

M5 Junction 10 Improvements Scheme

Environmental Statement Appendix 10.1 Definitions of Probability and Consequences

TR010063 – APP 6.15

Regulation 5 (2) (a)

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Infrastructure Planning Planning Act 2008

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M5 Junction 10 Improvements Scheme Development Consent Order 202[x]

6.15 Environmental Statement: Appendix 10.1 Definitions of Probability and Consequences

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1. Definitions of Probability and Consequence

- 1.1.1. This appendix is to support the Chapter 10 (Geology and Soils) – (application document TR010063 – APP 6.8) of the Environmental Statement for M5 Junction 10 Improvements Scheme.
- 1.1.2. Table 1-1 and Table 1-2 below look at the risk estimations and probability and their classifications.

Table 1-1 - Risk estimation - classification of probability

Classification	Definition of the probability of harm / pollution occurring
High Likelihood	The contaminant linkage exists, and it is very likely to result in harm / pollution in the short term, and/or will almost inevitably result in harm / pollution in the long term, and/or there is current evidence of harm/pollution. Likelihood is defined as more likely than not and meets the definition of 'significant possibility' within Part 2A Contaminated Land Statutory Guidance.
Likely	The source, pathway and receptor exist for the contaminant linkage and it is probable that harm / pollution will occur. Circumstances are such that harm / pollution is not inevitable, but possible in the short term and likely over the long term. Likelihood is defined as reasonably possible and meets the definition of 'significant possibility' within Part 2A Contaminated Land Statutory Guidance.
Low Likelihood	The source, pathway and receptor exist, and it is possible that harm / pollution could occur. Circumstances are such that harm/pollution is by no means certain in the long term and less likely in the short term.
Unlikely	The source, pathway and receptor exist for the contaminant linkage, but it is improbable that harm / pollution will occur even in the long term.

Table 1-2 - Risk estimation - classification of consequence

Classification	Definition of consequence
	Human Health Receptors – Site end user or other sensitive receptor
Severe	Acute damage to human health based on the effects on the critical human receptor. Concentrations of contaminants above appropriate site specific assessment criteria. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Medium	Chronic damage to human health based on the effects on the critical human receptor. Concentrations of contaminants above appropriate site specific assessment criteria. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Mild	No appreciable impact on human health based on the potential effects on the critical human receptor. Concentrations of contaminants above generic assessment criteria but below appropriate site specific assessment criteria.
Minor	No appreciable impact on human health based on the effects on the critical human receptor. Concentrations of contaminants below appropriate generic assessment criteria.

Classification	Definition of consequence
	Human Health Receptors – Site construction workers
Severe	Exposure to hazardous substances resulting in a reportable death, major injury, 3-day injury or illness/disease under RIDDOR.
Medium	Exposure to hazardous substances resulting in a dangerous occurrence reportable under RIDDOR. Exposure to hazardous substances resulting in exceedance of a workplace exposure limit.
Mild	Exposure to hazardous substances resulting in limited effects such as headache, dizziness, nausea. Exposures below the workplace exposure limits. Not reportable under RIDDOR.
Minor	Minor exposure to hazardous substance resulting in no appreciable ill health effects.
	Controlled Water Receptors
Severe	Pollution of a Principal Aquifer within a source protection zone or potable supply characterised by a breach of drinking water standards. Pollution of a surface water course characterised by a breach of an Environmental Quality Standard (EQS) at a statutory monitoring location or resulting in a change in General Quality Assessment (GQA) grade of river reach. Discharge of a List I or List II substance to groundwater. Pollution meets Part 2A Contaminated Land Statutory Guidance definition.
Medium	Pollution of a Principal Aquifer outside a source protection zone or a Secondary A Aquifer characterised by a breach of drinking water standards. Pollution of an industrial groundwater abstraction or irrigation supply that impairs its function. Substantial pollution but insufficient to result in a change in the GQA grade of river reach. Pollution meets Part 2A Contaminated Land Statutory Guidance definition.
Mild	Low levels of pollution of a Principal Aquifer outside a source protection zone or an industrial abstraction, or pollution of a Secondary Aquifer. Low levels of pollution insufficient to result in a change in the GQA grade of river reach, pollution of a surface water course without a quality classification.
Minor	No appreciable pollution, or pollution of a low sensitivity receptor such as a non-aquifer or a surface water course without a quality classification
	Property Receptors – Buildings, Foundations and Services
Severe	Catastrophic damage to buildings, such as explosion. Catastrophic failure of foundations and services. Substantial damage to a Scheduled Monument significantly impairing the by reason of which the monument is scheduled. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Medium	Substantial damage to buildings and foundations rendering the structures unsafe. Substantial damage to services impairing their function. Significant damage to a Scheduled Monument significantly impairing the reason of which the monument is scheduled. Harm meets definition of 'significant harm' within Part 2A Contaminated Land Statutory Guidance.
Mild	Significant damage to buildings and foundations but not resulting in them being unsafe for occupation. Damage to services but not sufficient to impair their function. Damage to a Scheduled Monument but no significant impairment to the reason of which the monument is scheduled.

Classification	Definition of consequence
Minor	Easily repairable damage to buildings, foundations and services.

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