

APPENDIX B
Tier 1 Risk Screening and Prioritisation

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Site 1

Site 1 – Tier 1 Screening Assessment

Source Assessment	Score Matrix	Score	Rational/Comments
Leachate	1a	0.5	0.8ha C&D (Source: WCC and Atkins)
Gas	1b	0.5	0.8ha C&D (Source: WCC and Atkins)
Leachate Migration Pathway Assessment	Score Matrix	Score	Rational
Vertical Pathway (Aquifer Vulnerability)	2a	2	High
Horizontal Pathway (Groundwater Flow Regime)	2b	2	Lg Locally important sand/gravel aquifers
Surface Water Pathway	2c	2	possible direct linkage - to be mapped
Gas Migration Pathway Assessment	Score Matrix	Score	Rational
Assuming lateral migration (assuming receptor within 250m of source)	2d	3	GLs (glaciofluvial sands and gravels). Farm building located c.270m from site boundary
Vertical migration (assuming receptor located above source)	2e	0	No receptors located above source
Receptor Assessment	Score Matrix	Score	Rational
Residential dwellings with potential for private water supply	3a	1	Nearest domestic dwelling located c.300m from site
Protected Areas	3b	3	SAC located within 50m
Aquifer	3c	3	Lg Locally important sand/gravel aquifers
Public Water Supplies	3d	0	No public water supplies within 1km of the site (Source: WCC)
Surface Water Bodies	3e	2	County Brook River located c.100m to north of site
Buildings and enclosed spaces used by humans or livestock	3f	0	Farm building located c.270m from site boundary

Site 1 – Tier 1 Risk Classification

	Source	Pathway	Receptor	% Score	Risk Classification
SPR1	(1a) Leachate	(2a,b&c) Groundwater and Surface Water migration	(3e) Surface Water body	2	Low
SPR2			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	3	Low
SPR3		(2a&b) Groundwater Migration	(3a) Private Well	1	Low
SPR4			(3b) Protected Area (Groundwater dependent terrestrial ecosystem)	3	Low
SPR5			(3c) Aquifer	2	Low
SPR6			(3d) Public Water Supply	0	No linkage
SPR7			(3e) Surface Water body	2	Low
SPR8		(2c) Surface Water Migration	(3e) Surface Water body	3	Low
SPR9			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	5	Low
SPR10	(1b) Landfill	(2d) Lateral migration in subsoil	(3f) Human Presence (Buildings, enclosed spaces)	0	Low
SPR11	Gas	(2e) Vertical Migration in subsoil		0	No linkage

Risk Classification	
High	≥70% for any individual SPR linkage
Moderate	Between 40-70% for any individual SPR linkage
Low	≤40% for any individual SPR linkage

SITE RISK CLASSIFICATION	LOW
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Site 2

Site 2 – Tier 1 Screening Assessment

Source Assessment	Score Matrix	Score	Rational/Comments
Leachate	1a	7	4.6ha MSW (Source: Muir, WCC and Atkins)
Gas	1b	7	4.6ha MSW (Source: Muir, WCC and Atkins)
Leachate Migration Pathway Assessment	Score Matrix	Score	Rational
Vertical Pathway (Aquifer Vulnerability)	2a	2	High
Horizontal Pathway (Groundwater Flow Regime)	2b	2	Lg Locally important sand/gravel aquifers
Surface Water Pathway	2c	2	possible direct linkage - to be mapped
Gas Migration Pathway Assessment	Score Matrix	Score	Rational
Assuming lateral migration (assuming receptor within 250m of source)	2d	3	GLs (glaciofluvial sands and gravels). Building located <50m from site boundary
Vertical migration (assuming receptor located above source)	2e	0	No buildings located above source
Receptor Assessment	Score Matrix	Score	Rational
Residential dwellings with potential for private water supply	3a	2	Nearest domestic dwelling located c.70m from site
Protected Areas	3b	3	SAC located within 50m
Aquifer	3c	3	Lg Locally important sand/gravel aquifers
Public Water Supplies	3d	0	No public water supply within 1km of site (Source: WCC)
Surface Water Bodies	3e	3	County Brook River located c.50 from the site
Buildings and enclosed spaces used by humans or livestock	3f	5	Building located <50m from site boundary

Site 2 Tier 1 Risk Classification

	Source	Pathway	Receptor	% Score	Risk Classification	
SPR1	(1a) Leachate	(2a,b&c) Groundwater and Surface Water migration	(3e) Surface Water body	42	Moderate	
SPR2			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	42	Moderate	
SPR3		(2a&b) Groundwater Migration	(3a) Private Well	23	Low	
SPR4			(3b) Protected Area (Groundwater dependent terrestrial ecosystem)	35	Low	
SPR5			(3c) Aquifer	21	Low	
SPR6			(3d) Public Water Supply	0	No linkage	
SPR7			(3e) Surface Water body	35	Low	
SPR8		(2c) Surface Water Migration	(3e) Surface Water body	70	High	
SPR9			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	70	High	
SPR10		(1b) Landfill Gas	(2d) Lateral migration in subsoil	(3f) Human Presence (Buildings, enclosed spaces)	70	High
SPR11			(2e) Vertical Migration in subsoil		0	No linkage

Risk Classification	
High	≥70% for any individual SPR linkage
Moderate	Between 40-70% for any individual SPR linkage
Low	≤40% for any individual SPR linkage

SITE RISK CLASSIFICATION	HIGH
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Site 3A

Site 3A – Tier 1 Screening Assessment

Source Assessment	Score Matrix	Score	Rational/Comments
Leachate	1a	7	2ha, MSW (source WCC)
Gas	1b	7	2ha, MSW (source WCC)
Leachate Migration Pathway Assessment	Score Matrix	Score	Rational
Vertical Pathway (Aquifer Vulnerability)	2a	2	High
Horizontal Pathway (Groundwater Flow Regime)	2b	2	Lg Locally important sand/gravel aquifers
Surface Water Pathway	2c	2	possible direct linkage - to be mapped
Gas Migration Pathway Assessment	Score Matrix	Score	Rational
Assuming lateral migration (assuming receptor within 250m of source)	2d	3	GLs (glaciofluvial sands and gravels)
Vertical migration (assuming receptor located above source)	2e	0	No receptors located above source
Receptor Assessment	Score Matrix	Score	Rational
Residential dwellings with potential for private water supply	3a	2	Nearest domestic dwellings located 175m and 230m from site (source: WCC)
Protected Areas	3b	3	SAC located within 50m
Aquifer	3c	3	Lg Locally important sand/gravel aquifers
Public Water Supplies	3d	0	No public water supplies within 1km
Surface Water Bodies	3e	2	County Brook River located c.70m to north of site (Source: WCC)
Buildings and enclosed spaces used by humans or livestock	3f	3	Enniskerry FC located 130m from site boundary

Site 3A – Tier 1 Risk Classification

	Source	Pathway	Receptor	% Score	Risk Classification
SPR1	(1a) Leachate	(2a,b&c) Groundwater and Surface Water migration	(3e) Surface Water body	28	Low
SPR2			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	42	Moderate
SPR3		(2a&b) Groundwater Migration	(3a) Private Well	23	Low
SPR4			(3b) Protected Area (Groundwater dependent terrestrial ecosystem)	35	Low
SPR5			(3c) Aquifer	21	Low
SPR6			(3d) Public Water Supply	0	No linkage
SPR7			(3e) Surface Water body	23	Low
SPR8		(2c) Surface Water Migration	(3e) Surface Water body	47	Moderate
SPR9			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	70	High
SPR10	(1b) Landfill	(2d) Lateral migration in subsoil	(3f) Human Presence (Buildings, enclosed spaces)	42	Moderate
SPR11	Gas	(2e) Vertical Migration in subsoil		0	No linkage

Risk Classification	
High	≥70% for any individual SPR linkage
Moderate	Between 40-70% for any individual SPR linkage
Low	≤40% for any individual SPR linkage

SITE RISK CLASSIFICATION HIGH

Site 3B

Site 3B – Tier 1 Screening Assessment

Source Assessment	Score Matrix	Score	Rational/Comments
Leachate	1a	5	0.9ha, MSW (Source WCC, EPA)
Gas	1b	5	0.9ha, MSW (Source WCC, EPA)
Leachate Migration Pathway Assessment	Score Matrix	Score	Rational
Vertical Pathway (Aquifer Vulnerability)	2a	2	High
Horizontal Pathway (Groundwater Flow Regime)	2b	2	Lg Locally important sand/gravel aquifers
Surface Water Pathway	2c	0	No direct linkage
Gas Migration Pathway Assessment	Score Matrix	Score	Rational
Assuming lateral migration (assuming receptor within 250m of source)	2d	3	GLs (glaciofluvial sands and gravels)
Vertical migration (assuming receptor located above source)	2e	0	No receptors located above source
Receptor Assessment	Score Matrix	Score	Rational
Residential dwellings with potential for private water supply	3a	2	Nearest domestic dwelling c.100m from site boundary. Farm buildings and Enniskerry FC c.100m from site boundary
Protected Areas	3b	1	SAC located c.300m
Aquifer	3c	3	Lg Locally important sand/gravel aquifers
Public Water Supplies	3d	0	No public water supplies within 1km
Surface Water Bodies	3e	1	County Brook River located c.350m to north of site. Glencullen River located c.600m
Buildings and enclosed spaces used by humans or livestock	3f	3	Buildings located c.100m from site boundary

Site 3B – Tier 1 Risk Classification

	Source	Pathway	Receptor	% Score	Risk Classification
SPR1	(1a) Leachate	(2a,b&c) Groundwater and Surface Water migration	(3e) Surface Water body	7	Low
SPR2			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	7	Low
SPR3		(2a&b) Groundwater Migration	(3a) Private Well	17	Low
SPR4			(3b) Protected Area (Groundwater dependent terrestrial ecosystem)	8	Low
SPR5			(3c) Aquifer	15	Low
SPR6			(3d) Public Water Supply	0	No linkage
SPR7			(3e) Surface Water body	8	Low
SPR8		(2c) Surface Water Migration	(3e) Surface Water body	0	No linkage
SPR9			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	0	No linkage
SPR10	(1b) Landfill	(2d) Lateral migration in subsoil	(3f) Human Presence (Buildings, enclosed spaces)	30	Low
SPR11	Gas	(2e) Vertical Migration in subsoil		0	No linkage

Risk Classification	
High	≥70% for any individual SPR linkage
Moderate	Between 40-70% for any individual SPR linkage
Low	≤40% for any individual SPR linkage

SITE RISK CLASSIFICATION	LOW
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Site 3C

Site 3C – Tier 1 Screening Assessment

Source Assessment	Score Matrix	Score	Rational/Comments
Leachate	1a	5	07ha, MSW (Source: WCC)
Gas	1b	5	07ha, MSW (Source: WCC)
Leachate Migration Pathway Assessment	Score Matrix	Score	Rational
Vertical Pathway (Aquifer Vulnerability)	2a	2	High
Horizontal Pathway (Groundwater Flow Regime)	2b	2	Lg Locally important sand/gravel aquifers
Surface Water Pathway	2c	2	possible direct linkage - to be mapped
Gas Migration Pathway Assessment	Score Matrix	Score	Rational
Assuming lateral migration (assuming receptor within 250m of source)	2d	3	GLs (glaciofluvial sands and gravels)
Vertical migration (assuming receptor located above source)	2e	0	No receptors located above source
Receptor Assessment	Score Matrix	Score	Rational
Residential dwellings with potential for private water supply	3a	3	Nearest domestic dwelling c.70m from site boundary. Farm buildings c.50m from site boundary
Protected Areas	3b	3	SAC located within 50m
Aquifer	3c	3	Lg Locally important sand/gravel aquifers
Public Water Supplies	3d	0	No public water supplies within 1km
Surface Water Bodies	3e	3	County Brook River located c.50m to north of site (Source: WCC)
Buildings and enclosed spaces used by humans or livestock	3f	5	Farm buildings located c.50m from site boundary

Site 3C – Tier 1 Risk Classification

	Source	Pathway	Receptor	% Score	Risk Classification
SPR1	(1a) Leachate	(2a,b&c) Groundwater and Surface Water migration	(3e) Surface Water body	30	Low
SPR2			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	30	Low
SPR3		(2a&b) Groundwater Migration	(3a) Private Well	25	Low
SPR4			(3b) Protected Area (Groundwater dependent terrestrial ecosystem)	25	Low
SPR5			(3c) Aquifer	15	Low
SPR6			(3d) Public Water Supply	0	No linkage
SPR7			(3e) Surface Water body	25	Low
SPR8		(2c) Surface Water Migration	(3e) Surface Water body	50	Moderate
SPR9			(3b) Protected Area (Surface Water dependent terrestrial ecosystem)	50	Moderate
SPR10	(1b) Landfill Gas	(2d) Lateral migration in subsoil	(3f) Human Presence (Buildings, enclosed spaces)	50	Moderate
SPR11		(2e) Vertical Migration in subsoil		0	No linkage

Risk Classification	
High	≥70% for any individual SPR linkage
Moderate	Between 40-70% for any individual SPR linkage
Low	≤40% for any individual SPR linkage

SITE RISK CLASSIFICATION	MODERATE
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