

PROJECT TYPE**10**

- **Inland waterways and ports;**
- **Trading ports;**
- **New or extended harbours;**
- **Inland waterways;**
- **Seawater and freshwater marinas.**

INTRODUCTION

Typical impacts from this type of development include many of those set out for project types 8 & 9. These projects are of particular environmental concern due to noise, vibration, dust and traffic impacts during construction operation and loading/unloading operations. The generation of increased traffic on water and on surrounding roads can also be of concern. Other impacts include those on water quality particularly from dredging activity and leakage. The potential for impacts arising from induced developments (i.e port-related activities) should be given consideration from the outset.

PROJECT DESCRIPTION

Checklist of items to be described:-

CONSTRUCTION

- Evaluation/site testing;
- Time of year, duration and phasing;
- Site preparation works;
- Employment;
- Accommodation;
- Working hours;
- Construction techniques;
- Materials (including sourcing, transportation and storage);
- Access;
- Traffic, noise, dust, vibes;
- Pipe laying;
- Extensions of infrastructure (water, power, railways, roads etc);
- Dredging/disposal of spoil;
- Fencing.

OPERATION (INCLUDING RELEVANT ALTERNATIVES)

- Type, tonnage, frequencies, seasonality;
- Loading/unloading, handling, storage and processing and/or distribution, by type of product;
- Marine structures, including dredging, filling and navigation aids;
- Induced effects - erosion and siltation;
- General handling equipment, cranes, conveyors;
- Fire and hazard control equipment;
- Runoff interceptor and treatment systems;
- Dust control systems;
- Storage facilities;
- Access, parking and movement (on-site and off);
- Solid waste generation of disposal;
- Water supply (bunkerage);
- Power supply;
- Monitoring proposals;
- Pollution and emergency control procedures;
- Access control, fences, water, signs, security;
- Traffic (on water and roads);
- Pest control;
- Cleaning facilities;
- Storage;
- Lighting;
- Public address systems;
- Emergency procedures;
- Employment;
- Seasonality, hours of option and shifts.

DECOMMISSIONING (IF APPLICABLE)

- Possible uses of the facilities should the port cease or reduce operations.

GROWTH

- Likelihood of adjacent secondary/tertiary

- developments;
- Likelihood of future expansion.

■ ASSOCIATED DEVELOPMENTS

- Port related industry;
- Access and transportation developments;
- Maintenance and supply enterprises;
- Packing/storage enterprises;
- Catering enterprises;
- Residential developments.

ENVIRONMENTAL EFFECTS

Typical significant impacts likely to affect:-

■ HUMAN BEINGS

- Provision of employment;
- Relocation;
- Amenity impacts;
- Health impacts and/or nuisance due to noise, dust or water pollution.

■ FAUNA

Aquatic

- Discharges planned and accidental (including anti-fouling mechanisms);
- Loss of habitat.

Other

- Introduction of new species;
- Attraction of pest species;
- Disturbance of existing species.

■ FLORA

Aquatic

- Discharge from vessels, storage/handling areas and machinery;
- Physical disturbance due to increased turbulence/dredging;
- Introduction of exotic species;
- Accidental discharges.

Terrestrial

- Loss of habitat due to site clearance;
- Introduction of exotics/attraction of pests.

■ SOILS (AND GEOLOGY)

- Excavation;
- Stability;
- Erosion;
- Spoil deposition/removal;
- Erosion and siltation.

■ WATER

- Planned and unplanned discharges from vessels;
- Discharges from machinery;
- Seepage from storage areas;
- Spillages;
- Dredging;
- Turbulence;
- Currents.

■ AIR

- Noise (with reference to hours of operation);
- Dust;
- Lighting overspill;

■ CLIMATE

■ THE LANDSCAPE

- Marine structures;
- Navigation aids;
- Erosion control measures;
- Cranes;
- Storage facilities;
- Vessels;
- Lighting;
- Secondary/tertiary developments;
- Parking areas;
- Rail developments.

■ MATERIAL ASSETS

- Impacts on infrastructure, particularly road and rail networks water and power supply;
- Opportunities for development.

■ THE INTERACTION OF THE FOREGOING

POSSIBLE MITIGATION OPTIONS

- Siting;
- Design;
- Limits to growth;
- Limits to hours of operation;
- Control of associated development;
- Limits to types of cargo;
- Dust suppression;
- Noise containment;
- Emergency procedures;
- Traffic routing;
- Management and monitoring - procedures;
- Runoff management and control.