A83 Rest and Be Thankful

LTS EIAR VOLUME 4, APPENDIX 12.5 - SPILLAGE AND ROUTINE RUNOFF ASSESSMENTS

Transport Scotland

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A12.5. Spillage and Routine Runoff Assessments

A12.5.1. Improvements to the Old Military Road (OMR)

Groundwater pollution from accidental spillage (OMR operational impact)

A12.5.1.1. The overall spillage risk assessment for each drainage network is presented in Table 12.5.2-1.

Groundwater pollution from routine runoff (OMR operational impact)

A12.5.1.2. The overall assessment of routine runoff impacts within each drainage network is presented within Table 12.5.2-2.

A12.5.2. Long Term Solution (LTS)

Groundwater pollution from accidental spillage (LTS operational impact)

A12.5.2.1. The overall spillage risk assessment for each drainage network is presented in

Groundwater pollution from routine runoff (LTS operational impact)

A12.5.2.2. The overall assessment of routine runoff impacts within each drainage network is presented within

Table 12.5.2-1 - Spillage risk assessment (OMR Improvements)

Drainage Network Section	Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	1	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	437443	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	2	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	3697757	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	3	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1222511	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	4	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	4105400	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	5	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	5871523	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	6	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1126697	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network Section	Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	7	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1633048	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	8	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1115790	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	1	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	809087	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	2	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1454457	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	3	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	920130	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents	4	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	2096116	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network Section	Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
(CH2480 to CH3836)								
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	5	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1156959	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	6	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1333567	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	7	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1621849	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	8	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1357526	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	9	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	675722	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network Section	Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	10	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1005968	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	11	Alluvium Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	904523	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	12	Beinn Bheula Schist	Water Quality (Groundwater)	High	3280881	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	13	Beinn Bheula Schist	Water Quality (Groundwater)	High	506471	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	1	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	365206	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	2	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	5226153	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network Section	Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
OMR IMPROVEMENTS OMR Proposed Phase 3	3	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	4192835	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	4	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	738165	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	5	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1020026	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	6	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1931486	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	7	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	620376	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	8	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	4236731	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	9	River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	393901	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network Section	Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
OMR IMPROVEMENTS OMR Proposed Phase 3	10	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	920665	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	11	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	624439	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	12	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	2584704	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	13	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1049507	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	14	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	5596782	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	15	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1988646	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network Section	Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
OMR IMPROVEMENTS OMR Proposed Phase 3	16	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	904096	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	17	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1325897	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	18	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	2038055	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS OMR Proposed Phase 3	19	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	735868	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS Sharp Bend 1	Sharp Bend 1	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	Water Quality (Groundwater)	High	1604805	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS Sharp Bend 1	Sharp Bend 2	Beinn Bheula Schist	Water Quality (Groundwater)	High	1391524	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
OMR IMPROVEMENTS Sharp Bend 1	Sharp Bend 3	Beinn Bheula Schist	Water Quality (Groundwater)	High	720981	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Table 12.5.2-2 - Routine run-off groundwater assessment results (OMR Improvements)

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	1	224591.3 704925.1	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	2	224472.5 705041.9	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	3	224459.3 705058.3	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	4	224425.2 705107.2	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	5	224414.8 705124.5	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	6	224404.6 705140.7	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	7	224387.9 705246.0	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 2-Way Extents (CH160 to CH1090)	8	224387.9 705246.0	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	1	223730.2 706647.5	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	2	223685.4 706732.4	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Hummocky Glacial Deposits Glacial Till	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
									Beinn Bheula Schist					
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	3	223664.0 706779.7	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	4	223632.2 706860.1	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	5	223613.5 706893.7	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	6	223561.3 706946.2	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents	7	223525.8 706994.6	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk*	Continuous (ditches and filter drains)	Depth to water table ≤5 m	Mixture of intergranular and fracture flow	Alluvium Glacial Till	<15 % to >1 % clay minerals	>=15% SOM	pH <=5	205	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
(CH2480 to CH3836)					*(Score = 20)*	*Low Risk (Score = 15)*	*High Risk (Score = 60)*	*Medium Risk (Score = 40)*	Beinn Bheula Schist	*Medium Risk (Score = 10)*	*Low Risk (Score = 5)*	*High Risk (Score = 15)*		
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	8	223502.4 707034.0	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	9	223456.9 707070.2	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	10	223397.9 707168.5	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	11	223356.7 707251.5	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Existing 1-Way Extents	12	223266.1 707279.0	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk*	Continuous (ditches and filter drains)	Depth to water table ≤5 m	Fracture flow *High Risk (Score = 60)*	Beinn Bheula Schist	<15 % to >1 % clay minerals	>=15% SOM	pH <=5	225	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
(CH2480 to CH3836)					*(Score = 20)*	*Low Risk (Score = 15)*	*High Risk (Score = 60)*			*Medium Risk (Score = 10)*	*Low Risk (Score = 5)*	*High Risk (Score = 15)*		
OMR IMPROVEMENTS OMR Existing 1-Way Extents (CH2480 to CH3836)	13	223244.1 707287.9	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Fracture flow *High Risk (Score = 60)*	Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	225	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	1	224362.9 705310.3	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	2	224315.6 705517.7	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	3	224315.5 705519.4	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	4	224257.0 705618.7	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk*	Continuous (ditches and filter drains)	Depth to water table ≤5 m	Mixture of intergranular and fracture flow	River Terrace Deposits Glacial Till	<15 % to >1 % clay minerals	>=15% SOM	pH <=5	205	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
					(Score = 20)	*Low Risk (Score = 15)*	*High Risk (Score = 60)*	*Medium Risk (Score = 40)*	Beinn Bheula Schist	*Medium Risk (Score = 10)*	*Low Risk (Score = 5)*	*High Risk (Score = 15)*		
OMR IMPROVEMENTS OMR Proposed Phase 3	5	224255.4 705620.5	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	6	224207.4 705698.4	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	7	224188.9 705734.1	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	8	224108.3 705866.8	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	9	224107.3 705869.1	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk*	Continuous (ditches and filter drains)	Depth to water table ≤5 m	Mixture of intergranular and fracture flow	River Terrace Deposits Glacial Till	<15 % to >1 % clay minerals	>=15% SOM	pH <=5	205	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
					(Score = 20)	*Low Risk (Score = 15)*	*High Risk (Score = 60)*	*Medium Risk (Score = 40)*	Beinn Bheula Schist	*Medium Risk (Score = 10)*	*Low Risk (Score = 5)*	*High Risk (Score = 15)*		
OMR IMPROVEMENTS OMR Proposed Phase 3	10	224039.0 706090.2	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	11	224038.4 706092.8	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	12	223994.8 706230.4	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	13	223993.1 706232.3	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
OMR IMPROVEMENTS OMR Proposed Phase 3	14	223940.1 706283.8	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	15	223880.6 706363.0	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium River Terrace Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	16	223879.2 706365.1	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	17	223833.2 706436.8	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS OMR Proposed Phase 3	18	223771.8 706541.0	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk*	Continuous (ditches and filter drains)	Depth to water table ≤5 m	Mixture of intergranular and fracture flow	Alluvium Hummocky Glacial Deposits	<15 % to >1 % clay minerals	>=15% SOM	pH <=5	205	Medium Risk

Drainage Network Section	Network Outfall ID	Outfall Grid Reference	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
					(Score = 20)	*Low Risk (Score = 15)*	*High Risk (Score = 60)*	*Medium Risk (Score = 40)*	Glacial Till Beinn Bheula Schist	*Medium Risk (Score = 10)*	*Low Risk (Score = 5)*	*High Risk (Score = 15)*		
OMR IMPROVEMENTS OMR Proposed Phase 3	19	223770.2 706543.8	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS Sharp Bend 1	Sharp Bend 1	223355.8 707241.2	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Mixture of intergranular and fracture flow *Medium Risk (Score = 40)*	Alluvium Hummocky Glacial Deposits Glacial Till Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
OMR IMPROVEMENTS Sharp Bend 1	Sharp Bend 2	223095.5 707329.1	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Fracture flow *High Risk (Score = 60)*	Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	225	Medium Risk
OMR IMPROVEMENTS Sharp Bend 1	Sharp Bend 3	223043.0 707218.8	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (ditches and filter drains) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Fracture flow *High Risk (Score = 60)*	Beinn Bheula Schist	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	225	Medium Risk

Table 12.5.2-3 - Spillage risk assessment (LTS)

Drainage Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
1	Alluvium Hummocky Glacial Deposits Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	51297	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
2A	Glacial Till Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	383380	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
2B	Glacial Till Unnamed Igneous Intrusion	Water Quality (Groundwater)	High	227632	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
	Beinn Bheula Schist						
3A	Hummocky Glacial Deposits Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	404678	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
3B	Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	1456842	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
3C	Hummocky Glacial Deposits Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	520301	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
4A	Hummocky Glacial Deposits Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	7284212	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
4B	Hummocky Glacial Deposits Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	910526	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
4C	Alluvium Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	910526	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
4D	Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	2428071	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
4E	Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	1214035	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
4F	Unnamed Igneous Intrusion Beinn Bheula Schist	Water Quality (Groundwater)	High	560324	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight
4G	Hummocky Glacial Deposits Unnamed Igneous Intrusion	Water Quality (Groundwater)	High	662201	Pass	Negligible (Risk of pollution from spillages <0.5%)	Slight

Drainage Network No.	Receptors	Attribute	Sensitivity	Return Period Probability (years)	Pass/ Fail	Magnitude	Significance
	Beinn Bheula Schist						

Table 12.5.2-4 - Routine run-off groundwater assessment results (LTS)

Outfall ID	Outfall Grid Reference	Location Description	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
1	223993 705857	Southern extent of the Scheme on Croe Water	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (filter drains, carrier drains and detention basin) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	River Terrace Deposits and Glacial Till (clay, silt, sand, gravel and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
2A	223469 707202	Stream at northern extent of the Debris shelter	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (filter drains, carrier drains and point outfall structure) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Glacial Till (clay, silt, sand, gravel and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
2B	223343 707343	Stream at bridge culvert	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20)*	Continuous (filter drains, carrier drains and point outfall structure) *Low Risk (Score = 15)*	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Glacial Till (clay, silt, sand, gravel and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
3A	222904 707587	Outfall located 50 m north the junction with the B828, as drainage direction is to the north.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock	Hummocky/glacial deposits (predominantly sand and gravel, with secondary constituents of clay, silt and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk

Outfall ID	Outfall Grid Reference	Location Description	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
								Medium Risk (Score = 40)						
3B	222976.68 707546.35	Outfall located 95 m north the junction with the B828, as drainage direction is to the north and west.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Hummocky/glacial deposits (predominantly sand and gravel, with secondary constituents of clay, silt and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
3C	222991.36 707682.39	Outfall located 225 m north the junction with the B828, as drainage direction is to the north and west.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Hummocky/glacial deposits (predominantly sand and gravel, with secondary constituents of clay, silt and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
4A	222772.68 707004.82	Western extent of the Scheme on the B828, 480 m south-west of the junction with the Rest And Be Thankful. Drainage direction is south west.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Hummocky/glacial deposits (predominantly sand and gravel, with secondary constituents of clay, silt and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
4B	222773.19 707015.64	Western extent of the Scheme on the B828, outfall is 470 m south-west of the junction with the Rest And Be Thankful. Drainage	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Alluvium, hummocky/glacial deposits (predominantly sand and gravel, with secondary constituents of clay, silt and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk

Outfall ID	Outfall Grid Reference	Location Description	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
		direction is south-west.												
4C	222878.1 707131.85	Western extent of the Scheme on the B828, outfall is 330 m south-west of the junction with the Rest And Be Thankful. Drainage direction is north-east.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Alluvium, hummocky/glacial deposits (predominantly sand and gravel, with secondary constituents of clay, silt and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
4D	222916.72 707122.25	Western extent of the Scheme on the B828, outfall is 325 m south-west of the junction with the Rest And Be Thankful. Drainage direction is south-east.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Bedrock with no superficial cover.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
4E	222924.95 707131.26	Western extent of the Scheme on the B828, outfall is 315 m south-west of the junction with the Rest And Be Thankful. Drainage direction is south-east.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Bedrock with no superficial cover.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk

Outfall ID	Outfall Grid Reference	Location Description	Traffic flow (AADT)	Rainfall depth SAAR (mm)	Drainage area ratio	Infiltration method	Unsaturated zone (m)	Flow Type (incorporates flow type and effect grain size)	Geology	Unsaturated zone clay content	Organic carbon	Unsaturated zone soil pH	Overall Risk Score	Risk Category
4F	222974.47 707321.79	Western extent of the Scheme on the B828, outfall is 120 m south-west of the junction with the Rest And Be Thankful. Drainage direction is north-east.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Bedrock with no superficial cover.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk
4G	222944.44 707426.04	Western extent of the Scheme on the B828, outfall is 120 m south-west of the junction with the Rest And Be Thankful. Drainage direction is north-west.	3088 *Low Risk (Score = 10)*	1343.9 *High Risk (Score = 30)*	>50 to <150 *Medium Risk (Score = 20*	Continuous (ditches, filter drains and carrier drains) Low Risk (Score = 15)	Depth to water table ≤5 m *High Risk (Score = 60)*	Intergranular flow through superficial aquifer and fracture flow through bedrock *Medium Risk (Score = 40)*	Hummocky/glacial deposits (predominantly sand and gravel, with secondary constituents of clay, silt and boulders) over bedrock.	<15 % to >1 % clay minerals *Medium Risk (Score = 10)*	>=15% SOM *Low Risk (Score = 5)*	pH <=5 *High Risk (Score = 15)*	205	Medium Risk