



**Appendix C – Extensive List of Matrix Criteria**

<b>1.0 Cultural Heritage</b>	
<b>1.1 Cultural Heritage - Land Parcels / Sites</b>	
1.1.1	Potential to impact (direct/indirect) on National Monuments (designated sites)
1.1.2	Potential to impact (direct/indirect) on RMPs (designated sites)
1.1.3	Potential to impact (direct/indirect) on RPS/NIAH (designated sites)
1.1.4	Potential to impact (direct/indirect) on CH sites (previously unrecorded sites)
1.1.5	Potential to impact (direct) on water courses and environs (areas of archaeological potential)
1.1.6	Potential to impact (direct/indirect) on historic designed landscapes
1.1.7	Potential to impact (direct) on townland boundaries (cultural heritage significance)
<b>1.2 Cultural Heritage - Route Corridors</b>	
1.2.1	Potential to impact on RMPs
1.2.2	Potential to impact on National Monuments
1.2.3	Potential to impact on RPS/NIAH
1.2.4	Potential to impact on CH sites
1.2.5	Potential to impact on historic designed landscapes
1.2.6	Potential to impact on ACA
<b>1.3 Cultural Heritage - Outfalls</b>	
1.3.1	Potential to impact on RMPs
1.3.2	Potential to impact on National Monuments
1.3.3	Potential to impact on RPS/NIAH
1.3.4	Potential to impact on CH sites
1.3.5	Potential to impact on Recorded shipwreck sites
1.3.6	Potential to impact on inter-tidal archaeology (previously unknown)
<b>2.0 Landscape &amp; Visual</b>	
<b>2.1 Landscape &amp; Visual - Land Parcels / Sites</b>	
2.1.1	Potential to impact on views from scenic routes (designation in Wicklow CDP)
2.1.2	Potential to impact on areas of 'Highly Sensitive Landscape' (designation in Wicklow CDP)
2.1.3	Potential to impact on views from heritage/tourist/amenity features
2.1.4	Potential to impact on the character of the landscape character
2.1.5	Potential that landscape screening will be ineffective or contribute to landscape and visual impacts
2.1.6	Potential to impact on views from settlements
2.1.7	Potential to impact on views from dwellings / local roads
2.1.8	Potential to impact on views from M11 motorway
2.1.9	Potential to impact on views from Dublin - Rosslare rail line
2.1.10	Potential to impact on views from other major roads (national or regional roads)
2.1.11	Potential to disrupt landscape structure (hedgerows / field pattern etc.)
2.1.12	Potential to impact on historic designed landscapes
2.1.13	Potential to impact on woodlands and significant tree groups
<b>2.2 Landscape &amp; Visual - Route Corridors - Pipelines</b>	
2.2.1	Potential to impact on views from scenic routes (designation in Wicklow CDP)
2.2.2	Potential to impact on areas of 'Highly Sensitive Landscape' (designation in Wicklow CDP)
2.2.3	Potential to impact on views from settlements
2.2.4	Potential to impact on views from dwellings / local roads
2.2.5	Potential to impact on views from motorways
2.2.6	Potential to impact on views from other major roads (national or regional roads)
2.2.7	Potential to impact on views from Dublin - Rosslare rail line
2.2.8	Potential to impact on views from heritage/tourist features
2.2.9	Potential to disrupt landscape structure (treelines / hedgerows / field pattern etc.)
2.2.10	Potential to impact on woodlands and significant tree groups
2.2.11	Potential to impact on rivers and streams
2.2.12	Potential to impact on historic designed landscapes
<b>2.3 Landscape &amp; Visual - Outfalls (Landward side)</b>	
2.3.1	Potential to impact on views from scenic routes (designation in Wicklow CDP)
2.3.2	Potential to impact on 'Highly Sensitive Landscape' (designation in Wicklow CDP)
2.3.3	Potential to impact on coastal walks (indicated in Wicklow CDP)
2.3.4	Potential to impact on bathing locations (indicated in Wicklow CDP)
2.3.5	Potential to impact on views from settlements
2.3.6	Potential to impact on views from dwellings / local roads
2.3.7	Potential to impact on views from major roads (national or regional roads)
2.3.8	Potential to impact on views from Dublin - Rosslare rail line
2.3.9	Potential to impact on views from heritage/tourist features
2.3.10	Potential to Impact on Character of the Coastal Landscape

<b>3.0 Ecology</b>	
<b>3.1 Ecology - Land Parcels / Sites</b>	
3.1.1	Potential to impact on Natura 2000 Sites
3.1.2	Potential to impact on Habitats Directive Annex II listed species in freshwater
3.1.3	Potential to impact on Habitats Directive Annex II listed species in coastal and marine waters
3.1.4	Potential to impact on pNHAs and Conservation Zones
3.1.5	Potential to impact upon ecological corridors, nature development area or high value habitats
3.1.6	Potential to impact on breeding habitat for Annex 1 bird species
3.1.7	Potential to impact on IWeBS identified areas of importance
<b>3.2 Ecology - Route Corridors/Pipelines</b>	
3.2.1	Potential to impact on Natura 2000 sites
3.2.2	Potential to impact on Habitats Directive Annex II listed species in freshwater
3.2.3	Potential to impact on Habitats Directive Annex II listed species in coastal and marine waters
3.2.4	Potential to impact on pNHAs and Conservation Zones
3.2.5	Potential to impact upon ecological corridors, nature development area or high value habitats
3.2.6	Potential to impact on breeding habitat for Annex 1 bird species
3.2.7	Potential to impact on IWeBS identified areas of importance
<b>3.3 Ecology - Outfalls</b>	
3.3.1	Marine Outfall; Coastal Natura 2000 sites
3.3.2	Marine Outfall; Marine Natura 2000 sites
3.3.3	Marine Outfall; Habitats Directive Annex II listed species
3.3.4	Marine Outfall; Birds Directive Annex 1 listed species
3.3.5	Potential to impact on IWeBS identified areas of importance
3.3.6	River outfall; Habitats Directive Annex II listed species in freshwater
3.3.7	Potential to impact on breeding habitat for Annex 1 bird species
<b>4.0 Hydrology</b>	
<b>4.1 Hydrology - Land Parcels / Sites</b>	
4.1.1	Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors
4.1.2	Culverting requirement - used to indicate impact on flood-prone watercourses due to reduced conveyance.
4.1.3	Area prone to flooding (based on historical data and predicted flood extents adjacent to the land parcel/site as well as up and downstream locations)
4.1.4	Potential Impact on ecologically important and designated sites.
<b>4.2 Hydrology - Route Corridors</b>	
4.2.1	Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors
4.2.2	Culverting requirement - used to indicate impact on flood-prone watercourses due to reduced conveyance.
4.2.3	Area prone to flooding (based on historical data and predicted flood extents adjacent to the land parcel/site as well as up and downstream locations)
4.2.4	Potential Impact on ecologically important and designated sites.
<b>4.3 Hydrology - Outfalls</b>	
4.3.1	Proximity to water bodies in terms of flooding and as an indicator of sensitive surface water receptors
4.3.2	Potential to impact Shellfish Waters
4.3.3	Area prone to flooding (based on historical data and predicted flood extents adjacent to the land parcel/site as well as up and downstream locations)
4.3.4	Potential Impact on ecologically important and designated sites

<b>5.0 Hydrogeology</b>
<b>5.1 Hydrogeology - Land Parcels / Sites</b>
5.1.1 Aquifer Classification - importance of the groundwater resource to a given area
5.1.2 Vulnerability Classification - potential for groundwater contamination
5.1.3 Groundwater Supplies - identification of water supply springs and bored wells based on GSI records.
5.1.4 Groundwater Source Protection Area's and Zones of Contribution as per available GSI data
5.1.5 Identification of hydrogeological features from the GSI karst database
<b>5.2 Hydrogeology - Route Corridors</b>
5.2.1 Aquifer Classification - importance of the groundwater resource to a given area
5.2.2 Vulnerability Classification - potential for groundwater contamination
5.2.3 Groundwater Supplies - identification of water supply springs and bored wells based on GSI records
5.2.4 Groundwater Source Protection Area's and Zones of Contribution as per available GSI data
5.2.5 Identification of hydrogeological features from the GSI karst database
<b>5.3 Hydrogeology - Outfalls</b>
5.3.1 Aquifer Classification - importance of the groundwater resource to a given area
5.3.2 Vulnerability Classification - potential for groundwater contamination
5.3.3 Groundwater Supplies - identification of water supply springs and bored wells based on GSI records.
5.3.4 Groundwater Source Protection Area's and Zones of Contribution as per available GSI data
5.3.5 Identification of hydrogeological features from the GSI karst database
<b>6.0 Soils and Geology</b>
<b>6.1 Soils and Geology - Land Parcels / Sites</b>
6.1.1 Potential to impact on Geological Heritage Sites / County Geological Sites
6.1.2 Potential to interact with contaminated land
6.1.3 Potential to sterilise mineral resource
6.1.4 Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)
6.1.5 Potential impact on karst features
6.1.6 Potential to encounter soft ground
6.1.7 Soils Types
6.1.8 Sub Soil Types
6.1.9 Depth to rock
<b>6.2 Soils and Geology - Route Corridors</b>
6.2.1 Potential to impact on Geological Heritage Sites / County Geological Sites
6.2.2 Potential to interact with contaminated land
6.2.3 Potential to sterilize mineral resource
6.2.4 Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)
6.2.5 Potential impact on karst features
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<b>6.3 Soils and Geology - Outfalls</b>
6.3.1 Potential to impact on Geological Heritage Sites / County Geological Sites
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6.3.4 Potential to encounter shallow bedrock during construction (interactions with other disciplines during construction - noise, dust etc)
6.3.5 Potential impact on karst features
6.3.6 Potential to encounter soft ground
<b>7.0 Agronomy &amp; Landuse - Land Parcels/Sites</b>
7.1 Approximate % Reduction in overall farm holding
7.2 Farming Enterprise
7.3 Number of landowners impacted within land parcel/site boundary
7.4 Land Quality
7.5 Severance based on site location within overall land holdings
7.6 Potential Impacts on landholdings
7.7 Crop rotation practiced
7.8 Overall Impact

<b>8.0</b>	<b>Noise &amp; Vibration</b>
8.1	Potential for Construction phase noise impact at Sensitive receptors
8.2	Potential for Operational phase noise impact at Sensitive receptors
8.3	Existing Ambient Noise Climate in the Area (significant noise sources)
8.4	Construction Phase Impact rating
8.5	Operational Phase Impact rating
<b>9.0</b>	<b>Air and Odour</b>
9.1	Potential for Construction Phase Air Quality Impact at Sensitive Receptors
9.2	Potential for Operational Phase Air Quality Impact at Sensitive Receptors
9.3	Potential for Odour impacts at Operational phase
9.4	Potential for Odour impacts at Construction phase
9.5	Proximity to EPA Waste Licensed facility
9.6	Proximity to EPA IPPC Licensed Intensive Agriculture facility
9.7	EPA Air Quality Zone Classification
9.8	Wind Rose Assessment
<b>10.0</b>	<b>People and Communities - Parcels/Sites</b>
10.1	Number of residential & commercial buildings 100-500m from land parcel/site boundary
10.1	Number of residential & commercial buildings 500m - 1km from land parcel/site boundary
10.1	Potential to impact on known community amenities and facilities within 1km from land parcel/site boundary.
10.1	Potential to impact on areas of Significant Population Densities
<b>11.0</b>	<b>Traffic - Parcels/Sites</b>
11.1	Length of access road required
11.2	Number of crossings required for access road
11.3	Potential Impact on landowners
11.4	Works required to provide safe access entrance
11.5	Potential impact on surrounding local road network
11.6	Frequency of accidents near entrance
11.7	Frequency of accidents on surrounding network (indication of general road safety issues)
11.8	Road link impacted upon by all construction traffic (excluding major routes)
<b>12.0</b>	<b>12.0 Planning Policy - Parcels/Sites</b>
12.1	Existing Land Use on Land Parcel/Site
12.2	Land Parcel/Site Zoning
12.3	Local Objectives/Constraints on Land Parcel/Site
12.4	Land Uses present within 100m of Land Parcel/Site Boundary
12.5	Zoning present within 100m of land parcel/site boundary
12.6	Zoning present within 1km of land parcel/site boundary
12.7	Other Local Objectives present within 1km of Land Parcel/Site Boundary

<b>13.0</b>	<b>Engineering Design - Pipelines</b>
<b>13.1</b>	<b>Pipeline Lengths</b>
	Total Length as Open Cut
	Total Length as Tunnel
	Total Length in Marine Outfall
	Total Length in River Outfall
	Total Pipeline Length
<b>13.2</b>	<b>Power Requirements</b>
	Power Requirement from Load Centre to WWTP Land Parcel/Site
	Power Requirement from Load Centre to WWTP Land Parcel/Site
	Total Power Requirements
<b>13.3</b>	<b>Carbon Emissions - Pipelines</b>
	Total embodied Carbon
	Total Lifetime Operational Carbon
	Total Carbon (tonnes CO2)
<b>13.4</b>	<b>Health and Safety</b>
	Health & Safety
<b>13.5</b>	<b>Access / Right of Way / Wayleaves along Pipeline Corridors</b>
	Restrictions Along Pipeline Corridors to WwTP Land Parcels/Sites
<b>13.6</b>	<b>Crossings - Waterways, Rail, etc. along Pipeline Corridors</b>
	Main River Crossings
	Stream Crossings
	Golf Courses
	Canal Crossings
	Motorway Crossings
	National Road Crossings
	Regional Road Crossings
	Railway Crossings
	Total Crossings
<b>13.7</b>	<b>Potential to Impact on Physical Infrastructure along Pipeline Corridors</b>
<b>13.8</b>	<b>Potential to Impact on Strategic Utility Services along Pipeline Corridors</b>
<b>13.9</b>	<b>Presence of Public Utilities within Land Parcels</b>
	Public Utilities within the Land Parcel
<b>13.10</b>	<b>Land Ownership and Titles along Pipeline Corridors</b>
<b>13.11</b>	<b>Route Traffic Management</b>
<b>13.12</b>	<b>Construction Risk along Pipeline Corridors</b>
<b>13.13</b>	<b>Operation</b>
<b>14.0</b>	<b>Engineering Design - WwTP</b>
<b>14.1</b>	<b>Engineering Design/Treatment Processes Required - WwTP</b>
<b>14.2</b>	<b>Health &amp; Safety - WwTP Construction</b>
<b>14.3</b>	<b>Remediation Works -WwTP &amp; Pipelines</b>
<b>14.4</b>	<b>Capital &amp; Operational Costs</b>
<b>14.5</b>	<b>Carbon Emissions - WwTP</b>
<b>15.0</b>	<b>Land Valuation</b>
<b>15.1</b>	<b>Land Valuation - Land Parcels &amp; Wayleaves</b>
	Price per area - Land Parcel
	Price - Wayleaves Required for Pipelines
	Summary