

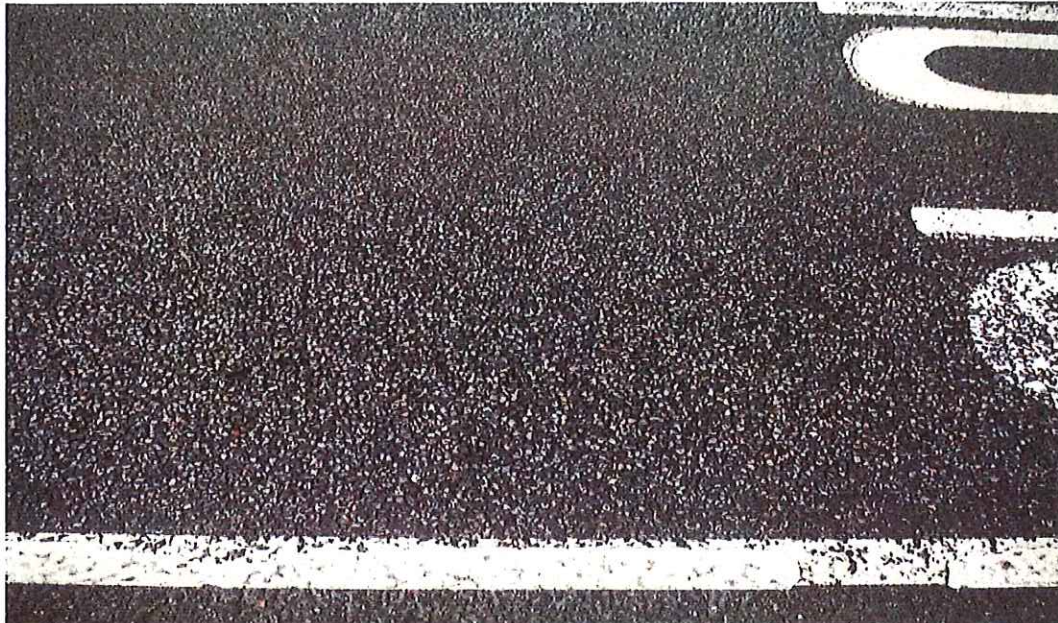


Photo 7: A83 Cairndow (HD28). Section 16520/05 CH1520. Photo detailing rutting, cracking to the nearside wheeltracks CL1.



Photo 8: A83 Cairndow (HD28). Section 16520/05 CH1710. Photo detailing drainage ditch, possible with heavy rain for water to flood over the carriageway contributing to increased skid risk.



Photo 9: A83 Cairndow (HD28), Section 16520/05 CH1780. Photo detailing accident of to the nearside CL1. Approx 20m beyond current safety barrier in place, and 20m beyond HD28 secondary site identified for treatment.



Photo 10: A83 Cairndow (HD28), Section 16520/05 CH1800. Photo detailing cracking to the nearside edge CR1.

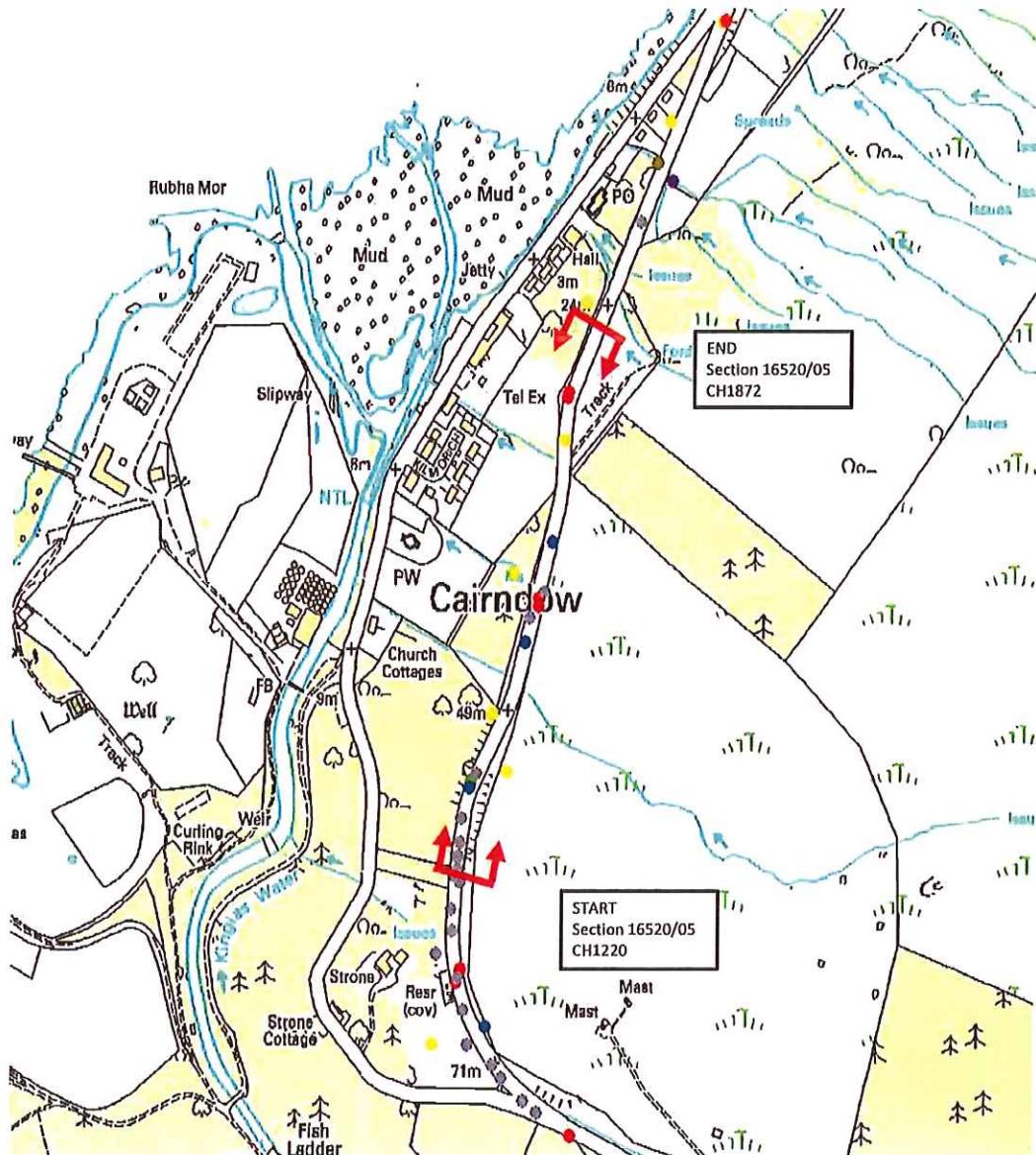


Photo 11: A83 Cairndow (HD28). Section 16520/05 CH1820. Photo detailing drainage ditch, possible with heavy rain for water to flood over the carriageway contributing to increased skid risk.



Photo 12: A83 Cairndow (HD28). Section 16520/05 CH1872. Photo detailing construction joint marking the end of scheme. Photo looking back into scheme. Safety barrier can be seen ending CR1. At design stage, looking to extend the barrier to account for recent accidents.

A83 Cairndow (HD28)
Location Plan showing existing Category 1 and Category 2 defects within RMMS



A83 Cairndow (HD28)
Descriptions of defects listed within RMMS for these sections

** Note: Category 1 and Category 2 defects currently existing within the carriageway are shown on previous page location plan and are detailed below*

CAT1					
Road/Section	Item Type	Defect Category	Inspection Date	CH	Location
A83 16520/05	CARRIAGEWAY	FLOODING - 2NO RUN-OFFS ACROSS C/WAY RESULTING IN POSSIBLE FREEZING DURING LOW TEMPS - REFORM CHANNEL ALONG ROCK FACE AT TOP OF HILL & DITCH TO ADJACENT CULVERT NEARBY			

CAT2					
Road/Section	Item Type	Defect Category	Inspection Date	CH	Location
A83 16520/05	CARRIAGEWAY	C/WAY - CRACKING - PATCH 40MX1M	18/04/2014 11:14	Chainage: 1231m	WEST OF CAIRNDOW INN ACCESS
A83 16520/05	CARRIAGEWAY	PATCH 4.5M X 1.5M	20/09/2016 14:19	Chainage: 1231m	NTH OF CAIRNDOW HOTEL
A83 16520/05	CARRIAGEWAY	C/WAY - STRIPPING/FRETTING - SIZE 6M X 2M	21/07/2015 11:25	Chainage: 1246m	CAIRNDOW HILL
A83 16520/05	CARRIAGEWAY	C/WAY - CRACKING - PATCH 15MX1.5M	18/04/2014 11:14	Chainage: 1271m	WEST OF CAIRNDOW INN ACCESS
A83 16520/05	CARRIAGEWAY	C/WAY - CRACKING - PATCH 15MX1M	18/04/2014 11:17	Chainage: 1319m	WEST OF CAIRNDOW INN ACCESS
A83 16520/05	CARRIAGEWAY	C/WAY - SURFACE CRACKING - SIZE 8M X 1M	27/04/2016 10:23	Chainage: 1494m	CAIRNDOW HILL.
A83 16520/05	CARRIAGEWAY	C/WAY - SURFACE CRACKING - SIZE 7M X 1M	27/04/2016 10:22	Chainage: 1523m	CAIRNDOW HILL.

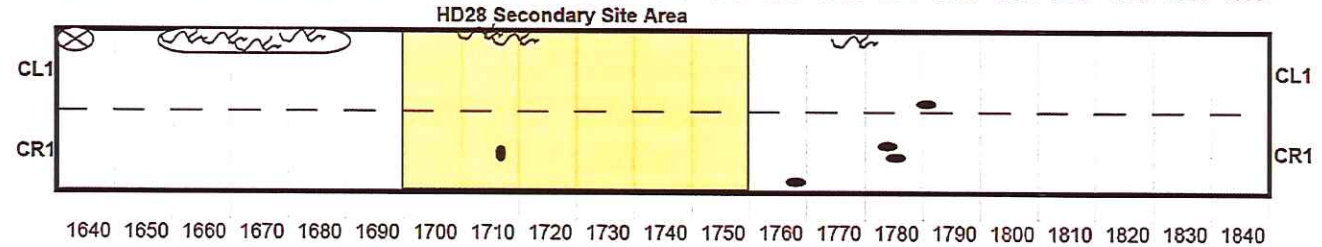
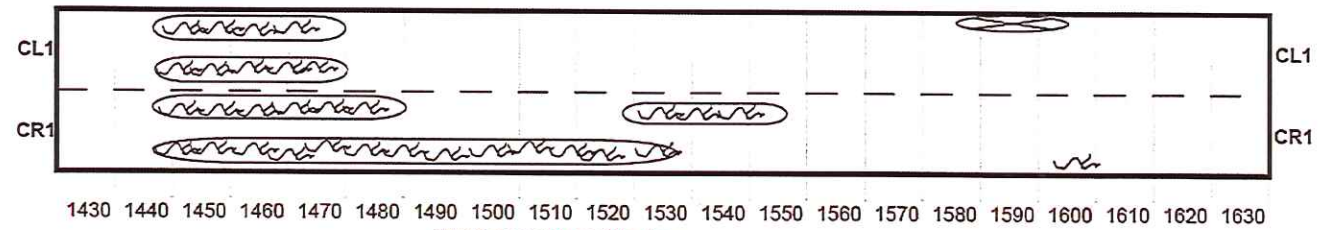
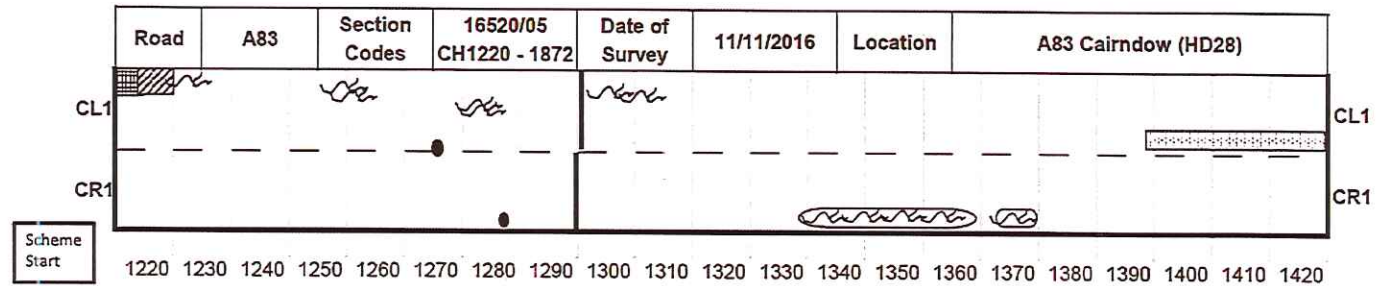
A83 Cairndow (HD28)
Descriptions of defects listed within RMMS for these sections

CAT2					
Road/Section	Item Type	Defect Category	Inspection Date	CH	Location
A83 16520/05	ROAD_MARKINGS_LONG	ROAD MARKINGS - WORN SLOW MARKINGS- 3M	18/04/2014 11:16	Chainage: 1307m	WEST OF CAIRNDOW INN ACCESS
A83 16520/05	ROAD_MARKINGS_LONG	ROAD MARKINGS - WORN SLOW MARKINGS- 3M	18/04/2014 11:20	Chainage: 1507m	WEST OF CAIRNDOW INN ACCESS
A83 16520/05	ROAD_MARKINGS_LONG	ROAD MARKINGS - WORN SLOW MARKINGS- 3M	18/04/2014 11:20	Chainage: 1515m	WEST OF CAIRNDOW INN ACCESS
A83 16520/05	ROAD_MARKINGS_LONG	REFRESH INTERMITTENT 6M CENTRE LINES - LENGTH 150M	27/04/2016 10:28	Chainage: 1726m	CAIRNDOW HILL.
A83 16520/05	ROAD_STUDS	33NO CATEYES UNLIT N/B	07/10/2015 22:57	Chainage: 1338m	BETWEEN CAIRDOW NORTH JCT & DUNOON A815 JCT
A83 16520/05	ROAD_STUDS	40NO CATEYES MISSING E/B	23/11/2013 01:19	Chainage: 1382m	BETWEEN CAIRNDOW NORTH JCT & DUNOON A815 JCT
A83 16520/05	ROAD_STUDS	35NO CATEYES UNLIT S/B	07/10/2015 22:55	Chainage: 1532m	BETWEEN DUNOON A815 JCT & CAIRDOW NORTH JCT
A83 16520/05	ROAD_STUDS	ROAD STUDS - 42NO MISSING/DAMAGED	18/10/2016 19:42	Chainage: 1681m	THROUGHOUT WHOLE SECTION
A83 16520/05	ROAD_STUDS	38 NO MISSING CATEYES N/B	04/05/2015 23:47	Chainage: 1822m	BETWEEN CAIRNDOW JCT & DUNOON A815 JCT N/B

Item	HD28 Priority	Rank	Road	Section Code	XSP	Start(m)	End(m)	SurveyDate	SCRIMSiteCategory	SCRIMDiff	Accident	WetAcc
1128032	2	0010	A83	16520/05	CL1	1240	1330	22/09/2015	Single <500m (S2M)	-0.23	0.00	0.00
1128059	2	0377	A83	16520/05	CR1	1240	1330	22/09/2015	Single <500m (S2M)	-0.16	0.00	0.00
1128033	2	2214	A83	16520/05	CL1	1330	1370	22/09/2015	Gradient 5-10% (G1L)	-0.10	0.00	0.00
1128060	4	0163	A83	16520/05	CR1	1330	1370	22/09/2015	Gradient 5-10% (G1L)	-0.09	0.00	0.00
1128061	2	0246	A83	16520/05	CR1	1370	1440	22/09/2015	Single <500m (S2M)	-0.17	0.00	0.00
1128034	2	1001	A83	16520/05	CL1	1370	1440	22/09/2015	Single <500m (S2M)	-0.13	0.00	0.00
1128035	2	1358	A83	16520/05	CL1	1440	1540	22/09/2015	Gradient 5-10% (G1L)	-0.12	0.00	0.00
1128062	2	1732	A83	16520/05	CR1	1440	1540	22/09/2015	Gradient 5-10% (G1L)	-0.11	0.00	0.00
1128036	2	1359	A83	16520/05	CL1	1540	1600	22/09/2015	Gradient 5-10% (G1L)	-0.12	0.00	0.00
1128063	4	1460	A83	16520/05	CR1	1540	1600	22/09/2015	Gradient 5-10% (G1L)	-0.07	0.00	0.00
1128064	2	0539	A83	16520/05	CR1	1600	1700	22/09/2015	Single <500m (S2M)	-0.15	0.00	0.00
1128037	2	0245	A83	16520/05	CL1	1600	1700	22/09/2015	Single <500m (S2M)	-0.17	0.00	0.00
1128065	1	0031	A83	16520/05	CR1	1700	1760	22/09/2015	Single <500m (S2M)	-0.16	2.00	1.00
1128038	1	0027	A83	16520/05	CL1	1700	1760	22/09/2015	Single <500m (S2M)	-0.23	2.00	1.00
1128039	4	1459	A83	16520/05	CL1	1760	1860	22/09/2015	Gradient 5-10% (G1L)	-0.07	0.00	0.00
1128066	4	0164	A83	16520/05	CR1	1760	1860	22/09/2015	Gradient 5-10% (G1L)	-0.09	0.00	0.00
1128040	2	2215	A83	16520/05	CL1	1860	1960	22/09/2015	Gradient 5-10% (G1L)	-0.10	0.00	0.00
1128067	4	4937	A83	16520/05	CR1	1860	1960	22/09/2015	Gradient 5-10% (G1L)	-0.03	0.00	0.00

A83 Calrindow (HD28)
HD28 Site Details

Visual Condition Survey

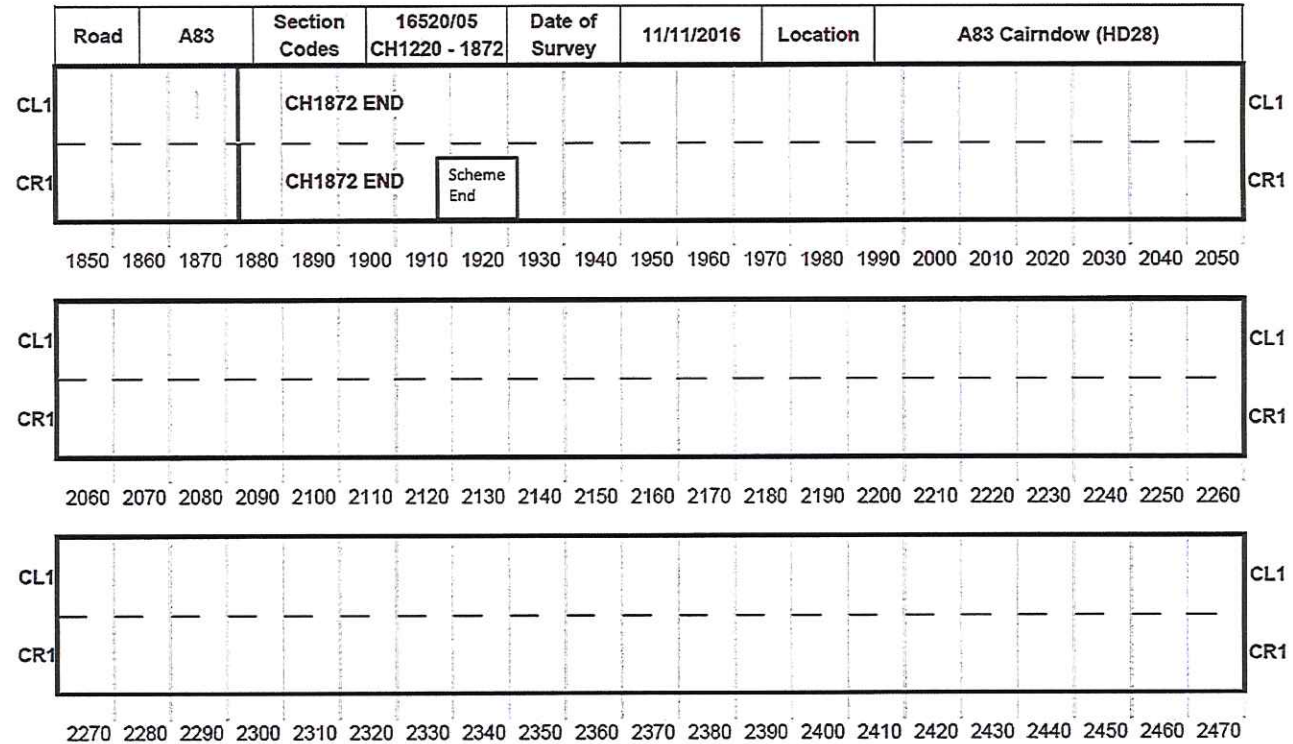


Key

Cracking	Patch/utility reinstatement	Crazing	Fretting	Fatting	Core	Bridge joint	Mud pumping
Localised Depression/Collapse	Node	Pothole	Gully	Photo	S.Dress	HRA	SMA
Constr. joint	Open joint	Rutting					

A83 Cairndow (HD28)
Visual Condition Survey

Visual Condition Survey



A83 Cairndow (HD28)
Visual Condition Survey

Key	Cracking	Patch/utility reinstatement	Crazing	Fretting	Fatting	Core	Bridge joint	Mud pumping
Localised Depression/Collapse	Node	Pothole	Gully	Photo	S.Dress	HRA	SMA	
Constr. joint	Open joint	Rutting						

A83 Cairndow (HD28)
HD28 Secondary Investigation



SCRIM Investigatory Form (Secondary)

ROUTE	A83	SECTION	JUNCTION A815 TO UC29 CAIRNDOW NORTH (2187m total length)						
LINK/SECTION	16520/05	XSP	CL1	START Ch.	1700	END Ch.	1760	LENGTH	60
SCRIM SITE CATEGORY DETAILS		Single <500m (S2M)					INVESTIGATORY LEVEL		0.5
PRIORITY (RANK)	1 (27)	UNIQUE SITE ID		1128038					

PAVEMENT AND SITE INFORMATION									
SCRIM SURVEY DATE	MSSC/CSC	SCRIM DI#	SURFACE TYPE	SUDR	Wet Accidents		1		
22/09/2015	0.27	-0.23	SURFACE AGE	15	Total Accidents		2		
			PSV	0	Start of site		Lat	56.25552	
			TEXTURE	0.93	Co-ords		Long	-4.935753	
			TRAFFIC (AADF)	2129					

SITE LOCATION	
IS THERE CLEAR VISIBILITY FROM ALL APPROACHES TO THE SITE?	☒
IS THE SPEED LIMIT APPROPRIATE FOR THE SITE?	☒
IS THE SITE CATEGORY APPROPRIATE FOR THE SITE?	☒
IS THE INVESTIGATORY LEVEL APPROPRIATE FOR THE SITE?	☒
ARE THERE MULTIPLE EVENTS?	☒ Possible gradient and bend
IS THERE EVIDENCE OF CRASHES? (broken glass, damaged barriers, road furniture)	☐

ROAD LAYOUT	
DOES A VISUAL ASSESSMENT INDICATE THAT THE GEOMETRY OF THE SITE INCLUDES RELAXATIONS/DEPARTURES FROM STANDARD?	☐
IS THERE ANY EVIDENCE OF INSUFFICIENT SPACE? (tyre tracks on the verge etc)	☐

PAVEMENT AND SURFACE CONDITION DATA	
DOES THE SCRIM DATA APPEAR TO REPRESENT THE SITE?	☒
IS THE MACROTEXTURE ADEQUATE FOR THE SITE?	☒

VISUAL ASSESSMENT OF PAVEMENT AND SURFACE	
ARE LOW TEXTURE AND SCRIM VALUES IN LOCATIONS WHERE VEHICLES HAVE A SPECIFIC NEED TO MANOEUVRE OR DECELERATE?	☒ Site on bend
IS THERE EVIDENCE OF CONTAMINATION?	☐
ARE THERE RUTS OR LONGITUDINAL PROFILE PROBLEMS THAT MAY CAUSE WATER TO POOL?	☐
ARE THERE HIGH LEVELS OF LONGITUDINAL PROFILE/RUTTING THAT COULD AFFECT VEHICLE HANDLING?	☐
ARE THERE ANY OTHER DEFECTS THAT COULD AFFECT VEHICLE HANDLING?	☐
IS THE SITE ADEQUATELY DRAINED?	☒

A83 Cairndow (HD28)
HD28 Secondary Investigation



SCRIM Investigatory Form (Secondary)

ROAD USER		
IS THE SITE LIKELY TO HAVE A HIGH PERCENTAGE OF HEAVY GOODS VEHICLES?	☐	
IS ACCESS TO THE SITE CLEAR AND UNAMBIGUOUS?	☒	
IS THE SITE LIKELY TO HAVE VULNERABLE ROAD USERS? (pedestrians, cyclists)	☐	
VISIBILITY		
ARE TRAFFIC SIGNALS, SIGNS AND MARKINGS APPROPRIATE IN ALL CONDITIONS?	☒	
ARE TRAFFIC SIGNALS, SIGNS AND MARKINGS CLEARLY VISIBLE TO ALL ROAD USERS?	☒	
DO APPROACHES (INCLUDING SIDE ROADS) HAVE ADEQUATE SIGHT DISTANCES?	☒	
ADDITIONAL INFORMATION/OBSERVATIONS		
INVESTIGATORS RECOMMENDATIONS		
RECOMMENDATION 1	Treatment to improve the skid resistance	
RECOMMENDATION 2		
RECOMMENDATION 3		
DESCRIPTION OF INVESTIGATORS RECOMMENDATIONS		
RECOMMENDATION 1	Poor SCRIM value, significantly below IL	
RECOMMENDATION 2		
RECOMMENDATION 3		
SLIPPERY ROAD WARNING SIGNS REQUIRED?		
SIGNS REQUIRED?	☐	
NAME OF INVESTIGATOR	DATE	SURVEY METHOD
	2016-05-06 00:00:00	
DESCRIPTION OF APPROVED OUTCOME FROM SECONDARY INVESTIGATION (if different to above)		
NAME OF AUTHORISED SIGNATORY	DATE	
	08/09/2016	

**A83 Cairndow (HD28)
HD28 Secondary Investigation**



SCRIM Investigatory Form (Secondary)

ROUTE	A83	SECTION	JUNCTION A815 TO UC29 CAIRNDOW NORTH (2187m total length)						
LINK/SECTION	16520/05	XSP	CR1	START Ch.	1700	END Ch.	1760	LENGTH	60
SCRIM SITE CATEGORY DETAILS		Single <500m (S2M)					INVESTIGATORY LEVEL		0.5
PRIORITY (RANK)	1 (31)	UNIQUE SITE ID		1128065					
PAVEMENT AND SITE INFORMATION									
SCRIM SURVEY DATE	MSSC/CSC	SCRIM Diff	SURFACE TYPE	SUDR	Wet Accidents		1		
22/09/2015	0.34	-0.16	SURFACE AGE	15	Total Accidents		2		
			PSV	0	Start of site Co-ords		Lat	56.25584	
			TEXTURE	1.00			Long	-4.935536	
			TRAFFIC (AADT)	2129					
SITE LOCATION									
IS THERE CLEAR VISIBILITY FROM ALL APPROACHES TO THE SITE?			☒						
IS THE SPEED LIMIT APPROPRIATE FOR THE SITE?			☒						
IS THE SITE CATEGORY APPROPRIATE FOR THE SITE?			☒						
IS THE INVESTIGATORY LEVEL APPROPRIATE FOR THE SITE?			☒						
ARE THERE MULTIPLE EVENTS?			☒	Possible gradient, and bend					
IS THERE EVIDENCE OF CRASHES? (broken glass, damaged barriers, road furniture)			☐						
ROAD LAYOUT									
DOES A VISUAL ASSESSMENT INDICATE THAT THE GEOMETRY OF THE SITE INCLUDES RELAXATIONS/DEPARTURES FROM STANDARD?			☐						
IS THERE ANY EVIDENCE OF INSUFFICIENT SPACE? (tyre tracks on the verge etc)			☐						
PAVEMENT AND SURFACE CONDITION DATA									
DOES THE SCRIM DATA APPEAR TO REPRESENT THE SITE?			☒						
IS THE MACROTEXTURE ADEQUATE FOR THE SITE?			☒						
VISUAL ASSESSMENT OF PAVEMENT AND SURFACE									
ARE LOW TEXTURE AND SCRIM VALUES IN LOCATIONS WHERE VEHICLES HAVE A SPECIFIC NEED TO MANOEUVRE OR DECELERATE?			☒	Site on bend					
IS THERE EVIDENCE OF CONTAMINATION?			☐						
ARE THERE RUTS OR LONGITUDINAL PROFILE PROBLEMS THAT MAY CAUSE WATER TO POOL?			☒	Edge cracking					
ARE THERE HIGH LEVELS OF LONGITUDINAL PROFILE/RUTTING THAT COULD AFFECT VEHICLE HANDLING?			☒	Edge cracking					
ARE THERE ANY OTHER DEFECTS THAT COULD AFFECT VEHICLE HANDLING?			☐						
IS THE SITE ADEQUATELY DRAINED?			☒						

A83 Cairndow (HD28)
HD28 Secondary Investigation



SCRIM Investigatory Form (Secondary)

ROAD USER	
IS THE SITE LIKELY TO HAVE A HIGH PERCENTAGE OF HEAVY GOODS VEHICLES?	☐
IS ACCESS TO THE SITE CLEAR AND UNAMBIGUOUS?	☒
IS THE SITE LIKELY TO HAVE VULNERABLE ROAD USERS? (pedestrians, cyclists)	☐
VISIBILITY	
ARE TRAFFIC SIGNALS, SIGNS AND MARKINGS APPROPRIATE IN ALL CONDITIONS?	☒
ARE TRAFFIC SIGNALS, SIGNS AND MARKINGS CLEARLY VISIBLE TO ALL ROAD USERS?	☒
DO APPROACHES (INCLUDING SIDE ROADS) HAVE ADEQUATE SIGHT DISTANCES?	☒
ADDITIONAL INFORMATION/OBSERVATIONS	
INVESTIGATORS RECOMMENDATIONS	
RECOMMENDATION 1	Treatment to improve the skid resistance
RECOMMENDATION 2	No further action, please provide reasons
RECOMMENDATION 3	
DESCRIPTION OF INVESTIGATORS RECOMMENDATIONS	
RECOMMENDATION 1	Poor SCRIM value, significantly below IL
RECOMMENDATION 2	
RECOMMENDATION 3	
SLIPPERY ROAD WARNING SIGNS REQUIRED?	
SIGNS REQUIRED?	☐
NAME OF INVESTIGATOR	DATE
	2016-05-06 00:00:00
SURVEY METHOD	
DESCRIPTION OF APPROVED OUTCOME FROM SECONDARY INVESTIGATION (if different to above)	
NAME OF AUTHORISED SIGNATORY	DATE
	08/09/2016

A83 Cairndow (HD28)
WLC Report

WHOLE LIFE COSTING SCHEME OPTIONS

Scheme Reference	16/NW/0104/024	Cairndow
Scheme Option Name	Do Something	
Year	Undiscounted Cost	Discounted Cost
2016/17		
2030/31		
2030/31		
2038/39		
2043/44		
2051/52		
2051/52		
2056/57		
2056/57		
TOTAL		
WORKS		
Scheme Option Name	Do Minimum	
Year	Undiscounted Cost	Discounted Cost
2016/17		
2017/18		
2018/19		
2019/20		
2033/34		
2033/34		
2041/42		
2046/47		
2054/55		
2054/55		
2056/57		
2056/57		
TOTAL		
WORKS		
Scheme Option Name	Do Minimum v1.1	
Year	Undiscounted Cost	Discounted Cost
2016/17		
2017/18		
2018/19		
2019/20		
2032/33		
2033/34		
2045/46		
2046/47		
2053/54		
2054/55		
2056/57		
2056/57		
TOTAL		
WORKS		
Scheme Option Name	ABF Do Something Test	
Year	Undiscounted Cost	Discounted Cost
2016/17		
2030/31		
2043/44		
2051/52		

A83 Cairndow (HD28)
WLC Report

WHOLE LIFE COSTING SCHEME OPTIONS

2056/57		
TOTAL WORKS		
Scheme Option Name	ABF DO Minimum Test	
Year	Undiscounted Cost	Discounted Cost
2016/17		
2017/18		
2018/19		
2019/20		
2032/33		
2045/46		
2053/54		
2056/57		
TOTAL WORKS		