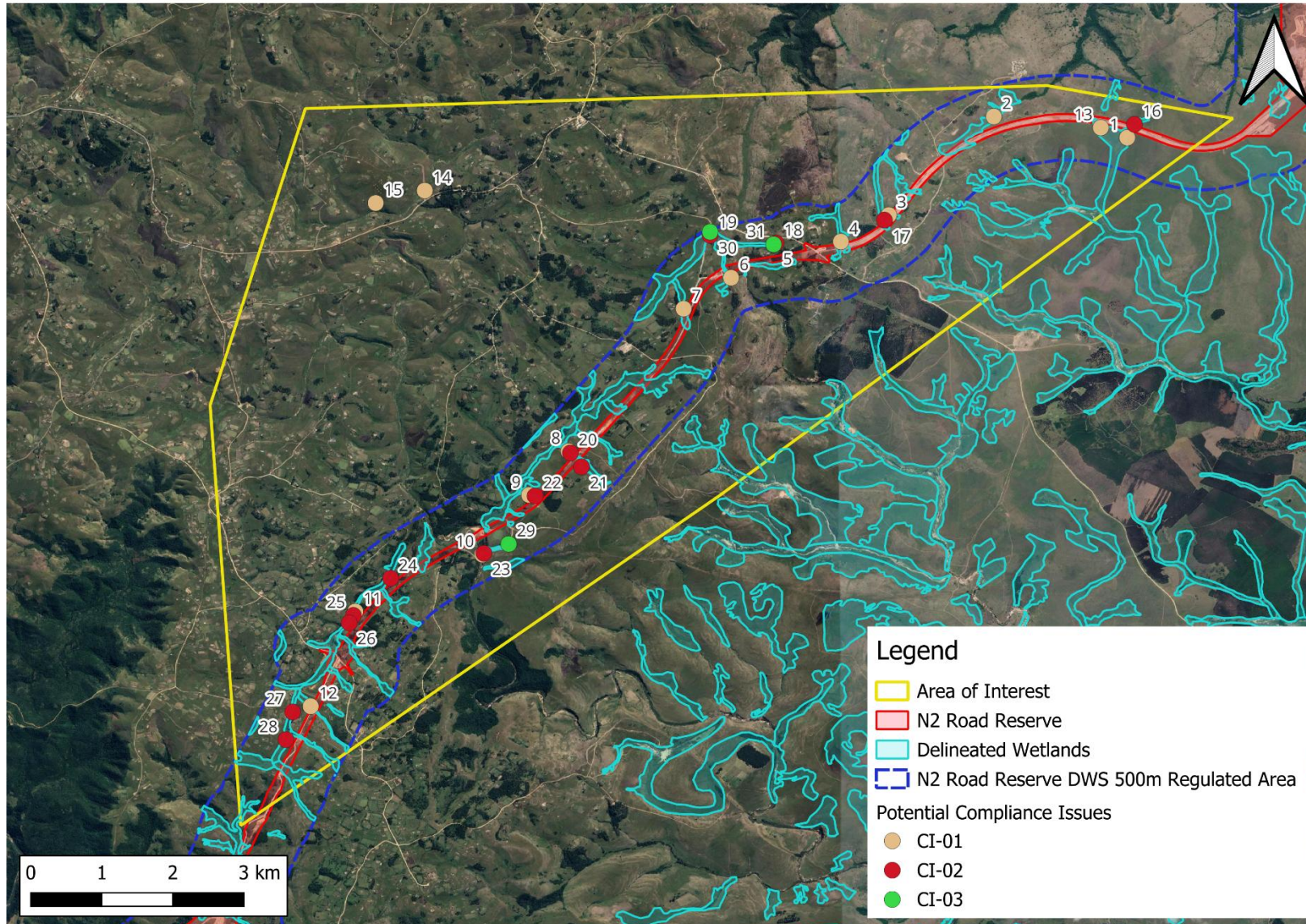
Assessment Method

- Pre GIS work to identify priority sites
- Consultation with Khanyayo residents
- Site visit and field observations (photographs, field notes and GPS points)
- Review of authorisations
- Compliance cross-check

Study Site



Summary of Findings



Summary of Key Findings

- Three systemic compliance issues (CI) were identified, with repeated impacts to aquatic ecosystems across multiple construction areas.
- 2 - 3 examples of each CI will be presented on the following slides

Issue ID	Compliance Issue	RoD Clauses	EMPr Clauses
CI-01	Sedimentation of watercourses due to inadequate stormwater and erosion control	6.1.1: Authorisation does not exempt SANRAL from compliance with other legislation. Relevant to NEMA/NWA breaches. 6.2.11.3: No trenches may be dug in wetland areas for stormwater disposal. 6.2.11.4: Wetlands in Greenfields sections must be delineated and class-specific mitigation measures drawn up before construction (link to EMPr's) 6.2.16.1(f): EMP must include measures to reduce soil erosion.	EMPr Clause 26: Erosion and sediment control; drainage works required; erosion prevention measures required; erosion method statement required. Aquatic EMPr: Sediment barriers required at crossings; temporary sediment traps downstream of excavations; no soil deposition into watercourses; stabilisation and revegetation of disturbed areas; stockpile erosion protection.
CI-02	Excessive and unnecessary disturbance of wetlands and watercourses during construction	6.1.1, Authorisation does not exempt SANRAL from compliance with other legislation. Relevant to NEMA/NWA breaches. 6.2.11.1: No construction camps, dumping or stockpiling of construction material allowed in or close to wetlands and watercourses. 6.2.11.2: Disturbed wetland areas must be re-vegetated using appropriate indigenous seed mix or wetland vegetation. 6.2.11.4: Wetlands in Greenfields sections must be delineated and class-specific mitigation measures drawn up before construction (link to EMPr's) 6.2.12.1: Vegetation disturbance must be restricted to the absolute minimum and rehabilitated as soon as possible.	EMPr Clause 20: No activities outside demarcated construction areas; wetland construction servitude must be minimised; no dumping or stockpiling in/near wetlands or watercourses. EMPr Clause 8: No materials stockpiled in wetlands. EMPr Clause 5: Stockpiles must be approved, demarcated, and erosion protected. EMPr Clause 2: Vegetation clearing must be minimised. EMPr Clause 10: Clearing for access roads requires written approval. EMPr Clause 3: Clearing requires approved method statement. Aquatic EMPr: Vehicles and stockpiles outside floodable areas; no spoil in inundation zones or stream channels; disturbance outside primary work area must be minimised; disturbance footprint must be physically marked.
CI-03*	Potential unauthorised and unnecessary access road crossings through watercourses	6.1.1 Authorisation does not exempt SANRAL from compliance with other legislation. Relevant to NEMA/NWA breaches. 6.2.11.5: All necessary DWA/DWS measures must be implemented where watercourses are crossed.	Potential non-compliance with approved access/haul road footprints and watercourse crossing authorisations. EMPr Clause 10 relevant where new access roads require approval and should preferably remain within road reserve.

*Subject to confirmation of the complete authorisation record.

Summary of Findings

- 31 instances of potential non-compliance were noted during the site visit

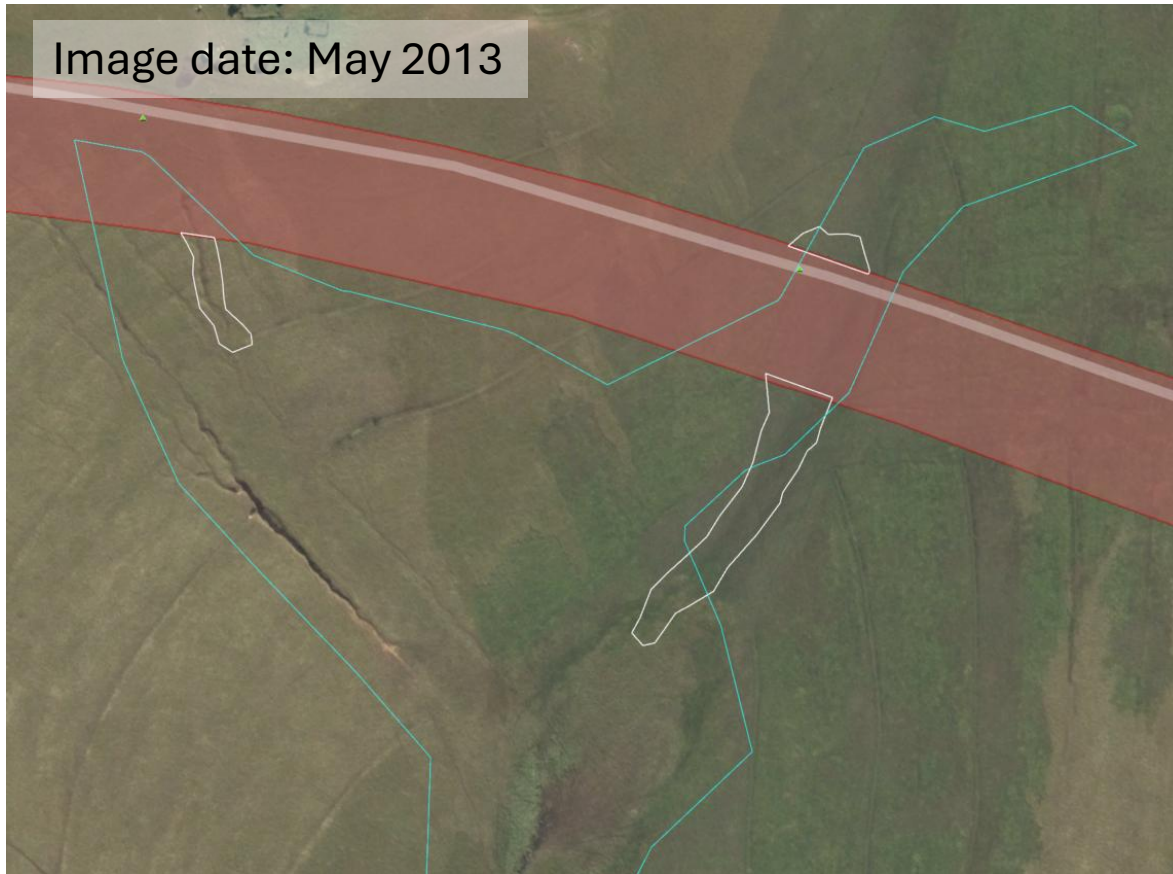
Number	CI Type	Latitude	Longitude	RoD Reference	EMPr Reference
1	CI-01	-31.1955	29.90804	6.1.1, 6.2.11.3, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
2	CI-01	-31.1931	29.89258	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
3	CI-01	-31.2045	29.88042	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
4	CI-01	-31.2076	29.87487	6.1.1, 6.2.11.3, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
5	CI-01	-31.2078	29.86721	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
6	CI-01	-31.2118	29.86215	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
7	CI-01	-31.2154	29.85665	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
8	CI-01	-31.2319	29.84333	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
9	CI-01	-31.2369	29.83876	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
10	CI-01	-31.2438	29.83333	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
11	CI-01	-31.2504	29.81862	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
12	CI-01	-31.2614	29.81346	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
13	CI-01	-31.1944	29.90497	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
14	CI-01	-31.2017	29.82666	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
15	CI-01	-31.2031	29.82098	6.1.1, 6.2.11.4, 6.2.16	EMPr: Table 5.1 (26), Aquatic EMPr: Multiple references
16	CI-02	-31.194	29.90887	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references

Summary of Findings

- 31 instances of potential non-compliance were noted during the site visit

Number	CI Type	Latitude	Longitude	RoD Reference	EMPr Reference
17	CI-02	-31.2051	29.8799	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
18	CI-02	-31.2078	29.86735	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
19	CI-02	-31.2069	29.85972	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
20	CI-02	-31.2321	29.84354	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
21	CI-02	-31.2337	29.84482	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
22	CI-02	-31.2371	29.83944	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
23	CI-02	-31.2437	29.83351	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
24	CI-02	-31.2466	29.82272	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
25	CI-02	-31.2509	29.8184	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
26	CI-02	-31.2518	29.81791	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
27	CI-02	-31.2621	29.81136	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
28	CI-02	-31.2653	29.81059	6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1	EMPr: Table 4.1 (2, 10), Table 5-1 (3, 5, 8, 20), Aquatic EMPr: Multiple references
29	CI-03	-31.2426	29.83639	6.1.1, 6.2.11.5	EMPr: Table 4.1 (10)
30	CI-03	-31.2065	29.85972	6.1.1, 6.2.11.5	EMPr: Table 4.1 (10)
31	CI-03	-31.2079	29.86708	6.1.1, 6.2.11.5	EMPr: Table 4.1 (10)

CI-01: Sedimentation due to poor stormwater control – Example 1 Overview



- Non-compliance in terms of RoD clauses 6.1.1, 6.2.11.3, 6.2.11.4, 6.2.16 and EMPr clause 26 in Table 5.1, Aquatic EMPr: Multiple references

CI-01: Sedimentation due to poor stormwater control – Example 1



CI-01: Sedimentation due to poor stormwater control – Example 2 Overview

Image date: February 2011

Image date: Nov 2025

1

2

- Non-compliance in terms of RoD clauses 6.1.1, 6.2.11.4, 6.2.16 and EMPr clause 26 in Table 5.1, Aquatic EMPr: Multiple references

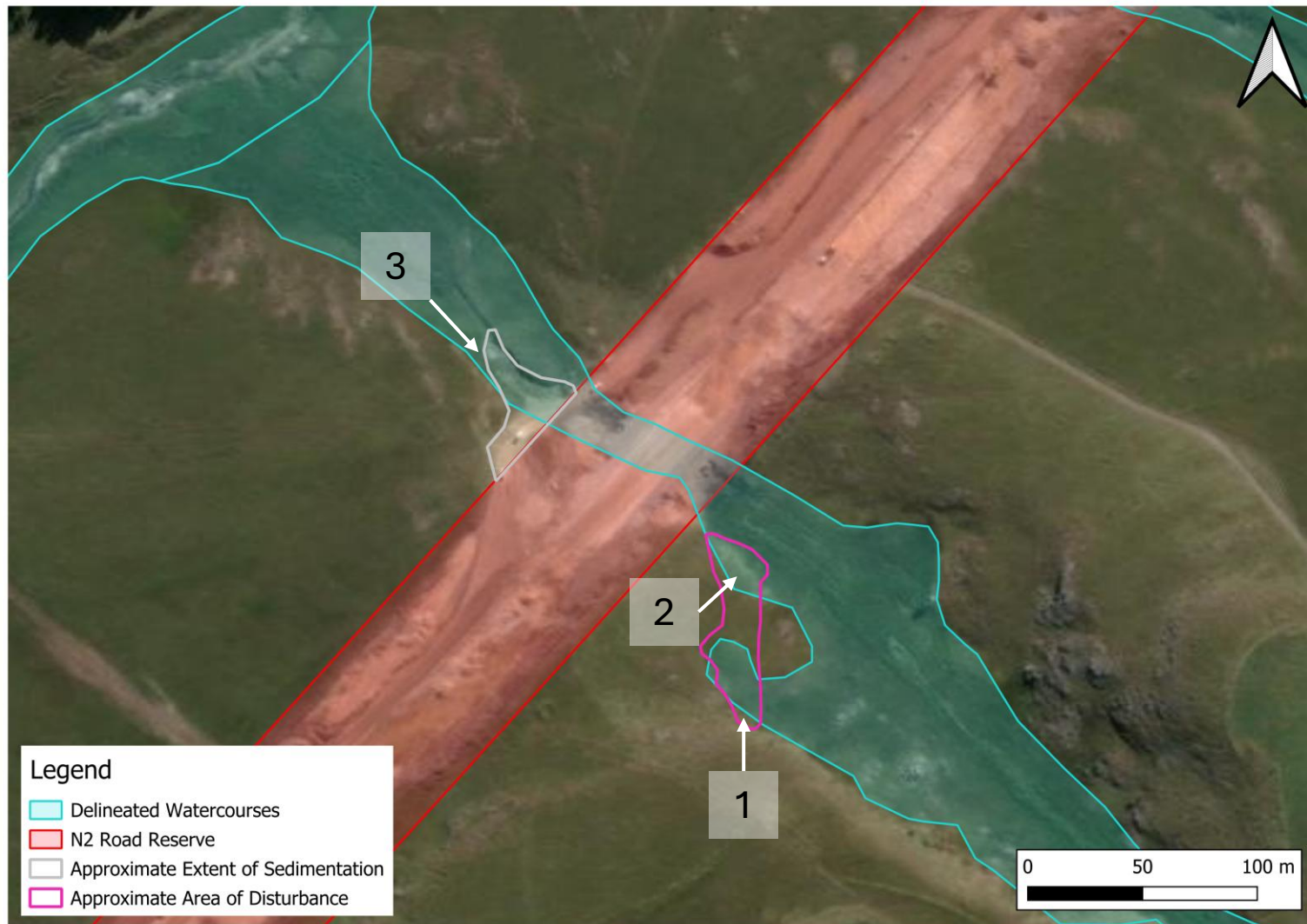
CI-01: Sedimentation due to poor stormwater control – Example 2



CI-01: Sedimentation due to poor stormwater control – Additional Examples



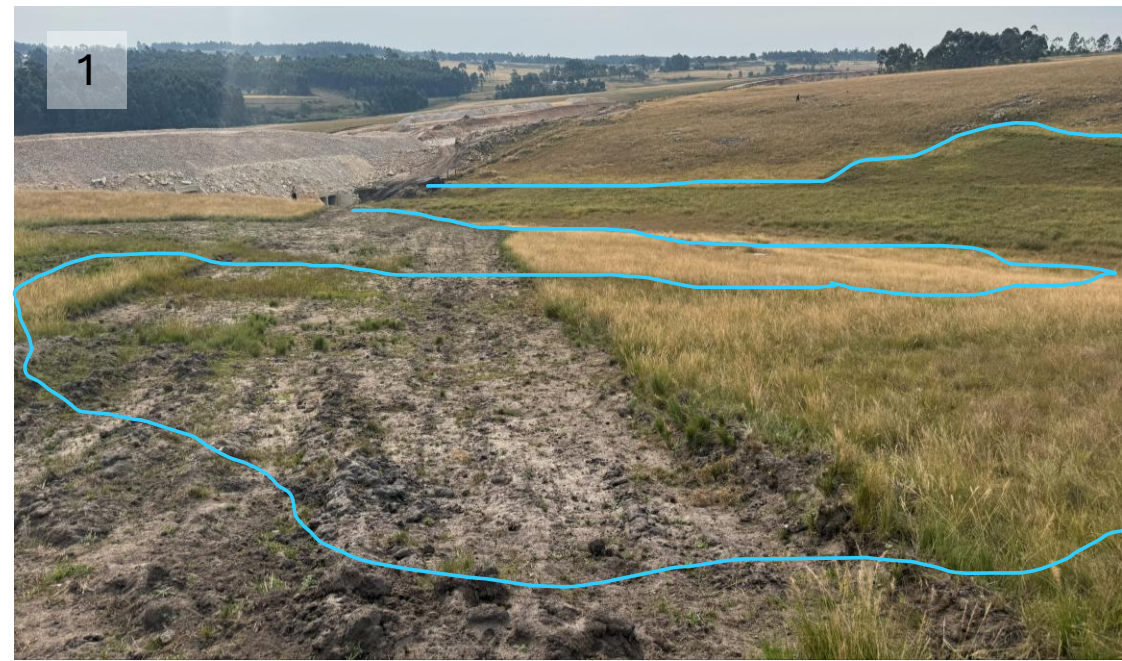
CI-02: Excessive disturbance of wetlands and watercourses – Example 1 Overview



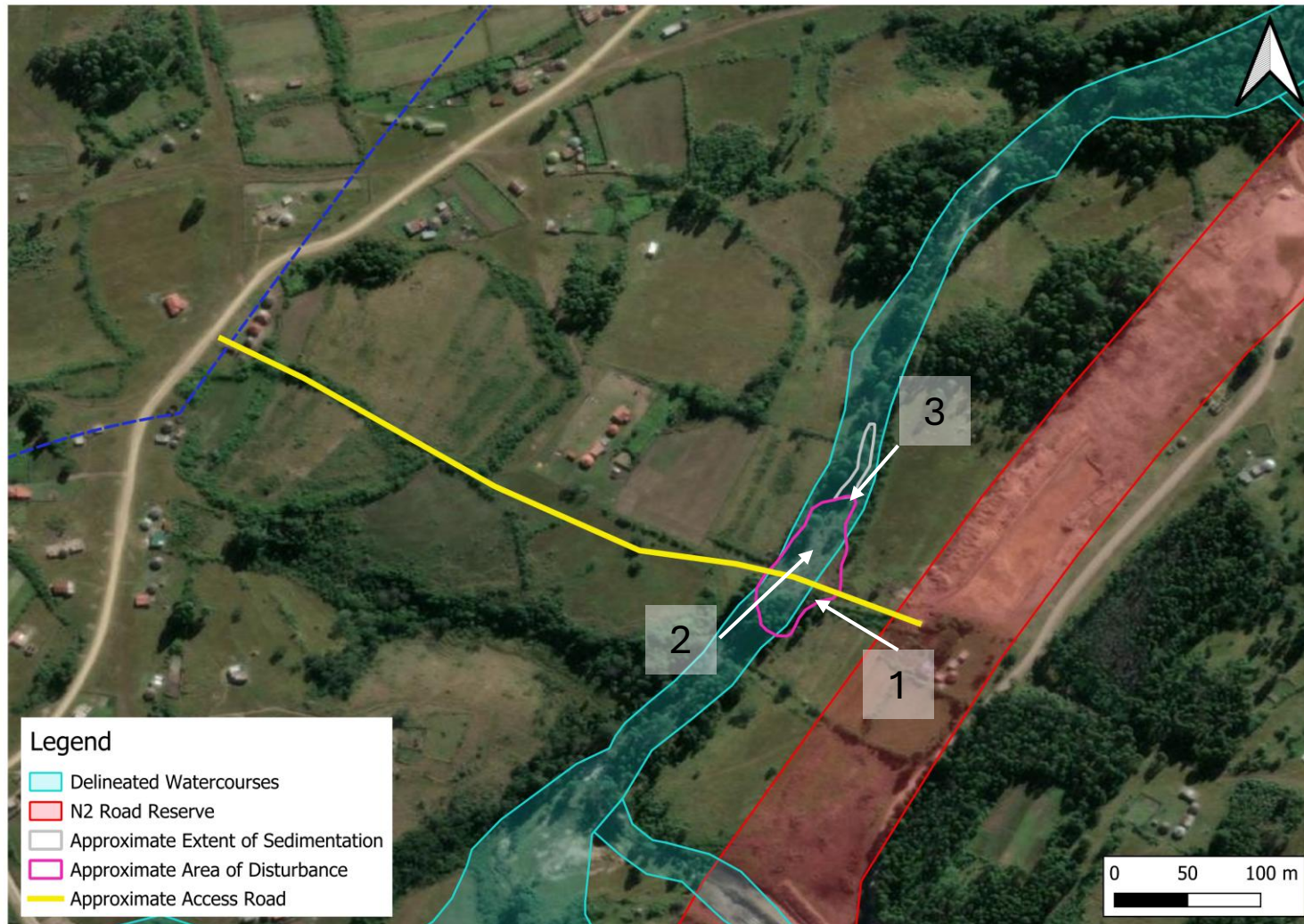
- Area in pink has been cleared on a slope for no clear reason
- Area in grey is a sedimentation incident associated with an access road which unnecessarily encroaches into the wetland
- Numbers correspond to the photos on the next slide and arrows indicate approximate position and direction of photo
- Non-compliance in terms of RoD clauses 6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1
- EMPr clauses 2 and 10 in Table 4.1 and 3, 5, 8 and 20 in Table 5-1, Aquatic EMPr: Multiple references

CI-02: Excessive disturbance of wetlands and watercourses – Example 1

- Blue lines represent an approximation of the wetland boundaries
- No clear reason for the clearing undertaken in pictures 1 and 2. Access road has been build behind the location of picture 1



CI-02: Excessive disturbance of wetlands and watercourses – Example 2 Overview



- Area in pink has been cleared for the construction of a road crossing with extensive stockpiling of material within the riparian area and extensive disturbance to riparian habitat
- Area in grey is a sedimentation incident associated with the disturbance in the pink area
- Numbers correspond to the photos on the next slide and arrows indicate approximate position and direction of photo
- Non-compliance in terms of RoD clauses 6.1.1, 6.2.11.1, 6.2.11.2, 6.2.11.4, 6.2.12.1
- EMPr clauses 2 and 10 in Table 4.1 and 3, 5, 8 and 20 in Table 5-1, Aquatic EMPr: Multiple references

CI-02: Excessive disturbance of wetlands and watercourses

– Example 2



- Excessive environmental destruction – despite the need to divert flows
- Stockpiling of soil in the riparian area which has caused extensive sedimentation downstream (see silt fence with sedimentation downstream of it in photo 3)



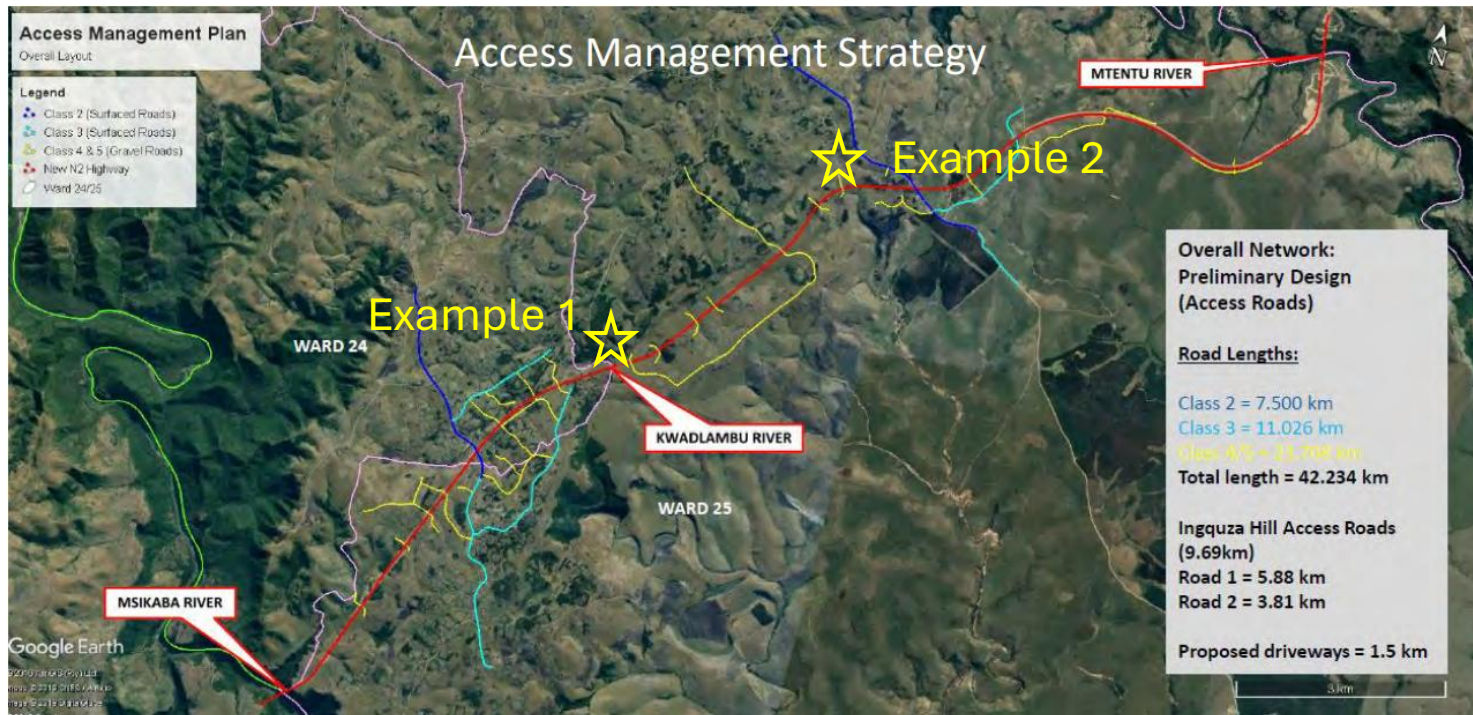
CI-02: Excessive disturbance of wetlands and watercourses

– Additional Examples



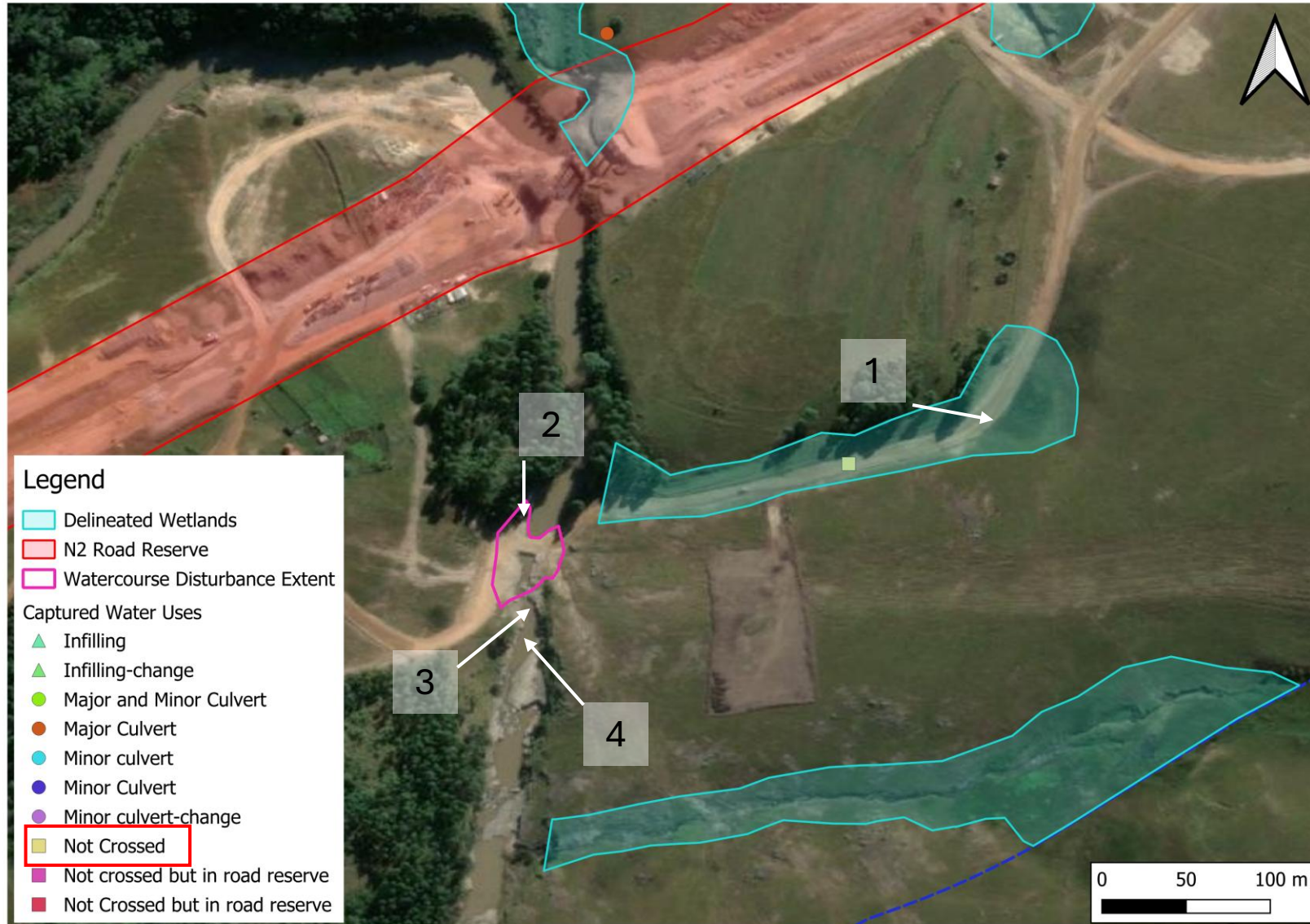
CI-03: Potential unauthorized access road crossings – Situational analysis

- It is noted that there may be unpublished authorisations that the public do not have access to
- An access road map for the Greenfields stretch of the N2 was located in an EMC presentation from February 2025 (this does not constitute an authorisation)



- This road map was georeferenced and overlaid in a GIS program
- Two questions arise
 - Why are some access roads not shown on this map, but exist on the ground? See yellow stars on map.
 - Are all access roads shown on this map necessary?

CI-03: Potential unauthorized access road crossings – Example 1



- Area in pink is associated with rubble and spoil material dumped or left after the construction
- Numbers correspond to the photos on the next slide and arrows indicate approximate position and direction of photo
- No clear evidence of authorisation for this road and not included in the access road map in the EMC meeting presentation (dated Feb 2025)

CI-03: Potential unauthorized access road crossings – Example 1

1



Blue line marks approximate wetland boundary

Culverts inappropriately set and cause backflow

Water appears to be sediment laden from upstream

Construction waste has been dumped within the riparian channel

Road is constructed within a wetland with no clear authorisation or plan

2



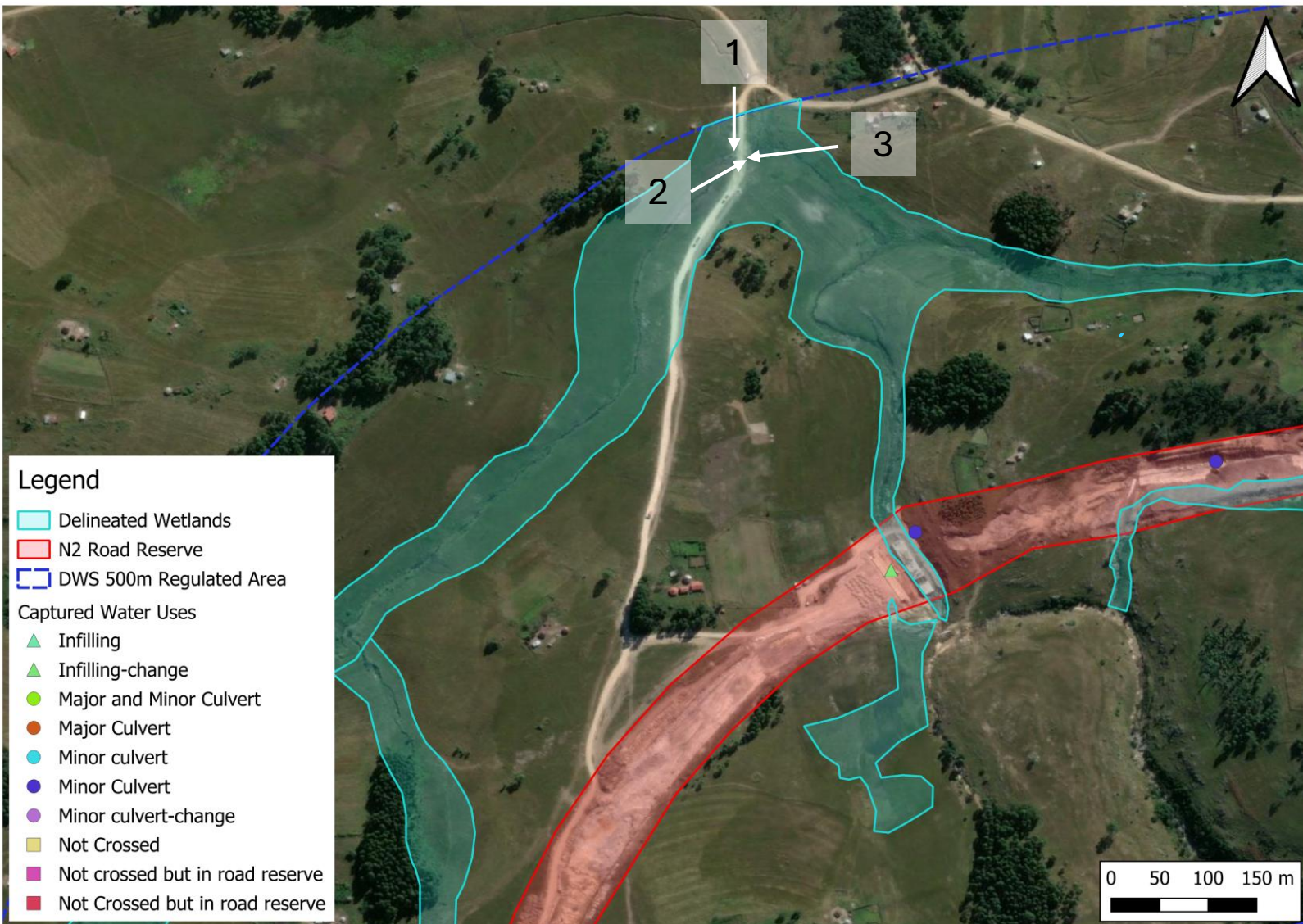
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4



CI-03: Potential unauthorized access road crossings – Example 2



- Numbers correspond to the photos on the next slide and arrows indicate approximate position and direction of photo
- DWS GA has no documentation for this road crossing (authorisation exists for downstream road crossing)
- No clear evidence of authorisation for this road and not included in the access road map in the EMC meeting presentation

CI-03: Potential unauthorized access road crossings – Example 2



Construction waste has been dumped within the riparian channel

Road is constructed within a wetland with no clear authorisation or plan

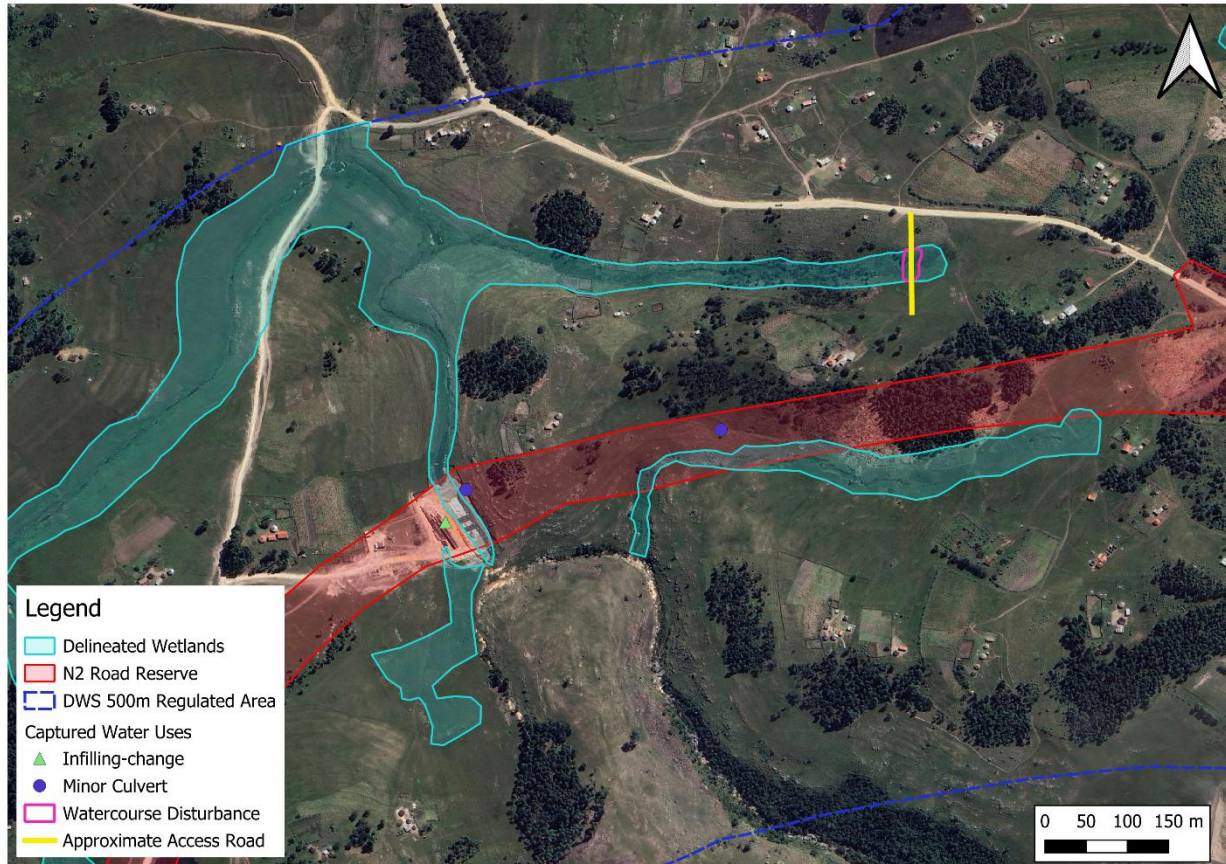


Culverts inappropriately set and cause backflow

Water appears to be sediment laden from upstream

Local water supply pond appears to be turbid

CI-03: Potential unauthorized access road crossings – Example 3



Conclusions and recommendations

- Note that the examples presented here are a subset of the compliance issues noted during the site visit
- Repeated aquatic compliance failures observed
- Multiple potential RoD and EMPr breaches
- Potential NEMA and NWA contraventions
- A water quality study should be conducted at multiple sites across the development footprint
- Further regulatory investigation is warranted
- Immediate compliance audit
- Verify all crossing authorisations
- Independent rehabilitation plan
- Increased ECO and DFFE oversight (RoD clause 6.2.3)