WAKA KOTAHI NZ TRANSPORT AGENCY

Principal with Specific Needs Structure Inspection Report

Name:	ASHBURTON R VER (HAKATERE) BR DGE			**BSN:**	4306	**Structure No.:**	32004
Highway:	1S	**Route Position:**	430 / 0 6	**Direction:**	Two Way	**Region:**	
Structure Type:	Bridge	**Span Arrangement:**	32 / 10 7	**Length:**	342 4	**Width Between Kerbs:**	8 5
Inspected By:	s 9(2)(a)	**Inspected Date:**	19/03/2018	**Reviewed By:**	s 9(2)(a)	**Reviewed Date:**	13/06/2018
Approved By:	s 9(2)(a)	**Approved Date:**	13/06/2018	**Inspection Type:**	Principal with Specific Needs		

Check List

Element Set	No	Description	Mark	Brief description of fault and comments
Supers ructure Elements	1	Primary load carrying element	4	cracking / spalling in beams
	2	Secondary element(s) - Transverse beams	1	
	3	Secondary element(s) - Other (incl deck)	3	Spalling on deck edges Light corrosion on footway decking
	4	Half joints	NA	
	5	Seismic linkages/Holding Down bolts	3	Brids nesting on linkages
	6	Parapet beam or cantilever	1	
	7	Cross bracing	NA	
Load-bearing Substructure	8	Foundations	1	
	9	Abutments	2	spalling s h abut
	10	Head wall	1	
	11	Pier / column	2	Pile abrasion
	12	Cross-head / capping beam	1	
	13	Bearings	2	Corrosion on steelwork
	14	Bearing plinth / shelf	NA	
Durability Elemen s	15	Superstructure drainage	4	consider extending drainage channels
	16	Subs ructure drainage	0	
	17	Movement / expansion joints	2	Deck joints leak
	18	Painting Superstructure elemen s	NA	
	19	Painting substructure elemen s	NA	
	20	Painting barriers/guardrails	1	
Safety Elemen s	21	Access / walkways / gantries	1	
	22	Guardrail / handrail / safety fences	2	spalling on H/R
	23	Carriageway surfacing	1	
	24	Footway / verge / footbridge surfacing	1	
Waterway Elemen s	25	nvert / river bed	3	degrada ion
	26	Aprons	NA	
	27	River bed upstream	1	
	28	River bed downs ream	1	
	29	Scour	2	Exposed pier foundations due to scour Debris on piers
	30	River banks	1	
Re aining Elemen s	31	Revetment / batter slope paving	NA	
	32	Wing walls	NA	
	33	Retaining walls	3	Broken gabion Abut A
	34	Embankmen s	1	
Other	35	Approach rails / barriers / walls	1	
	36	Approach adequacy	1	
	37	Signs	3	Sign missing
	38	Lighting	4	Corrosion on light pos s
	39	Services	1	
	40	Appearance	1	Graffiti on abu ments and piers

Marking Code

0 - Not inspected
1 - Satisfactory
2 - Monitor
3 - Routine Maintenance
4 - Structural Maintenance

Remedial work recommended last inspection has been completed? NO

Inventory Changes Required

Item	Inventory	Description	Date

Comments and Recommendations for Maintenance/Repairs

W/E = 114A (Routine Maintenance) 114B (Structural Maintenance) 215A (Routine Component Replacement) 215B (Structural Component Replacement) 215E (Component Replacement Pro essional Services) (nvestigate)

Item	Ref	Brief description of fault and recommendations for repairs	Priority	W/E	Cost Estimate	Complete (Y/N)
1	22	Footway steelwork corroding (Refer attached e-mail) 2020 detritus and local vegeta ion promoting corrosion critical can ilever connection at risk clean and reat	High	215B	125000	No
2	35	Cracking spalling 2020 1x transverse crack in PC footpath slab mid span downstream	High	215B	5000	No
3	38	Corrosion on light posts Bent post south west abutment replace	High	215B	12000	No

Comments and Recommendations for Maintenance/Repairs

W/E = 114A (Routine Maintenance) 114B (Structural Maintenance) 215A (Routine Component Replacement) 215B (Structural Component Replacement) 215E (Component Replacement Pro essional Services) (nvestigate)

Item	Ref	Brief description of fault and recommendations for repairs	Priority	W/E	Cost Estimate	Complete (Y/N)
4	38	Upgrade lighting HD bolts and corrosion protection of light masts 2020 some pin holes in tubing indica ing internal corrosion May be best to replace light pos s completely	High	215B	50000	No
5	5	Birds nesting and bird droppings on seismic linkages Remove nests and waterblast clean 2020	Medium	114B	10000	No
6	17	Deck joints leak (incl pier 10) 2020 wide spread all deck joints cracking in pavement see typical photo	Medium	215B	25000	No
7	29	Logs on pier J from north end	Medium	114A	850	No
8	40	Remove graf iti on abutments and piers provide graffiti resistant paint in reachable areas	Medium	114A	20000	No
9	1	Spalling in beams and diaphragms Refer to nspection notes 2018	Low	114B	50000	No
10	15	Consider extending deck drainage outlets Cracking evident in beam soffit/edges under drainage outlets widespread some isolated spalling	Low	114B	6000	No
11	1	Spalling under beams at south abutment Diagonal linkage bars exposed Likely to be caused by beam de lection Similar issue observed at Rangi ata No 1 S h Abu ment Monitor ongoing performance (spall repairs will not last unless separated from the underside of the beam Previous repair failed very quickly)	Monitor	114B	5000	No
12	1	Honeycombed concrete cracked concrete spalling see previous reports Also recent spalling south abutment Beams 2 3 4	Monitor	114B	10000	No
13	3	Spalling in deck edges	Monitor	114B	50000	No
14	3	10-15% Corrosion on walkway angles and channels 2020 heavy with detritus keep these areas clean critical connection to can ilever walkway	Monitor	215B	80000	No
15	11	Abrasion on exposed piles Pile south channel 2nd from U/S Exposed stirrups 2020 in waterway currently	Monitor	215B	10000	No
16	13	Light corrosion on bearings No change since 2011	Monitor	215B	100000	No
17	22	Some spalling on Handrail No change since 2020	Monitor	114B	10000	No
18	29	2m pile exposed S & N channel and central span 12-13-14 +2m 2011 - see photos may be more See management plan for monitoring s rategy Pile lengths at centre channel x 4 only 2-2 4 metres exposure all others approx 800 - 1 metre North channel 3 piers have 1 2-1 8 exposure 2018 - Refer Engineers Comments Worst 2 0-2 4m 2020 no change	Monitor	114B	50000	No
19	35	Cracking and spalling along concrete parapets 2020	Monitor	114B	50000	No
			Total Estimate		668850	

Comments and Recommendations Relating to Future Management (transfer to Current Record)

Item	Defect/Strategy	Person (Br Insp Eng)	Date
1	Pile scour identified as very high risk Bed being monitored by Ecan	s 9(2)(a)	14/04/2010
2	Asset Management S rategy for bridge attached wi hin database		05/12/2011
3	Spalling under beams at south abutment Diagonal linkage bars exposed Likely to be caused by beam deflection or snagging of sliding joints at piers Detailed inspec ion required to determine cause of issue		16/10/2017
4	When undertaking detailed inspections look at alternative options to Bridge Access Unit Signi icant Traffic Delays can result from single laning his structure during daytime hours		22/03/2018
5	Pier scour measuremen s 2018 Pier E =1 4m F =0 9m G =1 0m J=0 9m L=1 4m M=1 5m N=1 5m O=1 8m P = 2 5m (Channel) Q =2 0m R = 0 7m S=1 0m Refer 2018 nspection notes for further information		13/06/2018
6	John Keenan (NZTA) and ADC have confirmed that the lighting poles are owned by the NZ Transport Agency		07/09/2018
7	nspection of beam ends at each pier done 04/02/2020 River flow was 4 7m3/s at he ime and all channels along the bridge were less han knee deep		04/02/2020