

HA MONITORING RECORD SHEET



SCHEME: A30 Rawridge Hill 242/9 EB (Zone B)		Grid Reference:	Start E319772, N104895 End E319844, N104979
Earthwork ID	6543		
Earthwork Type	Embankment		
Max slope Height (m)	3.1		
Max Slope Angle (°)	39°		
Drainage	Top		
	Slope	N/A	
	Base	N/A	
Site Instructions	TM required: Traffic Lights	Monitoring Frequency	Initial: Quarterly Current: Quarterly

HISTORICAL OBSERVATIONS

Date	HAGDMS ID	Inspection		Description	Classification	
		Type	Initials		Defect/ Location	Feature Grade
06/03/2007	252122	PI	JM/CG	Oversteep soft verge, cracking in rib line and pavement, distorted kerb.	1A/A	5
07/12/2015	559063	PI	PL/RN	Oversteep soft verge, cracked pavement, distorted kerb. Extensive burrowing in embankment viewed from below. 26/03/13 05/3/14 series of small slips (max 0.2m high) along crest, verge cracking and undermining of concrete kerb backing at c/w edge.	1A/A	5
19/10/2016		SI	RB/PL	Oversteep soft verge, cracked pavement, distorted kerb. Extensive burrowing in embankment viewed from below. 26/03/13 05/3/14 series of small slips (max 1.0m high) along crest, verge cracking and undermining of concrete kerb backing at c/w edge.	1A/A	5
21/03/2017	580368	MI	JPM/PL/SB	Oversteep soft verge, cracked pavement, distorted kerb. Extensive burrowing in embankment viewed from below. 26/03/13 05/3/14 series of small slips (max 1.0m high) along crest, verge cracking and undermining of concrete kerb backing at c/w edge. Collapse of edge of embankment and bottom 1.0m of clay vitreous pipes in over the edge drainage run.	1A/A	5
19/06/2018	598763	MI	PL/RB/EG	Oversteep soft verge, cracked pavement. Edge of pavement white line depression 50-80mm near side wheel track. Collapse of embankment edge erosion continues. Gullies along EB carriageway edge non functioning and full of debris.	1A/A	5
17/08/2018	598764	SI	PL/CP	Site inspection to undertake cross sectional sketch of the extent of erosion and types of drainage asset present within the erosional defect alongside the edge of the EB carriageway.	1A/A	5
19/09/2018	598769	MI	EG/RB	Site inspection undertaken to inspect carriageway cracking, condition of drainage, condition of verge and embankment. CCTV camera fed through cross carriageway pipe and determined condition to be poor, identifying severe cracks and areas of collapse beneath the kerblines on the EB running lane. Verge failed ~600mm from kerb line, drain outfall daylight in slope and has broken at joint causing further collapse of the embankment causing ~3m high vertical face. Cracks still evident in carriageway, visually appear to have deteriorated slightly (but no quantitative equipment in place). Drainage gullies blocked.	1A/A	5
26/02/2019	608281	MI	MM/PL/RB	Site inspection undertaken with TM in place. Linear cracking and near side wheel rutting observed in the carriageway. Site plan created showing deflection and aperture measurements (see below). The concrete haunching to the back of the kerb is undermined by up to 450mm in places. There are no obvious signs of further movement down slope. Drainage gullies blocked.	1A/A	5

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CURRENT OBSERVATIONS

22/05/2019	615210	MI	PL/MM	<p>Slight increase in some aperture measurements (+5mm to +60mm).</p> <p>Cracking has increased in length and severity at Gully 2 and 3 (see site plan attached).</p> <p>Slope was difficult to observe due to dense vegetation but did not show signs of further movement.</p> <p>Extents of cracking has been sprayed up in order to visually assess change from last inspection.</p>	1A/A	5
07/08/2019	616262	MI	RB/MM	<p>Due to our availability and TM restrictions an inspection on foot in August was not possible. A drive-by was carried out instead. The defects do not seem to have worsened. The toe of the slope could not be observed from the carriageway.</p>	1A/A	5

FUTURE RECOMMENDATIONS

Date	Inspection Type		Recommendations
	Type	Initials	
22/03/2017	SI	PL	Due to the loss of verge edge particularly around the damaged drainage outfall, monitor monthly. Recommend to undertake temporary drainage repair; contact the South Network Team
19/09/2018	MI	EG/RB	Repair cross carriageway drainage to avoid water infiltration into the slope, and ensure effective drainage. Continue to monitor on a monthly basis to identify potential deterioration and put in emergency measures if required.
26/02/2019	MI	MM/PL/ RB	Monitor on a quarterly basis and use the site plan to monitor cracking in the carriageway.
22/05/2019	MI	MM/PL	Continue to monitor on a quarterly basis. Invite Emma Moore and Gavin Johnston on next visit. Book vegetation clearance in before the next inspection.
07/08/2019	MI	RB/MM	Carry out a monitoring inspection in November 2019. Invite Gavin Johnston and Emma Moore.

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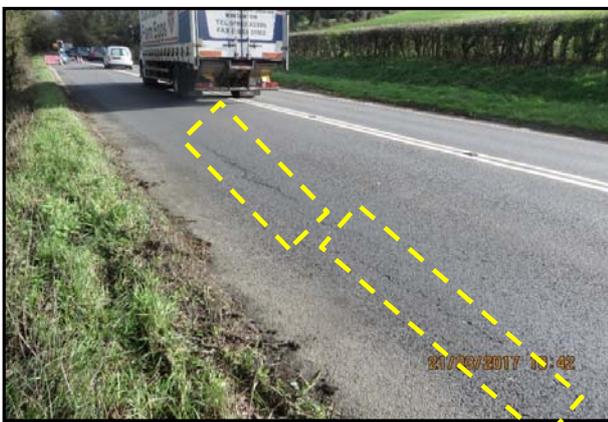
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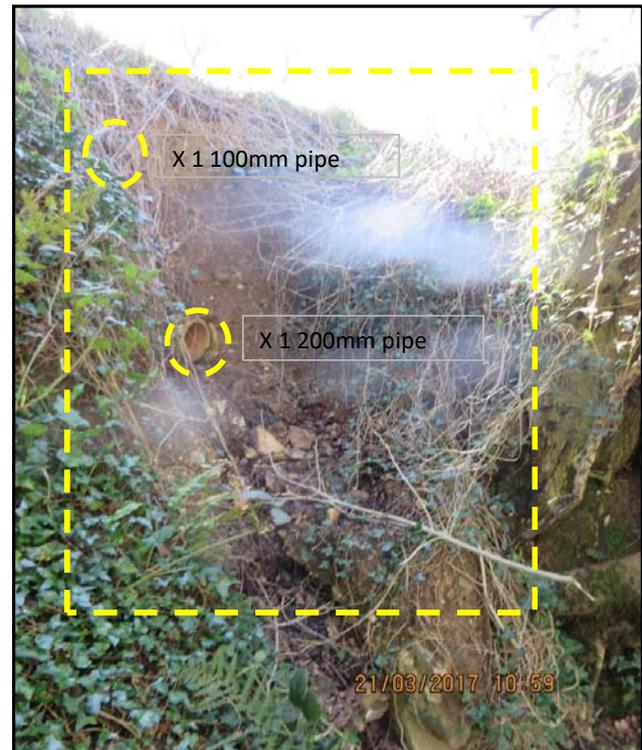
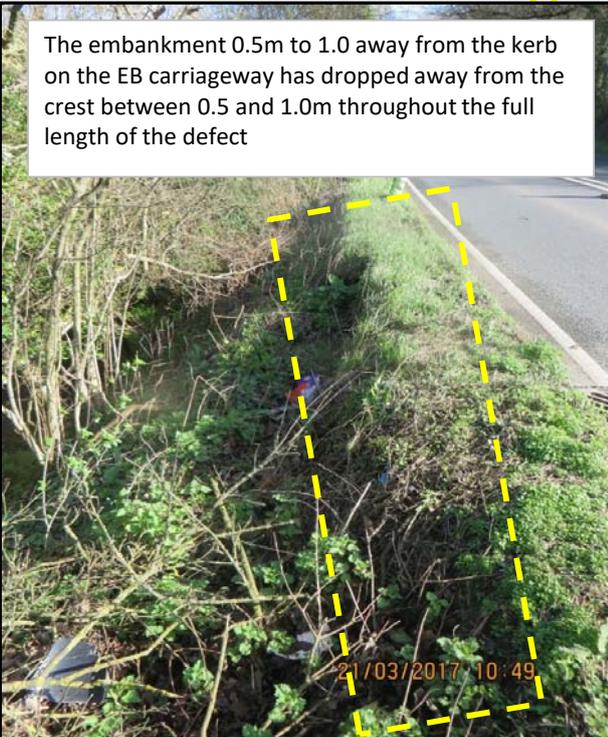
Photographs - 19/10/2016 - visual inspection



Photographs - 21/03/2017 - visual inspection



Linear pavement cracking 1.0m from kerb EB NS wheel track has widened. Second linear crack has developed west of existing linear feature subsequent to the 19/10/2016 monitoring visit



The embankment has been eroded away below the carriageway (shown at the top of the picture) there are two clay vitreous pipes daylighting in the face of the eroded earthwork, x 1, 100mm diameter and x 1, 250mm diameter. The area at the base of the erosion is saturated and a new connection to the two pipes is required as a temporary repair.

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Site visit: 19th September 2018



1.



2.

Photo 2: CCTV camera probed cross carriageway drainage from both EB and WB access. EB access identified a blockage which the camera could not penetrate. WB access identified numerous pipe fractures and areas of collapse.



3.

Photo 3: view of embankment below carriageway showing sheared section of pipe and soil failure.

Photo 1: view of embankment below carriageway, supporting A30 EB carriageway. Cross carriageway drainage sheared and caused embankment failure. Steady flow of water observed to be entering the catchpit on the WB which should feed into this cross carriageway drainage, but no water is flowing out of the pipe where it



4.

Photo 4: Significant settlement in verge behind kerb line, forming separation cracking and exposes kerb haunching.



5.

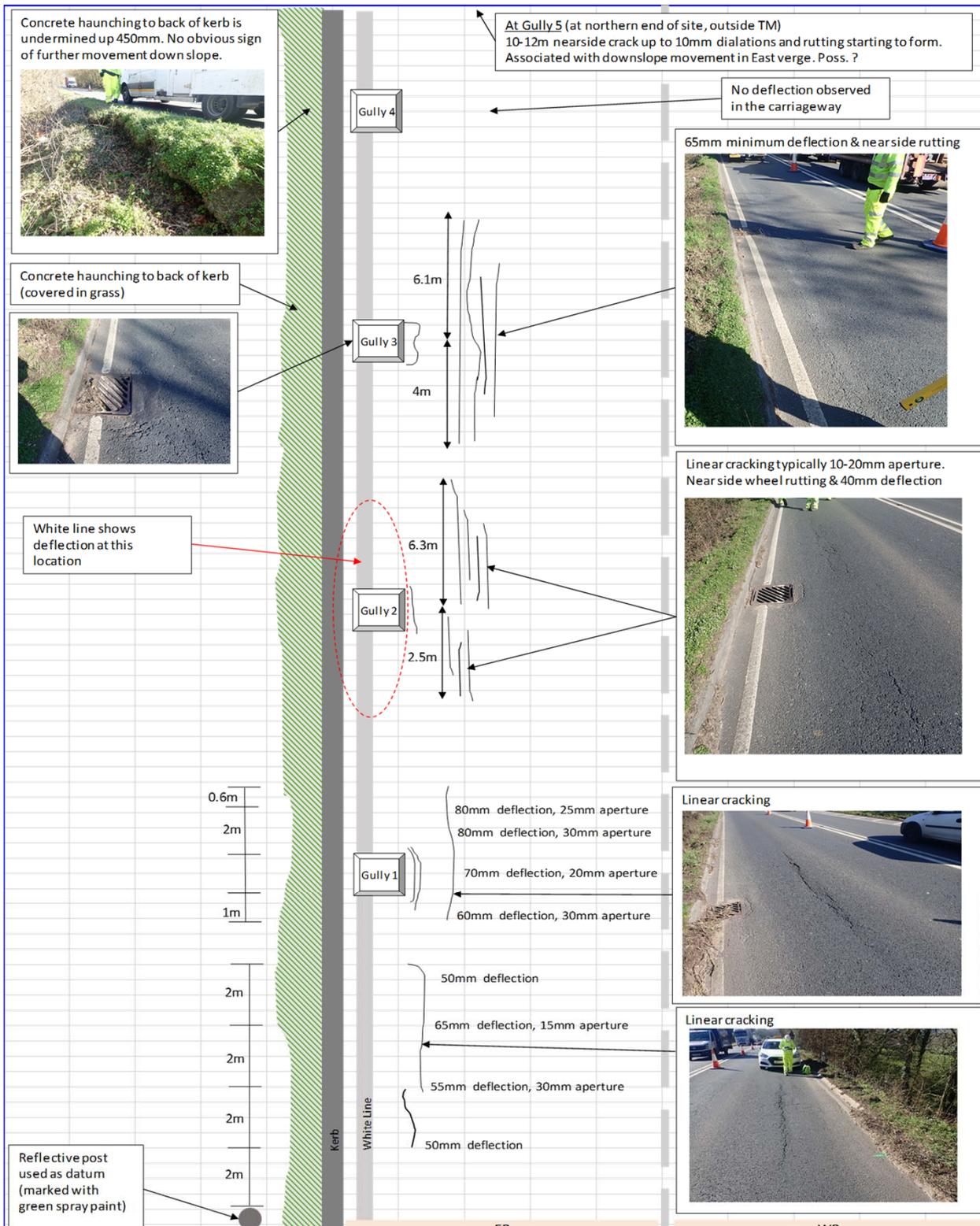
Photo 5: Cracking evident in carriageway, potentially slightly worse than previous visit. However, this is hard to tell without quantitative monitoring in place.

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Site plan: 26th February 2019



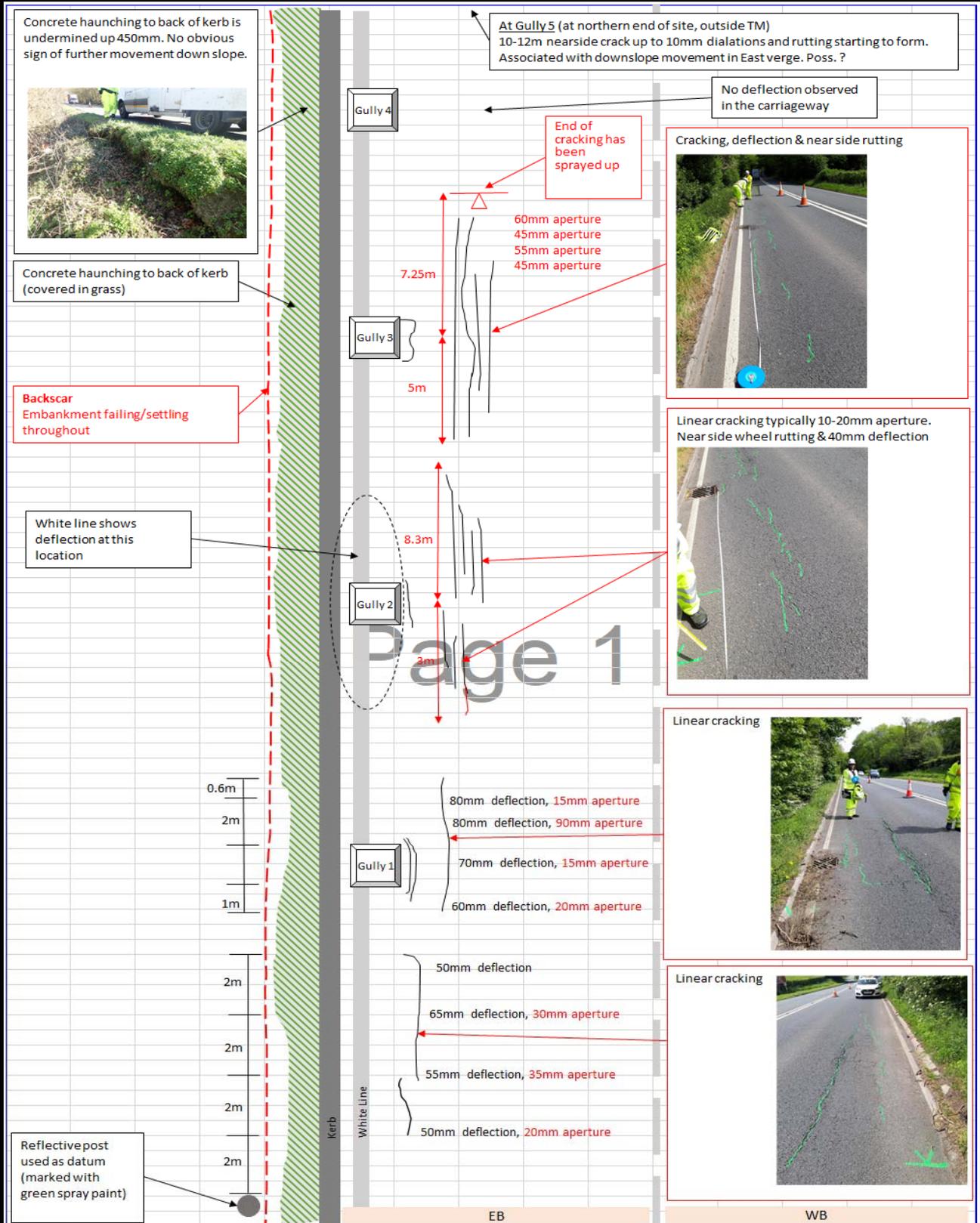
	Project	A30 Rawridge Hill MP 242/9 EB	Scale	NTS	Checked	PL	Compiled	MM
	Title	Site Plan	Date	27/02/2019		Job No.	PIN 570127	

SCHEME: A30 Rawridge Hill 242/9 EB (Zone B)

Grid Reference:

End E319844, N104979

Site Plan: 22 May 2019



Page 1

Project	A30 Rawridge Hill MP 242/9 EB			Scale	Checked	Compiled
	Title			NTS	PL	MM
Date			22/05/2019			
Job No.			PIN 570127			
Figure						

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Site Photos: 07/08/19

This drive-by photograph was taken from the end of the defect at MP 242.9 looking East.

The defect does not seem to have worsened since the last visit.

Another inspection is planned for November 2019.