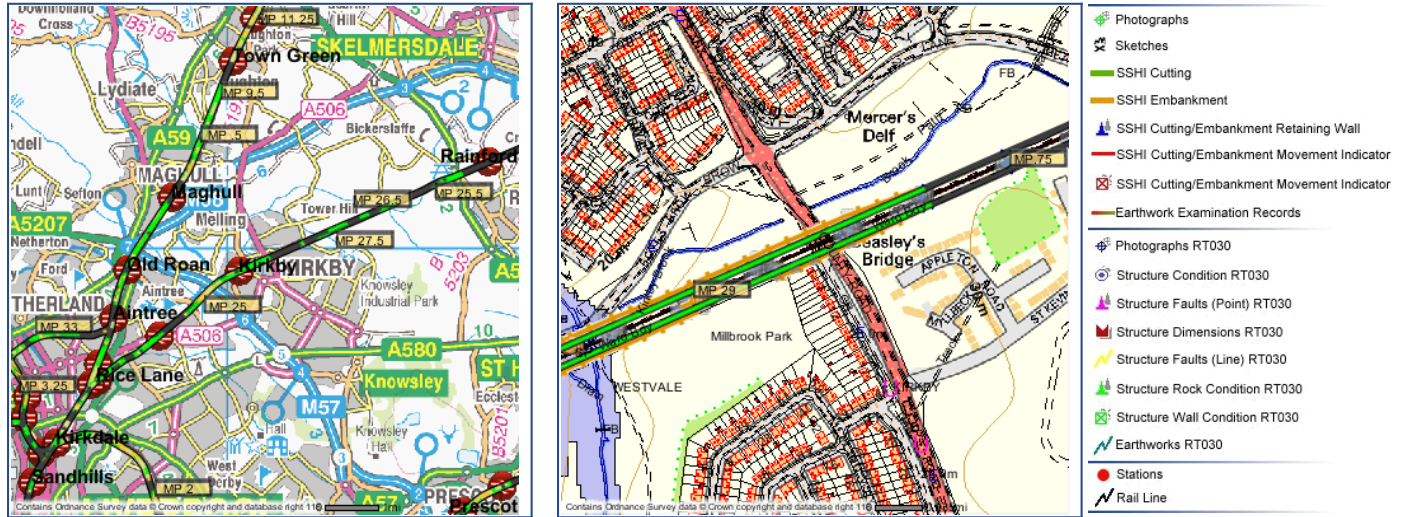
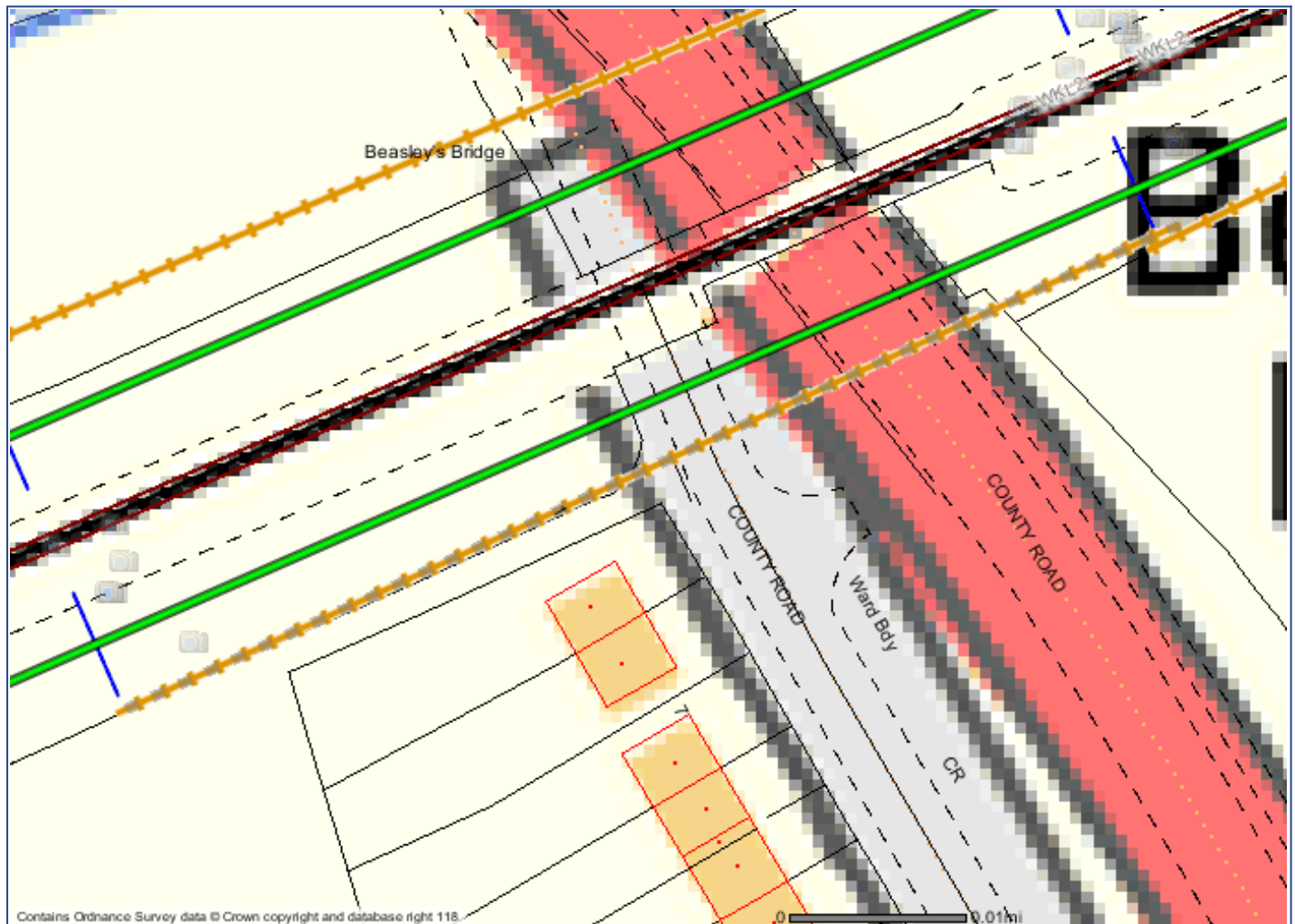


SEHI Soil Embankment

Overview Maps



Location Map



SEHI Soil Embankment

Reference WKL2_28.1539_U_341134_399668_23_01_2013_12_11_18
 EHC  A

Location Information

Inspection 5 Chain Reference	WKL2_28.1540_U_341191_399675_05_03_2012_14_08_31				
ELR	WKL2				
Start Mileage (Miles.Yards)	28.1539	End Mileage	28.1652	Side	Up
Start Easting	341,182	Northing	399,688		
End Easting	341,087	Northing	399,647		
Length (Mile.Yards)	0.0113				
Start Connection	-				
End Connection	-				
Approach	False				
Structure Name	-				

Height Ranges

Start Height (m)	4.0	End Height (m)	5.0
Min. Height (m)	4.0	Max. Height (m)	5.0

Actual Geometry Information

	Slope Angle (deg)	Slope Hyp (m)	Slope Height (m)
Upper Slope	32.0	9.4	5.0
Middle Slope	0.0	0.0	0.0
Lower Slope	0.0	0.0	0.0
Actual Slope to Track Separation (m)	3.0		

LIDAR Derived Geometry

LIDAR Adjacent Natural Slope Angle (deg.)	0
LIDAR Adjacent Natural Slope Direction	Not Inspected
LIDAR Maximum Height (m)	0.00
LIDAR Maximum Angle (deg.)	0

SEHI Soil Embankment

Scored Geometry (A-H) Information

(A) Slope Angle and Height	25 to <35 degrees, 3m to <10m High (A7)
(B) Slope Angle Adjacent to Earthwork	(-)ve falls away from earthwork (B1)
(D) Construction Activity	None (D1)
(E) Min. Slope to Track Separation	Embankment cess width 3-6m (E2)
(F) Historic Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (F7)
(FF) Bedrock Geology	General Competent Rock (FF11)
(FF) Drift Geology	Granular Glacial Till / Terrace Deposits / Blown Sand (FF7)
BGS Superficial Geology	-
BGS Bedrock Geology	-
(G) Slope Composition at Crest	Fine granular / Ash (G2)
(H) Slope Composition at Toe	Fine granular / Ash (H3)
Boulders Present?	None Present
Rock Outcrops \ Faces Present?	None Present

Retaining Walls (C) Information

No Retaining Walls Present

Drainage (I-P) Information

(I) Slope Face Drainage Condition	Face dry (I1)
(J) Slope Toe Drainage Condition	Dry / free draining (J1)
(K) Sub-Drainage	Absent & not required (K1)
(L) Drainage of Adjacent Land	None (L1)
(M) Adjacent Catchment Depth	< 100m (M4)
(N) Adjacent Catchment Gradient	Slopes away from structure (N4)
(O) Catchment Surface	Grazed Pasture (O2) Industrial/Hardstanding (O7)
(P) Catchment Geology	Mixed (P3)

SEHI Soil Embankment

Movement Indicators (Q-DD) Information

(Q) Slope Form of Earthwork	Uniform toe (Q1) And Uniform Crest (Q5)
(R) Geomorphology of Adjacent Land	No Significant Features (R3)
(S) Track Movements	No Significant Features (S4)
(T) Ballast	Maximum 0.5m <1.5m thickness, sleeper ends covered (T3)
(U) Troughing	No Significant Features or Absent (U5)
(V) Leaning Trees / Structures	Random (V2)
(W) Cracking	None (W1)
(X) Mass Movement	None (X1)
(Y) History of Instability	None (Y1)
(Z) Mining / Removal of Support	No Significant Features (Z2)
(AA) Animal Activity	Occasional Rabbit - <10 burrow holes /20sq.m (AA2)
(BB) Tree Cover	Occasional mature trees - <10 trees /20sq.m on slope angles >25deg. (BB4)
(CC) Ground Cover	Sparse grass / bramble cover (CC3) Dense grass / bramble cover (CC4)
(DD) Condition of Opposite Side Embankment	Adjacent ground falls away from toe of embankment or falls towards it at <5 degrees (DD1)

No Line Movement Indicators Present
No Point Movement Indicators Present

Intervention Works

Pre-Intervention SEHI -115

No Linear Intervention Works Present
No Point Intervention Works Present

SEHI Soil Embankment

Photograph Information

No Photograph Information

SEHI Soil Embankment

Examiner

Completed in Current Season True
 Examined By Phil McNerney, Amey (LNW)
 Examined Date 09 March 2018 13:38

Comments

Current Season Comments Phil McNerney, Amey (LNW): 09/03/18: ashy emb, no mi's noted, uniform crest, occ burrowing
 Historic Comments 2013:
 EE: Rob Mullen, Amey (LNW): 23/01/13:
 ~5m high embankment; no significant defects noted.

CP4 SSHI

	Rot.	Trans.	Earth.	Wash.	Burrow.
Actual Score	4	4	3	4	-1
Potential Score	26	34	45	49	50
SSHI	2.6	3.9	3.9	3.9	3.9
Earthworks Factor	1.3				
Overall SSHI Score	3.9				
SSHI Category	 Serviceable				
CP5 Category	 Serviceable				

EHC

SEHI -115
 EHC  A
 Asset Examination Status Full

EACB

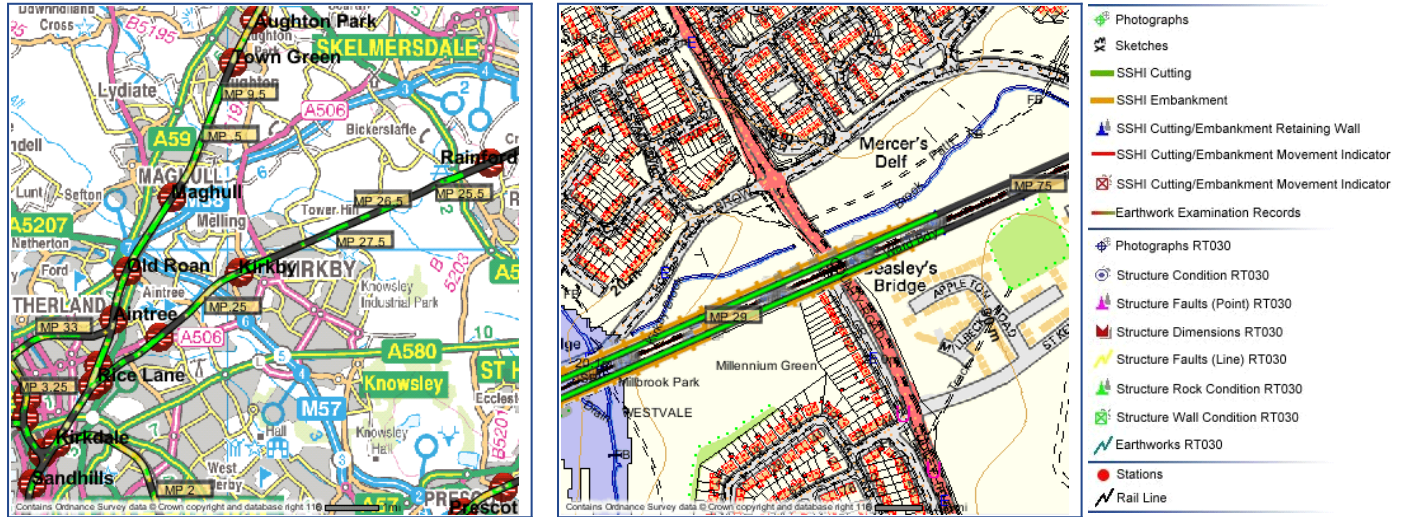
CCT Value 0.00030
 EACB 1

Asset Examination Frequency (Years)

Scored Asset Examination Frequency 10
 Reviewed Asset Examination Frequency 0
 Overall Asset Examination Frequency 5

SEHI Soil Embankment

Overview Maps



Location Map



F. Qualitative Risk Assessment Methodology

The following classification published by the NHBC, EA, and CIEH (2008) has been developed from DOE Guide to Risk Assessment and Risk Management for Environmental Protection and the Statutory Guidance on Contaminated Land (Defra September 2006). The methodology differs from that presented in Contaminated Land Risk Assessment, A Guide to Good Practice (CIRIA C552, 2001), particularly in terms of the definitions of classification of consequence, which include a consideration of immediacy of hazards.

The key to the classification is that the designation of risk is based upon the consideration of both:

- the magnitude of the potential consequence (i.e. severity). [takes into account both the potential severity of the hazard and the sensitivity of the receptor]
- the magnitude of probability (i.e. likelihood). [takes into account both the presence of the hazard and receptor and the integrity of the pathway]

The potential consequences of contamination risks occurring at this Site are classified in accordance with Table 11 below:

Table 11: Classification of Consequence

Classification	Definition of Consequence
Severe	Highly elevated concentrations likely to result in "significant harm" to human health as defined by the EPA 1990, Part 2A, if exposure occurs. Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce. Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population. Catastrophic damage to crops, buildings or property.
Medium	Elevated concentrations which could result in "significant harm" to human health as defined by the EPA 1990, Part 2A if exposure occurs. Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce. Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population. Significant damage to crops, buildings or property.
Mild	Exposure to human health unlikely to lead to "significant harm". Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce. Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the longterm maintenance of the population. Minor damage to crops, buildings or property.
Minor	No measurable effect on humans. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems.

Classification	Definition of Consequence
	Repairable effects of damage to buildings, structures and services

The probability of contamination risks occurring at this Site is classified in accordance with Table 12.

Note: A pollution linkage must first be established before probability is classified. If there is no pollution linkage then there is no potential risk. If there is no pollution linkage then there is no need to apply tests for probability and consequence.

Table 12: Classification of Probability

Classification	Definition of Probability
High Likelihood	There is pollutant linkage and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.
Likely	There is pollutant linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low Likelihood	There is pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.
Unlikely	There is pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.

For each possible pollution linkage (source-pathway-receptor) identified, the potential risk can be evaluated based upon the following probability x consequence matrix shown in Table 13.

Table 13: Overall Contamination Risk Matrix

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Low Risk
	Likely	High Risk	Moderate Risk	Moderate / Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate / Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate / Low Risk	Low Risk	Very Low Risk	Very Low Risk

R&D 66:2008 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case. These definitions are reproduced in Table 14. These risk categories apply to each pollutant linkage, not simply to each hazard or receptor.

Table 14: Risk Category

Risk Category	Definition and Likely Actions Required
Very High	There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.
High	Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.
Very Low	It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.
No Potential Risk	There is no potential risk if no pollution linkage has been established.

