

# Corrib Onshore Pipeline

## Evaluation of Alternative Pipeline Corridors - Sheet 1

11th September, 2007

Preferred Potential Constraints

Technical Criteria	Rosspoint CORRIDOR A	Aghoos CORRIDOR B	Sruwaddacon Bay CORRIDOR C	Inver Upland CORRIDOR D	Inver / Barnatra CORRIDOR E	Portaclay CORRIDOR F	Glinisk CORRIDOR G	Curraunboy CORRIDOR H	Rosspoint APPROVED ROUTE****
<b>1 Safety</b>									
Risk to people and community during operation	Low	Low	Low	Low	Low	Low	Low	Low	Low
Risk of disturbance e.g. by third parties	Low	Low	Low	Low	Low	Low	Low	Low	Low
Construction Safety Risk including offshore approaches and landfall	Low	Low	Low to medium. Longer section in marine areas.	Low	Low	Medium/High. Longer off-shore pipeline. Difficult landfall - northfacing narrow bay	Medium/High. Additional risks at landfall location (>50m cliffs). Longer off-shore pipeline. Northfacing bay	Low to medium. Longer section in marine areas.	Low
<b>2 Design</b>									
Length of Pipeline - downstream of landfall valve	10.6km	8.3km	8.2km	9.6km	12.5km	14km	14.2km	11.8km	8.9km
Approx. additional length to currently approved Off-shore pipeline	0km	0km	0km	1.5km	1.5km	5km	20km	1.5km	0km
Pipeline flow assurance issues	Acceptable	Acceptable	Acceptable	Acceptable	Acceptable	Reduced gas recovery from Corrib Field	Reduced gas recovery from Corrib Field	Acceptable	Acceptable
Offshore pipeline routing risk	Low	Low	Low	Medium/High	Medium/High	High	High	Medium/High	Low
Offshore pipeline permitting risk	Low	Low	Low	Medium/High	Medium/High	High	High	Medium/High	None
Risk of incompatibility with approved off-shore pipeline design/alignment	None	None	None	Medium	Medium	High	High	Low	None
Suitability of landfall valve location	High	High	High	Medium. Requires further detailed study. Rocky coastline at northern landing.	Medium. Requires further detailed study. Rocky coastline at northern landing.	Low. Rocky coastline. Difficult perpendicular approach.	Medium	Low. Construction of landfall valve facility in Machair/sand system poses significant challenge.	High
<b>3 Construction</b>									
Risk of Construction Difficulties	Medium. Mainly land based. One short and one medium water course crossings	Medium. Mainly land based. Short water course crossings	Medium/High. Section traversing bay technically challenging	Medium. Mainly land based. Slopes	Low. Mainly land based.	Medium/High. Pipeline pull-in difficult. Mainly land based. Sloping upland areas may pose additional challenges.	High.	Medium/High. Section traversing landfall area and bay technically challenging	Medium. Mainly land based. One short and one medium water course crossings
Complexity of construction methodology	Low. Generally conventional construction with short crossings of Sruwaddacon Bay and rivers.	Medium. Generally similar to Corridor A but includes second crossing of Sruwaddacon Bay which will be longer and more complex.	High. Includes approximately 4.5km within Sruwaddacon Bay which will be technically challenging.	Low. Generally conventional construction.	Low. Generally conventional construction.	Medium. Generally conventional construction. Slope stability needs further detailed study close to landfall.	High. Landfall will be technically very challenging. Long section through extensive bog will be technically challenging.	High. Includes approximately 2.5km within Curraunboy Bay which will be technically challenging.	Low. Generally conventional construction with short crossings of Sruwaddacon Bay and rivers.
Suitability of road access for construction	Medium	Medium	Medium	Medium	High	Medium	Low	Low	Medium
<b>GROUND CONDITIONS</b>									
<b>4</b>									
Risk of landslides and sandbank movements	Low	Low. Route perpendicular to slope in steep sections.	Low. Sections through bay can be stabilised by deeper burial of pipeline.	Low. Avoids slopes.	Low	Medium. Relatively steep slopes.	Low	Low	Low
<b>Community Criteria</b>	<b>CORRIDOR A</b>	<b>CORRIDOR B</b>	<b>CORRIDOR C</b>	<b>CORRIDOR D</b>	<b>CORRIDOR E</b>	<b>CORRIDOR F</b>	<b>CORRIDOR G</b>	<b>CORRIDOR H</b>	<b>CURRENT ROUTE</b>
<b>5 Proximity</b>									
Minimum Distance from dwellings	>100m	>100m	>100m	>100m	>100m	>100m	>100m. Proximity significantly exceeds that for all other corridors.	>100m	70m
<b>6 Planning / Land Use</b>									
Impact on development potential	Low	Low	Low	Medium. Greater development potential around Inver.	Medium to high. Greater development potential around Inver.	Low to Medium. Some development potential around Portaclay.	Low	Low	Low
Temporary impacts on land use	Low	Low	Low	Low	Low	Low	Low	Low	Low
Permanent Impacts on land use	Low/Medium. Turbary rights affected close to roadside.	Low	Low	Low/Medium. Turbary rights affected close to roadside.	Low/Medium. Turbary rights affected close to roadside.	Low/Medium. Turbary rights affected close to roadside.	Low/Medium. Turbary rights affected close to roadside.	Low/Medium. Turbary rights affected close to roadside.	Low/Medium. Turbary rights affected close to roadside.
<b>7 Landowner Consent</b>									
Level of landowner agreement with corridor / Route	Full landowner agreement still outstanding	Full landowner agreement still outstanding	All landowners agreed previously consented route. This corridor may not require any new landowner consent.	Full landowner agreement still outstanding	Full landowner agreement still outstanding	Full landowner agreement still outstanding	Full landowner agreement still outstanding	Full landowner agreement still outstanding	Documented & Unresolved Landowner Opposition.
<b>8 Number of Affected Landowners</b>									
Number of landowners involved directly	Medium	Medium	Medium	High	High	Low	Low	Low	Medium
Number of commonage shares involved directly	High	None	None	High	High	High	Medium	Medium	High
<b>9 Number of Affected Residents</b>									
Number of dwellings in the immediate vicinity of the development	Low	Low	Low	High in areas around Inver. Otherwise low.	High in areas around Inver and along R314.	High in areas around Portaclay. Otherwise relatively low.	Low	Low	Low
<b>10 Potential Impacts on Human Beings during Construction</b>									
Air Quality	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary
Drinking Water	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary
Noise	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary
Vibration	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary
Traffic	Low & temporary	Low & temporary	Low & temporary	Medium & Temporary (denser habitation. Relatively busy area)	Medium & Temporary (denser habitation. Relatively busy area)	Low & temporary	Low & temporary	Low & temporary	Low & temporary
Access to private property	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary
Access to public areas and amenities	Low & temporary	Low & temporary	Low & temporary	Medium & Temporary	Medium & Temporary	Medium & Temporary	Low & temporary	Low & temporary	Low & temporary
Negative economic impacts e.g. tourism, fishing	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary	Low & temporary
<b>Environmental Criteria</b>	<b>CORRIDOR A</b>	<b>CORRIDOR B</b>	<b>CORRIDOR C</b>	<b>CORRIDOR D</b>	<b>CORRIDOR E</b>	<b>CORRIDOR F</b>	<b>CORRIDOR G</b>	<b>CORRIDOR H</b>	<b>CURRENT ROUTE</b>
<b>11 Impacts on Habitats and Wildlife</b>									
Potential for impact on Habitats and Species of conservation value / Environmentally Designated Areas	Medium/High. Short crossings of watercourses; Sruwaddacon Bay (SPA) & Glenamoy Bog Complex (SAC). Crossing blanket bog - intact in areas	Low / medium. Short and one medium length crossings of Sruwaddacon Bay (SPA) & Glenamoy Bog Complex (SAC).	Medium / High. Long section within Sruwaddacon Bay / Glenamoy Bog Complex (SAC).	Medium/high. Fixed dune system / Machair (Annex I priority habitat at southern Inver landfall only. Potential to use landfall on Corridor E. Short sections through Pollatomish Bog (NHA).	Medium. Short section through Pollatomish Bog (NHA) and Carrowmore Lake Complex (SAC).	Low / medium. This Corridor includes some of a small dune system (Annex I habitat) at the landfall. Traverses marginal blanket bog sections of the SAC, some of which are intact.	High. Traverses through centre of intact blanket bog (Annex I priority habitat) Glenamoy Bog Complex (SAC). Feeding area for over wintering Geese. Flora Protection Order Petaphyllum ralfsii.	High. Machair at Garter Hill, Annex I priority habitat. Periphery of Glenamoy Bog Complex (SAC). Feeding area for over wintering Geese. Flora Protection Order Petaphyllum ralfsii.	Low. Mainly land based. One short bay crossing and one medium water course crossing.
Annex I Priority Habitat (SAC) exists within Corridor	Fixed dune grassland* Intact Blanket Bog	Fixed dune grassland*	Fixed dune grassland*	Machair	none	Intact Blanket Bog	Intact Blanket Bog	Machair	none
Potential to impact on fauna**	Salmonids; feeding birds (Brent geese), sand martin colony, otters; protected plant species; heronry	Salmonids; feeding birds (Brent geese), sand martin colony, otters; protected plant species	Salmonids; feeding birds (Brent geese, waders); sand marten colony & otters.	Salmonids, otters; protected plant species.	Salmonids; overwintering Greenland white-fronted Geese, breeding seabirds; otters; protected plant species.	Salmonids; otter; protected plant species; heronry.	Grey Seals & Twite (red listed birds); Salmonids; feeding birds, otters; heronry; protected plant species	Salmonids; Brent geese; feeding birds; otters; protected plant species; heronry.	Salmonids; feeding birds (Brent geese), sand martin colony, otters; protected plant species
<b>12 Archaeology, Culture &amp; Local Heritage</b>									
Recorded Monument and Place Sites / Potential archaeological constraints **	One area of archaeological potential identified from aerial photography (on land).	None recorded.	None recorded.	There are recorded archaeological features (cist, stone circle, field systems) and areas of archaeological potential within this corridor.	There are recorded archaeological features (field system, barrow, house site, enclosure) and areas of archaeological potential within this corridor.	One area of archaeological potential identified from aerial photography.	None recorded.	In Curraunboy townland, there is a large foreshore settlement site. One area of archaeological potential identified from aerial photography.	None recorded.
Architectural Heritage Constraints**	No protected structures	No protected structures	No protected structures	No protected structures	No protected structures	No protected structures	No protected structures	No protected structures	No protected structures
Potential for Cultural Heritage Constraints**	field & townland boundaries, past mining remains	field & townland boundaries, past mining remains	field & townland boundaries, past mining remains	Field & townland boundaries, past mining remains.	Field & townland boundaries, past mining remains.	field & townland boundaries, past mining remains.	field & townland boundaries, past mining remains.	field & townland boundaries, past mining remains.	field & townland boundaries, past mining remains.
<b>13 Other / General Criteria</b>									
Potential Visual Impacts***	Low / Medium. Location of landfall valve is close to protected views and a scenic route. Potentially visible from a large number of vantage points. Short Term for Pipeline.	Low / Medium. Location of landfall valve is close to protected views and a scenic route. Potentially visible from a large number of vantage points. Short Term for Pipeline.	Low / Medium. Location of landfall valve is close to protected views and a scenic route. Potentially visible from a large number of vantage points. Short Term for Pipeline.	Low / Medium. Location of landfall valve is close to protected views and a scenic route. Potentially visible from a large number of vantage points. Short Term for Pipeline.	Low / Medium. Location of landfall valve is close to protected views and a scenic route. Potentially visible from a large number of vantage points. Short Term for Pipeline.	Low / medium. Location of Landfall is located within a narrow valley with residential properties. Short term for Pipeline.	Low / Medium. Location of landfall valve is close to protected views. Potentially visible from a large number of vantage points. Short Term for Pipeline.	Low / Medium. High Scenic View extends across the Bay to this area. Scenic Route at County Road North of Dooncarton offers long distance view across the Bay. Potentially visible from a large number of vantage points. Short Term for Pipeline.	Low / Medium. Location of landfall valve is close to protected views and a scenic route. Potentially visible from a large number of vantage points. Short Term for Pipeline.
Impact on Project Programme	Low	Low	Medium. Potential delays due to slow construction and seasonal constraints.	High. Due to market constraints for offshore barges this can delay production start-up by up to two years. Significant negative impact on project.	High. Due to market constraints for offshore barges this can delay production start-up by up to two years. Significant negative impact on project.	High. Due to market constraints for offshore barges this can delay production start-up by up to two years. Significant negative impact on project.	High. Due to market constraints for offshore barges this can delay production start-up by up to two years. Significant negative impact on project.	High. Due to market constraints for offshore barges this can delay production start-up by up to two years. Significant negative impact on project.	Low
Capital costs	No significant additional capital costs	No significant additional capital costs	Medium. Construction within Sruwaddacon Bay will add to project costs.	Medium - need additional laybarge for shallow water area	Medium - need additional laybarge for shallow water area	Significant additional offshore and landfall costs	Significant additional offshore and landfall costs	Medium - need additional laybarge for shallow water area	No significant additional capital costs
Schedule induced additional costs	None	None	Medium. Construction time delay can cause late start-up and reduce net present value of project.	New landfall will result in deferral of current offshore contract and will result in major delay and additional costs.	New landfall will result in deferral of current offshore contract and will result in major delay and additional costs.	New landfall will result in deferral of current offshore contract and will result in major delay and additional costs.	New landfall will result in deferral of current offshore contract and will result in major delay and additional costs.	New landfall will result in deferral of current offshore contract and will result in major delay and additional costs.	None

\* Priority habitat exists at edge of corridor. If this corridor were to be pursued, then further detailed studies would be required.  
 \*\* Careful site selection and design of facilities will avoid/reduce impacts.  
 \*\*\* Approved Route is not a corridor (300m wide). Assessment here is therefore of an area approximately 40m wide (wayleave width)  
 \*\*\*\* 40m wide (wayleave width)

Note: this is an ongoing process and colours may change as the route is defined.