Winter 2020

National Water Resources Plan - Draft Framework Plan
Technical Appendices

Appendix N
Fine Screening Scoring Criteria

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Data Disclaimer:

This document uses best available data at time of writing. Some sources may have been updated in the interim period. As data relating to population forecasts and trends are based on information gathered before the Covid 19 Pandemic, monitoring and feedback will be used to capture any updates. The National Water Resources Plan will also align to relevant updates in the National Planning Framework.

1.1 Introduction

This appendix provides further information of how the MCA Analysis is undertaken as part of the Fine Screening Stage of the Options Assessment Methodology.

The appendix contains the following information:

- Table 1.1 contains the fine screening questions that form the MCA assessment;
- Table 1.2 lists information we consider to assess each question;
- Table 1.3 provides the scoring criteria sub-criteria and guidance on scoring.

Further details on the Fine Screening Stage of the Options Assessment Methodology are provided in Section 8.3.5 of the draft Framework Plan.

Table 1.1 – Fine Screening Questions

MCA criteria	Sub-criteria[1]	Fine screening questions
Resilience	Outages	• Is there vulnerability due to failure/outages caused by, for example, flooding, pollution, damage, freeze-thaw, loss of power supply? • Is there provision of additional resilience (from new option) to outage events at existing sources?
	Financial uncertainty	• Is there vulnerability due to increasing energy or commodity prices?
	Regulatory changes	• Is there vulnerability to future regulatory and legislation changes including changes to environmental legislation?
	Climate change	• Is there improved resilience for Irish Water against climate change and / or drought conditions?
Feasibility and Deliverability	Flexibility	• Are there benefits due to short lead in time to deliver the option? • Is there phased or incremental delivery of the option? • Is it possible to adapt the option once delivered, to meet any future changes? • Are there benefits due to a short ramp-up time for the option to deliver potable water into supply?
	Deliverability	• Is there experience in delivering similar solutions (technology or construction methodology known to Irish Water)? • Is there deliverability uncertainty due to land ownership or suitable land availability? • Are there construction uncertainties due to land stability or contamination risk? • Is there dependency on existing assets for successful delivery? • Are there any major issues with the Safety, Health and Welfare at Work (Construction) Regulations, 2013 that could change the scope or put at risk the successful delivery of the option? • Is the required technology tried and tested with operations department? • Is there quality and confidence of design information?
Progressibility	Acceptability	• Are there any major local planning issues that could change the scope or put at risk the successful delivery of the option? • Are there any major issues with regulatory consents or permissions that could change the scope or put at risk the successful delivery of the option?
	Synergies	• Are there synergies with other WRZs, other water companies on the island of Ireland, in the UK, or third parties?

[1] The Sustainability sub-criteria and questions are based on assessment against the SEA Objectives

MCA criteria	Sub-criteria[1]	Fine screening questions
Sustainability (Environmental and Social impacts)	Population, health, economy & recreation	• Will the option impact public health and quality of life in terms of improved supply security or access to water, and/or does this option help to raise public awareness of the need for water conservation? • Does the option address drinking water quality issues that are identified on the EPA remedial action list? • Will the construction or operation of the option cause significant disturbance to sensitive receptors from dust, noise and/or traffic? • Will the option result in loss of recreational amenity, footpaths, or access to recreational amenity (including water based recreation)?
	Water environment: quality & resources	**Water quality and resources** • Would the option or associated construction activities create the potential for deterioration of waterbody status/quantitative status or conflict with or contribute to potential to achieve RBMP/WFD objectives for achieving good status (groundwater and surface water)? • Does the option address risk to the water environment from drinking water treatment residuals? • Would the option reduce pressure on the water environment through water savings or improvements to water quality? **Flood risk** • Is there a potential for this option to increase flood risk, for example increase base flow or result in loss of flood plain?
	Biodiversity, flora and fauna	• Is there potential for the option to result in significant adverse or beneficial effects on European or nationally designated sites (for example, by undermining the European sites' conservation objectives through direct or indirect effect pathways, including but not limited to direct loss of habitat, changes in hydrology) and/or terrestrial and aquatic populations of European or nationally protected species? • Is there potential for this option to result in significant adverse of beneficial effects on local, county or national biodiversity (for example flora and fauna protected under the Flora Protection Order, Salmonid Regulations, 1988 and/or the Wildlife Act, 1976), for example through loss of significant areas of ecologically valuable habitat (woodlands/hedgerows/wetlands) and in particular irreplaceable habitats (ancient or long-established woodlands) or by undermining biodiversity objectives outlined in the National Biodiversity Action Plan or local county development/biodiversity action plan? • Could this option contribute to a significant increased risk in spreading Invasive Non-Native Species (INNS)?
	Material assets	• Will this option conflict with critical infrastructure, or does the option conflict with existing business, planned land use or result in the loss of significant area of valuable agricultural land? • Does the option make use of suitable existing assets? • Does this option increase resource use and waste production, including waste to landfill, or does it promote waste treatment efficiency and waste reuse, for example improvements to the management of drinking water treatment residuals? • Would this option affect other water users, for example through effects on existing groundwater abstractions?

MCA criteria	Sub-criteria[1]	Fine screening questions
	Landscape and visual amenity	• Could this option impact the landscape character areas, townscape character areas or important views (detract or improve)?
	Climate change	• What is the level of construction and operational carbon emissions associated with the option – using indicator of level of emissions such as scale of construction or energy use or estimated tonnes? • Does the option increase climate change vulnerability for the environment or add resilience?
	Cultural heritage and archaeology	• Does the option have potential to damage, or detract from the setting of, designated cultural heritage assets or result in the loss of potential archaeological interest, or does this option contribute to protecting them?
	Geology and soils	• Would any designated or non-designated geological features be damaged by an option, or is there a risk to significant areas of valuable soils or are there risks from contaminated land? Or could the option support improvement to soil quality and reduce erosion risks?

Table 1.2 – Information for assessing options

Multi-Criteria Analysis topic	Sub-criteria[2]	Criteria information required
Resilience	Outages	• Vulnerability to outages
	Financial uncertainty	• Vulnerability to increased capital and/or operating costs
	Regulatory changes	• Proposed regulations/legislation • Regulations/legislation being discussed at a national/local level that we are aware of but not yet proposed
	Climate Change	• Vulnerability to extreme weather events such as floods, drought or freeze or pollution such as algal blooms which could affect water supply
Feasibility and Deliverability	Flexibility	• Irish Water GIS and other databases
	Deliverability	• Similar completed projects in Ireland, UK or Europe • Availability of technologies required • Existing infrastructure near the option • Safety, Health and Welfare at Work Act, 2005 and 2010
Progressibility	Acceptability	• Compliance with national planning policy • Compliance with local planning and land zoning • Relevant regulatory requirements
	Synergies	• Existing projects in planning near the option • Other options proposed near the option within the NWRP
Sustainability (Environmental and social impacts)	Population, health, economy & recreation	Data on communities and populations potentially affected or benefiting from options: • Urban/rural settlement areas • Road types • Population • Businesses in close proximity to the option • Tourist/recreational areas/attractions in close proximity to the

[2] The Sustainability sub-criteria and questions are based on assessment against the SEA Objectives

Multi-Criteria Analysis topic	Sub-criteria[2]	Criteria information required
		option • Environmental Protection Agency Remedial Action List • Water treatment plant reliability
	Water environment: quality & resources	Data on water sources or receptors including freshwater and coastal waters: • WFD groundwater status for source aquifers • WFD surface water chemical status and ecological status/potential as sources or receptors • Water resource availability • RRBMP measures and WFD objectives • Current abstraction and residual discharge • Flood Risk Areas
	Biodiversity, flora and fauna	• Natura 2000 sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar) • UNESCO (United Nations Educational, Scientific and Cultural Organisation) World Heritage and Biosphere sites • sites designated as Wetlands of International Importance • National Heritage Areas (NHAs) • proposed National Heritage Areas (pNHAs) • Salmonid Waters, • Freshwater Pearl Mussel Catchments • Nature reserves • Waterbody ecological status • Invasive species records or risk assessments
	Material assets	• CORINE Landcover type considered valuable; agricultural, peatlands, forestry • Urban areas/rural areas • Major built infrastructure (for example main roads, rail, canals, existing water infrastructure) • Residual generation
	Landscape and visual amenity	• Option characteristics and proximity to sensitive sites • Landscape Character Areas • CORINE Landcover
	Climate change	• Carbon footprint • Vulnerability of sources and receptors to climate change
	Cultural heritage and archaeology	• National Monuments • Records of Monuments and Places • Record of Protected Structures, • Architectural Conservation Areas • National Inventory of Architectural Heritage • UNESCO World Heritage Sites
	Geology and soils	• Irish Geological Heritage Sites (IGHS) • Soil Types

Table 1.3 - Fine screening scoring guide

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
Resilience	Outages	Is there provision of additional resilience (from new option) to outage events at existing sources? Is there vulnerability due to failure/ outages caused by flooding, pollution, damage, freeze thaw, loss of power, etc?	**Clearly significant positive opportunities/benefits** where an option provides additional resilience to outage events (for example, water transfers between multiple WRZs at a national level)	**Moderate positive opportunities/benefits** where an option provides additional resilience to outage events (for example, water transfers between multiple WRZs or at a regional level)	**Some minor positive opportunities/benefits** where an option provides additional resilience to outage events (for example, water transfers at a county level and storage reservoirs that can provide resilience within a WRZ).	Improvements to resilience to outage events are localised to the existing WRZ (mainly demand management options will fall under this scoring)	Option may not improve resilience to outage events but will maintain it at the current risk level (for example, WTP expansion options with additional standby treatment capacity)	Option is **vulnerable to outage events,** which will increase the current risk level and reduce resilience, but mitigation measures can help manage the outage risk (for example, options that are connected to the network that could be supplied from other sources in the event of outage)	Option is **highly vulnerable to outages** with **mitigation measures difficult to implement** (for example, standalone options in isolated areas with no backup supplies or potential for imports in the event of an outage)
	Financial uncertainty	Is there vulnerability due to increasing energy or commodity prices?	Option **greatly reduces** capital and/or current operational expenditure, allowing for cost savings.	Option will **moderately reduce** capital and/or current operational expenditure, allowing for cost savings.	Option may result in a **minor reduction** in capital and/or current operational expenditure, allowing for cost savings.	Option **may temporarily reduce** current operational expenditure, but would likely be eventually offset by increased energy or commodity prices (for example, WTP upgrades, with improved operational efficiency)	Option presents **no change** to current operational expenditure, meaning option may be vulnerable to future changes due to increasing energy or commodity prices (for example, water efficiency and leakage reduction options that reduce production energy requirements)	**Option would see operational expenditure increase and will therefore be vulnerable to increasing energy or commodity prices** (for example, water transfers which have significant pumping energy requirements)	**Option would see operational expenditure significantly increase and will therefore be highly vulnerable to increasing energy or commodity prices** (for example, coastal desalination plants that use energy intensive processes)
	Regulatory changes	Is there vulnerability to future regulatory and legislation changes?	N/A	N/A	N/A	Option will not be affected by future regulatory and legislation changes (for example, where an abstraction license is in place but the option will not increase beyond the license limit)	Option does not present any change to current abstraction and is within allowable abstraction yield (existing abstractions are likely to be licensed as is)	There is a **moderate risk** of option vulnerability due to future regulatory and legislation changes (for example, where a current abstraction is to be increased beyond either “what is currently being abstracted” or “the abstraction license” but within allowable abstraction yield)	There is a **high risk** of option vulnerability due to future regulatory and legislation changes (for example, where there is no current abstraction but abstraction within allowable abstraction yield is proposed)
	Climate change	Is there improved resilience of Irish Water due to climate change and / or drought conditions?	**Clearly significant positive opportunities/benefits** where an option provides additional resilience to climate change and/or drought conditions	**Moderate positive opportunities/benefits** where an option provides additional resilience to climate change and/or drought conditions	Option will provide **positive/beneficial outcomes** in improving resilience to climate change and/or drought conditions (for example, storage reservoirs or one-way water transfers within a WRZ in areas where abstractions during low flows may be affected by climate change)	This option will **have no effect on resilience**, either positive or negative due to the Deployable Output being unaffected by climate change and/or drought conditions (for example, WTP expansion which is not impacted by climate change)	Option has a **low risk of negatively affecting improved resilience** due to climate change and/or drought conditions (for example, where a source may have surplus Deployable Output at present, which could be affected by climate change in the long term (>25years))	Option has a **moderate risk of negatively affecting improved resilience** due to climate change and/or drought conditions (for example, where a source may have sufficient Deployable Output at present, which could be affected by climate change in the medium term (10–20 years))	Option has a **high risk of negatively affecting improved resilience** due to climate change and/or drought conditions (for example, where a new water source may have a drought-critical Deployable Output, which would almost certainly be affected by climate change in the short term (<5years))
Flexibility & Deliverability	Flexibility	Are there benefits due to short lead in time to deliver the option? Is there phased or incremental delivery of the option? Is it possible to adapt the option once delivered, to meet any future changes?	**Highly flexible option** that can be adapted at any stage. Measures can be phased in from locality to locality or region to region until they are active nationwide. For example, demand	**Moderately flexible option** that offers the opportunity to plan for phased construction or the final option to be adapted to meet future changes. Alternatively, the option has a very	**Flexible option** that offers the opportunity to be phased or adapted to meet future changes given careful planning. Additionally, the option has a reasonably short implementation time	The option has a very short lead-in time which is less than 12 months.	Option has the potential to be **revised at any stage of the project or the option has lead time of 1–2 years.**	It may be **difficult to improve the option** to allow for flexibilities in its delivery but not impossible. Alternatively, the option has a lead in time of 2–5 years.	**Inflexible option** where delivery of project cannot be phased or adapted to meet any future changes. Alternatively, the option has a lead in time of over 5 years.

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
		Are there benefits due to a short ramp-up time for the option to deliver potable water into supply?	management option.	short implementation time which would enable it to be started/stopped quickly without significant impact. For example, for a pipeline transfer, where the pipeline can be installed in stages, the route can be adapted and it has a relatively quick implementation time.	which would enable it to be started/stopped with minimal impact.				
	Deliverability	Is there experience in delivering similar solutions (technology or construction methodology known to Irish Water)? Is there deliverability uncertainty due to land ownership or suitable land availability? Are there construction uncertainties due to land stability or contamination risk? Is there dependency on existing assets for successful delivery? Are there any major issues with the Safety, Health and Welfare at Work (Construction) Regulations, 2013 that could change the scope or put at risk the successful delivery of the option? Is the required technology tried and tested with operations department? Is there quality and confidence of design information?	Feasible option which is a **standard solution delivered regularly and recently in Ireland**. There are no risks due to land availability or contamination. There is no risk posed by dependency on existing assets. There are no S, H & W risks which cannot be mitigated.	Feasible option which has had a **similar solution delivered recently in Ireland**. There are no risks due to land availability or contamination. There is no risk posed by dependency on existing assets. There are no S, H & W risks which cannot be mitigated.	Feasible option which has had a **similar solution delivered before in Ireland**. There is minimal risk due to land availability or contamination and minimal risk posed by dependency on existing assets. S, H & W risks can be mitigated.	N/A	Feasible option which may require **minor revisions in order to successfully deliver project** (for example, revisions to option at early stages to avoid S, H & W issues at later stages of project)	Feasible option which may require **moderate amount of revisions and/or specialist technology in order to successfully deliver project** (for example, large pipelines transferring treated water over long distances)	Feasible option which requires **bespoke technology or construction not seen in Ireland previously** (for example, desalination plant in Ireland)
Progressibility	**Acceptability**	Are there any major local planning issues that could change the scope or put at risk the successful delivery of the option? Are there any major issues with regulatory consents or permissions that could change the scope or put at risk the successful delivery of the option?	N/A	N/A	The proposed scheme is a “no build” solution which will require no planning (for example, some demand management options)	Planning required but no local planning issues and no issues with regulatory consents or permissions expected	**Minor planning** issues and/or issues with regulatory consents or permissions that may be acceptable in the wider context of the option (for example, wider benefits of other MCA criteria; the planning issues can be overcome)	**Potential planning issues** and/or potential issues with regulatory consents or permissions, which are not fully known at this stage. However, they may put at risk the successful delivery of the project if confirmed.	**Major** planning and/or issues with regulatory consents or permissions that will likely put at risk the successful delivery of the project

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
Environmental and social acceptability	Synergies	Are there synergies with other WRZs, other water companies on the island of Ireland, in the UK, or third parties?	Proposed scheme is integrated with **multiple other WRZ** via existing transfers, but where additional benefits could be accrued by integrated operation, thereby reducing overall operating costs.	Proposed scheme is both integrated within the WRZ water supply network and also linked to one other WRZ via existing transfers, but where additional benefits could be accrued by integrated operation, thereby reducing overall operating costs.	Proposed scheme is both integrated within the WRZ water supply network and also linked to other WRZs via existing transfers, but where additional benefits could be accrued by integrated operation, thereby reducing overall operating costs.	Proposed scheme is integrated within the WRZ water supply network, and could also supply other WRZs via existing transfers at no additional capital cost.	Proposed scheme is integrated within the WRZ water supply network, but where additional synergies could accrue if the option could be linked to other WRZs at a reasonable cost.	Proposed scheme is a standalone option in an isolated area but where synergies could accrue if the option were integrated within the WRZ water supply network at a reasonable cost.	Proposed scheme is a standalone option in an isolated area where synergies are not possible; due to the area being unable to be supplied either from other sources in the same WRZ via the network or from other neighbouring WRZs.
	Population, health, economy & recreation	Will the option impact public health and quality of life, during construction? Will the option impact public health and quality of life, during operation? What is the impact on recreational amenities?	**Some long-term and/or significant positive opportunities/benefits** to public health and quality of life that should be seen as a highly favourable effect of the option. Or, Potential for significant positive effects, such as a creation of a new recreational area or activity or enhanced quality of water based recreation, due to improved water quality status.	**Some intermittent, medium-term, positive opportunities/benefits** to public health and quality of life that should be seen as a favourable effect of the option. Or, Potential for positive effects, such as a noticeable improvement in existing views or the actual amenity.	**Some short-term, minor and/or infrequent positive opportunities/benefits** to public health and quality of life. Or, **Some potential for short-term positive opportunities/benefits** to recreational amenity, footpaths or access to recreational amenity that should be seen as a favourable effect of the option, such as improved access.	No discernible effect, either positive or negative to human health, quality of life or recreational amenity	**Potential for some minor and short-term effects** to public health and/or quality of life, short-term disruption from dust, noise and/or traffic during the construction phase of the option. Or, The option has the **potential to result in minor effects** to recreational amenity or access to recreational amenity, such as through the construction of the option.	The option has potential for significant effects to public health or quality of life, such as reduced security of supply or water quality risks from supply or environmental contamination. Or, The option has the **potential for significant effects** such as a noticeable change to important views, loss of the actual amenity with limited potential for compensation provision, or increased traffic journey lengths or traffic volumes nearby.	**Even with the implementation of mitigation,** this option has the potential for significant effects to public health or quality of life, such as long-term noise or traffic generation or increased risks to security of supply and access to water. Or, **Significant effects**, such as a noticeable visual detractor affecting highly valued views, loss of important amenity, increased journey lengths to the amenity or traffic volumes nearby.
	Water environment: quality & resources	Would the option or associated construction activities affect WFD Status of water body status, in terms of quantity and quality for surface water? Would the option or associated construction activities affect WFD Status of water body status, in terms of quantity and quality for groundwater? Would the option or associated construction activities affect WFD Status of water body status, in terms of hydro morphology? Would this option reduce pressure on water environment through water savings? Is there a potential for this option to increase flood	**Potential significant contribution to the achievement** of objectives for waterbody status/quantitative status improvement or potential to achieve RBMP objectives due to **reduced pressure on the water environment** through significant water use savings, for example replacement of existing abstraction where environmental stress is likely to an area where the abstraction is more environmentally sustainable.	**Potential contribution to the achievement of** objectives for waterbody status/quantitative status improvement or potential to achieve RBMP objectives as a result of **reduced pressure on the water environment** through water use savings, or reduced abstraction during low flow or low water level/environmental stress periods.	**Potential contribution to waterbody quality or resource availability but not expected to change** waterbody ecological status/quantitative status or may contribute to achieving WFD objectives due to **reduced pressure on the water environment** through minor water savings, for example water efficiency measures.	No change to waterbodies near the option. No water savings, but no change to water associated with the scheme.	The option has the potential to result in minor or short-term effects to a waterbody as a result o**f increased pressure on water environment but within resource capacity**, or effects could be easily mitigated or avoided, for example operational rules so that abstraction is limited to high flows.	This option has the potential to result in medium risk of deterioration of the waterbody or impediment to achieving the RBMP/WFD objectives as a result of **increased pressure on the water environment**, for example through increased water abstraction compared to water available.	This option has the potential to result in a high risk of deterioration of the waterbody or impediment to achieving the RBMP/WFD objectives as a result of **increased pressure on the water environment**, for example through increased water abstraction compared to water available.

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
		risk – e.g. increase base flow or result in loss of flood plain? Will Navigation be affected?							
		Is there a potential for this option to increase flood risk, for example increase base flow or result in loss of flood plain?	Option will **clearly provide permanent, long-term resilience** against flooding near the option, for example on line water storage designed to provide flood storage capacity as well as water supply or catchment management improving retention of water.	Option will **provide considerable contribution to protection or resilience** against flooding downstream for example water storage reservoir which would provide some additional flood water storage capacity.	Option will **clearly provide some contribution to resilience** against flooding near the option, for example ground water abstraction where high groundwater levels can cause flooding.	Option causes **no impediment to or increase of flood risk** nearby.	Option could result in **minor impediment to flood risk management or result in loss of a small area of flood plain that could be mitigated through implementation of flood prevention measures**.	Option could result in **major impediment to flood risk management or result in loss of a considerable area of flood plain that could be mitigated through implementation of flood prevention measures**.	The option has the potential to result in **major impediment to flood risk management** nearby or result in the **loss of a significant area of flood plain that would be difficult or highly costly to avoid through flood prevention measures**.

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
	Biodiversity, flora and fauna	Is there potential for the option to result in adverse effects on the integrity of a European site ((for example by undermining the European sites' conservation objectives through direct or indirect effect pathways, including but not limited to direct loss of habitat, changes in hydrology)? Is there potential for the option to impact on an Annex species (through direct or indirect effect pathways, including but not limited to direct loss of habitat, changes in hydrology) outside designated areas?	The option provides the potential **to create new areas of habitat that could be of international or European importance** (that is, potential for future designation as an SAC, SPA or Ramsar site) or which extends the existing network of international and European sites as a result of water resource management options, for example construction of wetlands. The option **removes an existing cross-catchment Invasive INNS risk** affecting European sites, for example, replacing raw water transfer with treated water transfer.	The option has the **potential to improve the existing condition of a European site** (for example, reduced abstraction near water dependent habitats and species). The option **removes an existing cross-catchment INNS risk** affecting European sites, for example replacing raw water transfer with treated water transfer.	The option may have the **potential to remove a local risk of spreading INNS to European sites**.	The option has **no potential to result in adverse effects on internationally or European designated sites or species.** The option is **unlikely to result in increased risk from the spread of INNS**.	In the absence of mitigation, the option has the **potential to result in adverse effects to a European designated site and/or European protected species**. However, it is considered that **adverse effects could be easily mitigated or avoided** (for example, seasonal constraint to works). The option has the **potential to result in minor increased risk from INNS** to European sites which could be avoided/reduced with additional mitigation.	The option has the **potential to result in adverse effects on European sites** in the absence of mitigation. However, it is considered that **adverse effects on site integrity could potentially be avoided with mitigation** in place. The option has a **moderate risk of spreading INNS to European sites**.	Even with the implementation of mitigation, the option still has the **potential to result in adverse effects on European or national sites**. However, it is considered that **adverse/significant effects could potentially be avoided with mitigation** in place. Mitigation may be more complex and risk of effects judged as higher than for moderate and minor scoring categories. The option has a high risk of spreading INNS to European sites. **Note. where options are identified with potential for adverse effects on a European site's integrity (AESI) and mitigation is not considered possible these options are not taken forward.** Alternative options may have to be considered.
		Is there potential to result in significant impacts on local, county or national biodiversity, for example through loss of significant areas of ecologically valuable habitat (for example woodlands/ hedgerows/ wetlands) and, in particular, irreplaceable habitats (for example ancient or long-established woodlands) or by undermining biodiversity objectives outlined in the National	The option has potential to **contribute to meeting national biodiversity targets**. The option **removes an existing cross-catchment Invasive INNS risk**, for example, replacing raw water transfer with treated water transfer.	The option provides the **potential to create new areas of habitat that could be of national importance** (that is, potential for future designation as an NHA) or which extends the existing network of nationally important sites as a result of water resource management options, for example, construction of	The option has **potential to contribute to local biodiversity**. The option has the **potential to contribute to local, county or national biodiversity gains through habitat creation** (for example wetlands/hedgerow planting), water quality improvements and/or enhancement or extension of local nature reserves.	The optional has **no potential to result in significant effects on nationally designated sites or species.** Option is unlikely to contribute to the enhancement of biodiversity at a local or national scale. The option is **unlikely to result in increased risk from the spread of INNS**.	In the absence of mitigation, the option has the **potential to result in significant effects to a nationally designated site or nationally protected species**. However, it is considered that **significant effects could be easily mitigated or avoided** (for example, seasonal constraint to works). The option has the **potential to result in minor increased risk**	The option has the **potential to result in significant effects on national sites** in the absence of mitigation. However, it is considered that **significant effects could potentially be avoided with mitigation** in place. The option has a **moderate risk of spreading INNS** which could be avoided/reduced with additional mitigation	Even with the implementation of mitigation, the option still has the **potential to result in significant effects on national sites**. Mitigation may be more complex and risk of effects judged as higher than for moderate and minor scoring categories. The option has a **high risk of spreading INNS**

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
		Biodiversity Action Plan or local county development/biodiversity action plan?		wetlands. The option has **potential to contribute to meeting regional or national biodiversity targets**. The option **removes an existing cross-catchment INNS risk**, for example replacing raw water transfer with treated water transfer.			**from INNS** which could be avoided/reduced with additional mitigation.		
	Material assets	Will the option make effective use of existing assets or reduce water abstraction? Will this option conflict with critical infrastructure, or does the option conflict with existing business, planned land use or valuable agricultural land?	The option **is likely to bring significant and long-term added benefits** such as where the option would facilitate or "open up" areas for business development or high value agricultural production (for example, where existing access to water is limiting potential). And/Or, Option will provide regional or national facilities for promoting residual treatment efficiency and residual reuse.	The option **has the potential to bring moderate added benefits** for business development, planned land use or high value agricultural production. And/Or, Option will promote residual treatment efficiency and residual reuse.	The option has the potential to **bring some minor added benefits** to existing infrastructure and/or businesses, planned land use or valuable agricultural land, such as where the option would be supportive to agricultural diversity. And/Or, The option **makes use of suitable existing water assets**. And/Or, Option will provide some opportunity to promote residual treatment efficiency and residual reuse.	There is **no change to existing water infrastructure and would result in no change to other infrastructure** and/or businesses, planned land use or valuable agricultural land. And/Or, No change to material residual.	The option has the potential to result in **minor and short-term conflicts** with existing infrastructure and/or businesses, planned land use or valuable agricultural land, such as through construction works. However, it is considered that these effects could be easily mitigated or avoided. And/Or, Option will increase resource use and/or increase residual disposed of to landfill (note that resource use can be captured through carbon accounting).	The option has the potential for significant, long-term conflicts with existing infrastructure and/or businesses, planned land use or valuable agricultural land. These would include loss of prime agricultural lands, disruptions to existing utilities or to the operations of existing businesses. However, it is considered that these impacts could be avoided/reduced with mitigation. And/Or, Option will increase resource use and residual production to landfill (note that resource use can be captured through carbon accounting).	Even with the implementation of mitigation, this option has the potential to result in **significant and permanent effects** to existing infrastructure and/or businesses, planned land use or valuable agricultural land. And/Or, Option will result in major increase to resource use or residual production including residual to landfill (note that resource use can be captured through carbon accounting).
	Landscape and visual amenity	Could this option impact the landscape character areas, townscape character areas or important views (detract or improve)?	The option will provide **significant and permanent positive/beneficial enhancement** to a moderate to high value local landscape character/feature or to visual amenity.	The option will provide **localised positive/beneficial enhancement** to a moderate to high value local landscape character/feature or to visual amenity.	The option will provide **localised positive/beneficial enhancement** to local landscape character/feature or to visual amenity.	Option causes **no change to landscape** character or visual amenity, as there is **no construction, installation or operation of** infrastructure required.	Option has the potential to create **minor and short-term effects** to local, regional or national landscape character or visual amenity, such as excavation works to install underground infrastructure which will not be visible in the long term and lands can easily be reinstated. Effects resulting from the option could be easily mitigated or avoided.	This option has the potential for significant effects such as the development of minor infrastructure elements which would noticeably alter the local, regional or national landscape or visual amenity. However, it is considered that these impacts could be avoided/reduced with mitigation.	Even with the implementation of mitigation, this option has the potential for significant effects such as the **development of large-scale, major infrastructure** which would **detrimentally alter local, regional or national landscape or visual amenity**.

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
	Climate change	What is the level of construction and operational carbon emissions associated with the option (tonnes)? Does the option increase climate change vulnerability for the environment or add resilience?	The option clearly provides **significant** carbon emission reductions or savings **in relation to the Deployable Output** created. And/Or, The option will provide significant protection in the long term to water dependent habitats and species, soils and landscapes and from the effects of climate change, for example through wetland creation.	The option **provides moderate** carbon emission reductions or savings **in relation to the Deployable Output** created. And/Or, The option will improve future resilience from the effects of climate change for water dependent species and habitats, soils and landscapes including contributing to restoring peatlands, grasslands and broadleaved forestry in upper catchments.	The option **provides some** carbon emission reductions or savings **in relation to the Deployable Output** created. And/Or, The option will contribute to improving future resilience of species and habitats, soils and landscapes from the effects of climate change. Provides scope for offsetting effects of carbon emission and climate change adaptation by contributing to peatland, grassland or forestry within catchments.	This option would not save or increase carbon emissions The option will not increase environmental vulnerability to climate change nor contribute to improved resilience to climate change.	There is a **low level of carbon emissions associated** with the option **in relation to the Deployable Output** created. And/Or, The option could increase the vulnerability of species and habitats or soils to the effects of climate change.	There is a **moderate level or carbon emissions** associated with the option **in relation to the Deployable Output** created. And/Or, The option will result in an increase in vulnerability to the effects of climate change for protected species and habitats or loss of peatlands, grasslands and woodlands important for water retention and carbon.	There is a **high level of carbon emissions** associated with the option **in relation to the Deployable Output** created. And/Or, The option will result in a significant increase in vulnerability to the effects of climate change for protected species and habitats, for example loss of wetlands.
	Cultural heritage and archaeology	Does this option avoid direct damage to, or detract from the setting of, designated cultural heritage assets, or does this contribute to protecting them?	Option will provide clearly significant **positive/beneficial enhancement** to local cultural heritage or archaeological assets near the selected measure.	Option will provide some moderately **positive/beneficial enhancement** to local cultural heritage or archaeological assets near the selected measure, including indirect effects such as protection from flooding.	Option will provide some minor **positive/beneficial enhancement** to local cultural heritage or archaeological assets near the selected measure, such as potential for improved access.	**No cultural heritage, assets benefiting from protection or at risk** of damage as a result of the option.	The option is located where there are a number of cultural heritage assets listed under the Record of Monuments and Places/Record of Protected Structures and/or National Inventory of Architectural Heritage records and may be affected, such as loss of access, changes to setting or removal of the feature. Effects could be avoided/reduced with mitigation.	This option is located where there is nationally important cultural heritage asset(s) such as National Monuments in State Care, sites on which Preservation Orders or Temporary POs have been served) present and may be affected such as some alteration to access or setting or partial removal of the feature Effects could be avoided/reduced with mitigation.	This option is located where there are nationally important cultural heritage assets which may be affected, such as complete alteration of access or setting or complete removal of the feature. Or, This option is located where an internationally important cultural heritage asset is potentially affected, such as an alteration to access or setting or removal of the feature. Effects would difficult to avoid/reduce with mitigation.
	Geology and soils	Would any designated or non-designated geological features, valuable soils, or contaminated land sites be affected?	Option will provide **clearly significant positive/beneficial enhancement** to soils near the selected measure, such as catchment management reducing soil erosion risks.	Option will provide **moderately positive/beneficial enhancement** to soils near the selected measure, such as catchment management.	Option will provide **minor positive/beneficial enhancement** to local geological features and/or soils near the selected measure, such as catchment management.	**No geological features** or valuable soil resources **at risk** as a result of the option.	The option is located where there are a **number of sites listed under IGHS, NHAs or pNHAs of geological significance present and potentially affected that could be avoided/reduced with additional mitigation**. And/or, Minor disruption to soils expected throughout construction of the option. However, sustainable	The option is located where there are a **number of sites listed as IGHS, NHAs or pNHAs of geological significance** potentially affected **but could be avoided/reduced with additional mitigation**. And/or, Considerable disruption to soils through excavation. However, sustainable practices can be implemented to mitigate impacts.	The option is located where there are a **number of sites listed as IGHS, NHAs or pNHAs of geological significance present** and **likely to be affected and would be difficult to avoid/reduce with additional mitigation**. And/or, **Significant disruption to valuable soil type**.

Criteria		Fine screening questions	Major Positive / Beneficial	Moderate Positive / Beneficial	Minor Positive / Beneficial	Neutral / Negligible Risk	Minor Risk	Moderate Adverse Risk	Major Adverse Risk
Sub-criteria			3	2	1	0	-1	-2	-3
							practices will ensure little or no impacts.		

1.2 Application of the Fine Screening Scoring Guidance

The questions for scoring options against the criteria and sub-criteria (Table 1.1) and the information to be considered (Table 1.2) will need to be applied as relevant to the option type and level of detail available on the option definition. The fine screening scoring guidelines (Table 1.3) will be developed as rules for scoring for application in the options assessments undertaken for the development of the Regional Plans. These will be consulted as part of SEA Scoping this will inform the implementation of the options assessment methodology and decision making process in the Regional Plans. They final scoring rules as applied will be provided as part of the Regional plan consultation process.

In a small number of cases, where the rules for option scoring at fine screening may not be applicable across some options for the development of the Regional Plans, Irish Water will use the input of expert judgment in the form of a review group. The process followed will be documented and fully outlined as part of the regional plans.

The Sample Case Study reports provide an example of how the scoring rules can be developed and applied as part of the options assessment methodology.