



Trans Adriatic
Pipeline

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Crossing CCP

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TAP ITALY ESMS ONSHORE WATERCOURSE CROSSING CCP



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1 Abbreviations and Definitions

The following table provides definitions of acronyms and a glossary of terms used in this document.

Table 1-1 Abbreviations and Definitions

ALARP	As Low As Reasonably Practicable
CCP	Contractor Control Plan
COMPANY	TAP AG
CONTRACTOR	Construction contractors for Italy
Cultural heritage impact	A change to cultural heritage (in this context “cultural heritage” refers to any tangible (e.g. objects, artefacts, structures, spaces) or intangible element which is of value or importance to people’s culture, history and/or identity) which has occurred as a result of Project activities. Impacts may be considered to be positive or negative.
EBRD	European Bank for Reconstruction and Development
EHS	Environment health and safety
Environmental impact	A change to the environment (in this context the “environment” refers to any aspect of the natural or semi-natural physical environment (air, water, soil etc.)) which has occurred as a result of Project activities. Impacts may be considered to be positive or negative.
ESIA	Environmental and Social Impact Assessment
ESIP	Environmental and Social Implementation Plans
ESMS	Environmental and Social Management System
EU	European Union
IFC	International Finance Corporation
KP	Kilometre Point relating to the pipeline route as per the base case described in the ESIA (it is possible that the KP locations will change because of a re-routing)
Pipeline	Proposed pipeline scheme (TAP) including related facilities such as access roads, etc.
Project	Proposed pipeline scheme that will bring natural gas from the Caspian region to Western and South-Eastern Europe (TAP)
Socio-	A change to the existing socio-economic environment (in this context the

economic impact	“socio-economic environment” refers to the combination of any existing social and economic factors) which has occurred as a result of Project activities. Social factors may include aspects such as demographics, health and wellbeing etc. and may refer to individuals, groups or wider communities of people. Economic factors may include aspects such as employment, finances, livelihoods etc. An impact may be considered to be positive or negative.
TAP	Trans Adriatic Pipeline
TAP AG	Trans Adriatic Pipeline joint venture company

2 Introduction

This Contractor Control Plan (CCP) identifies the commitments made in relation to onshore watercourse crossing during the construction and commissioning phase of the Project and describes the COMPANY’s requirements of the CONTRACTOR in terms of meeting these commitments. Where a specific commitment from the Italy Commitments Register is described in this CCP, it is followed by its reference number as stated on the Project Commitment Register Italy (e.g. IT0012). Additional requirements have been included within this CCP where they are deemed to be internationally accepted, or best practice. These additional requirements are not followed by a reference number.

As part of its planning and readiness for construction, CONTRACTOR is required to prepare its own specific Environmental and Social Implementation Plans (ESIPs) setting out how it intends to meet and comply with specific Project commitments set out in each CCP developed by the COMPANY. This CCP shall act as a reference from which CONTRACTOR shall prepare an Onshore Watercourse Crossing ESIP.

Deviations that involve measures different from those contained in this CCP will only be permitted upon approval of the COMPANY.

The Contractor’s ESMS Framework Document (CAL00-RSK-601-Y-TTM-0001) provides an explanation of the linkage between CCPs and ESIPs.

2.1 Objectives

This CCP has been prepared to define the mitigation measures necessary to ensure onshore watercourse crossings are adequately managed during the construction phase of the onshore sections of the Project in Italy, and to ensure that any potential negative impacts occurring as a result of Project activities are prevented or where this is not possible, as low as practicably possible (ALARP¹) The objectives of the CCP are to ensure that onshore watercourse crossing management complies with all the commitments provided in the Environmental and Social Impact Assessment (ESIA) Italy and international best practice.

2.2 Scope

This CCP defines COMPANY requirements (i.e. commitments and best practice) on managing watercourse crossings.

It is not anticipated that any watercourse crossings will be required in the onshore areas affected by the Project in Italy. However, in the event that watercourse crossings should be required (for example in the event of a re-routing), CONTRACTOR shall implement the requirements specified within this CCP during construction, including hydrotesting and commissioning.

The scope of this CCP includes:

- requirements for different crossing techniques
- requirements for reinstatement of watercourses.

Measures for the prevention of sediment pollution of watercourses are defined in the Onshore Erosion Control and Reinstatement CCP (IAL00-RSK-601-Y-TTM-0003), as they are intrinsically linked to erosion control. Monitoring and inspection requirements are detailed in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

¹ For a risk (or impact) to be ALARP it must be possible to demonstrate that the cost involved in reducing the risk/impact further would be grossly disproportionate to the benefit gained. The ALARP principle arises from the fact that infinite time, effort and money could be spent on the attempt of reducing a risk/impact to zero. It should not be understood as simply a quantitative measure of benefit against detriment. It is more a best common practice of judgement of the balance of risk and societal benefit.

2.3 Responsibilities

The COMPANY's role is that of compliance assurance as described in the Compliance Assurance Plan .

CONTRACTOR shall be responsible for ensuring that the Project (including all site operations, equipment and machinery) will comply with the defined Project Standards which encompass the requirements of Italian legislation, EU Directives, EBRD Environmental and Social Policy, IFC Performance Standards and IFC EHS Guidelines (IT0036). CONTRACTOR will comply with the requirements of the COMPANY Environmental and Social Management System (ESMS) (IT0516) (including this CCP) and the ESIA Italy.

CONTRACTOR will be responsible for any adverse environmental, socio-economic and cultural heritage impacts arising from its activities and operations and for putting in place any necessary measures to avoid or, if not possible, mitigate them. CONTRACTOR will also be responsible for promptly reacting to accidental events and mitigating any resulting adverse environmental, socio-economic and cultural heritage impacts for which CONTRACTOR is responsible as much as possible. Should any such accidental events occur, CONTRACTOR will immediately inform the COMPANY. Should these accidental events be the responsibility of CONTRACTOR (i.e. events resulting from CONTRACTOR's activities, events in areas which CONTRACTOR is responsible for) CONTRACTOR shall consult the COMPANY on the best way to handle and/or mitigate immediate risks to Project stakeholders.

CONTRACTOR shall put these responsibilities into effect by:

- writing an Onshore Watercourse Crossing ESIP that describes how it will implement the requirements described in Section 3 of this CCP and other legal requirements
- implementing the Onshore Watercourse Crossing ESIP by:
 - communicating the contents of the ESIP to its workers and subcontractors and training them to ensure they understand their responsibilities with respect to onshore watercourse crossing, incident reporting and adequate response
 - ensuring that adequate resources and methods are for the management of onshore watercourse crossings, including input from any specialist resources necessary to ensure effective planning and implementation of the appropriate measures

- ensuring compliance by its workers and subcontractors with the procedures established in the ESIP
- ensuring that all environmental incidents are reported and dealt with effectively and that lessons are learned in accordance with the procedures outlined in the Contractor's ESMS Framework Document (CAL00-RSK-601-Y-TTM-0001)
- keeping the COMPANY fully informed of any site environmental issues.

CONTRACTOR shall be responsible for completing the Onshore Watercourse Crossing ESIP in a timely manner and submitting it to the COMPANY for review and acceptance a maximum of 30 days after Contract award. The ESIP will not be considered 'accepted for construction' until all comments raised by the COMPANY have been addressed by CONTRACTOR to the satisfaction of the COMPANY. Construction will not be allowed to commence before all relevant ESIPs are accepted.

3 Impact avoidance and mitigation

3.1 Watercourse crossing techniques

CONTRACTOR shall determine the watercourse crossing technique for each watercourse crossing, taking into consideration the characteristics of the watercourse with a view to minimising any impacts.

The preferred option will be the open-cut method for minor watercourse crossings (including small and seasonal streams). No major watercourses are present within the onshore areas affected by the Project in Italy. Table 3-1 describes the open-cut watercourse crossing technique and its associated environmental considerations.

Table 3-1 Open-cut watercourse crossing method and environmental considerations

Method	Technical description	Environmental considerations
Open-cut	<ul style="list-style-type: none"> • Trench excavated and back-filled without diversion of flow • Equipment typically operates from each bank with spoil stored at upland locations • Large watercourses may require in-stream equipment and spoil storage 	<ul style="list-style-type: none"> • High sediment mobilization and deposition • Minimal period of in-stream activity

CONTRACTOR shall develop an Onshore Watercourse Crossing Plan for each watercourse crossing to be agreed with the COMPANY prior to commencement of construction at any watercourse. The Onshore Watercourse Crossing Plan shall detail:

- the dates that construction will be undertaken, i.e. the “assumed period of construction”
- the selected crossing technique
- specific impact avoidance and mitigation measure applicable from those described in this CCP, other good practice and applicable measures (e.g. erosion and sediment control) described in the Onshore Erosion Control and Reinstatement CCP (IAL00-RSK-601-Y-TTM-0003).

3.2 General requirements

CONTRACTOR shall apply the following requirements to watercourse crossings, where and when applicable:

- prevent and avoid or minimise the exacerbation of impacts caused by natural hazards, such as landslides or floods that could arise from land use changes due to Project activities
- prevent and avoid or minimise the impacts from Project activities on air, soil, water, vegetation and fauna and other natural resources in use by affected communities
- redirection of surface watercourses will be avoided or will be limited to the proximity of the surface watercourse
- when working in sensitive habitats as defined by the COMPANY, reduce the working strip to a minimum of 18m
- use sheet pile walls to minimise excavation at watercourse banks, if technically feasible
- maintain temporary passage across watercourses to ensure unhindered flow of water
- where possible remove all vegetation outside the bird breeding season (between 1 March and 31 July), or discourage birds from nesting in these areas by installing plastic bands (e.g. warning tape) or flags that flutter in the wind, before bird breeding season starts (i.e. before March 1st). For further details see the Onshore Ecological Management CCP (IAL00-RSK-601-Y-TTM-0004)
- maintain passage for fish populations (if present) during watercourse works
- avoid working at night
- undertake construction works during low flow conditions or preferably in dry conditions for minor crossings

- conduct micro-siting of crossings to avoid mature vegetation especially trees.

3.3 Open-cut crossing techniques

Where any open-cut crossing technique is used (anticipated for all minor crossings), CONTRACTOR shall apply the following measures:

- use flume pipes (as appropriate) to allow continual flow. Flume pipes are to be of sufficient size to maintain level of flow and allow for high flow conditions. Flume pipes shall be checked periodically to ensure they are kept free of debris that may restrict the flow of water
- use closed buckets for backhoe dredgers and silt screens
- remove bed and bank materials carefully so that they may be reinstated at the same location. If additional reinstatement materials are required, this will be locally sourced
- construct silt screens in such a way that any runoff water is retained, settled and filtered. Silt fencing shall be installed on both banks of the watercourse. Silt fencing on the banks around the crossing areas shall be left in place until bank vegetation is established, and effectiveness will be monitored periodically or after heavy rain periods
- regularly inspect and maintain all erosion and sediment control structures.

When the dry open-cut technique is used, CONTRACTOR shall implement the following:

- utilise sheet piling, sandbags or 'aquadams' to create dry open-cut trench (earth or other sediment rich material is not recommended)
- when creating the dry works corridor carefully remove any fish or invertebrate species from this area during dewatering and replace within the watercourse in an area with no sediment.

When the wet open-cut technique is used CONTRACTOR will implement any applicable additional measures listed within the Onshore Ecological Management CCP (IAL00-RSK-601-Y-TTM-0004).

3.4 Road crossings

Where watercourses are crossed with new roads or roads that are being upgraded, CONTRACTOR shall apply the following:

- the design for the crossing shall reduce the requirement for works in the watercourse (use of single deck spanning the watercourse)
- implement applicable control measures specified in this CCP
- bank-side vegetation will be retained as far as possible
- flume pipes will be used (as appropriate) to allow continual flow. Flume pipes are to be of sufficient size to maintain level of flow and allow for high flow conditions. Flume pipes shall be checked periodically to ensure they are kept free of debris that may restrict the flow of water.

3.5 Reinstatement

Following works CONTRACTOR shall perform appropriate measures in order to restore the affected habitat. This shall include restoring the habitat to acceptable levels in terms of contamination in the water column and restoring the watercourse bed cover to its original state. CONTRACTOR shall also ensure the retention of passage for fish populations (if present) following works.

The COMPANY shall determine the adequacy of the reinstatement measures implemented by CONTRACTOR, and reserves the right to require CONTRACTOR to implement additional measures should it feel that the current measures are not sufficient.

For further information on reinstatement refer to the Onshore Erosion Control and Reinstatement CCP (IAL00-RSK-601-Y-TTM-0003).

4 Training

The training requirements relating to managing onshore watercourse crossings can be found in the Onshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0012).

5 Monitoring and inspection

The monitoring and inspection requirements relating to managing onshore watercourse crossings can be found in the Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006).

6 Related documents

The following is a list of documents that, amongst others, have content relevant to this CCP:

- Contractor's ESMS Framework Document (CAL00-RSK-601-Y-TTM-0001)
- Onshore Pollution Prevention CCP (IAL00-RSK-601-Y-TTM-0002)
- Onshore Erosion Control and Reinstatement CCP (IAL00-RSK-601-Y-TTM-0003)
- Onshore Ecological Management CCP (IAL00-RSK-601-Y-TTM-0004)
- Onshore Compliance Monitoring CCP (IAL00-RSK-601-Y-TTM-0006)
- Onshore Employment, Training and Worksite Management CCP (IAL00-RSK-601-Y-TTM-0012)
- Compliance Assurance Plan .