

**ITEM FOR PUBLIC WORKS  
SUBCOMMITTEE  
OF FINANCE COMMITTEE**

**Supplementary information on  
91WC - Water supply to new developments in Yau Tong area**

**INTRODUCTION**

In considering PWSC paper No. PWSC(1999-2000)25 on **91WC** " - Water supply to new developments in Yau Tong area" at the Public Works Subcommittee meeting held on 26 May 1999, Members requested the Administration to provide supplementary information on the following –

- (a) details of the projected increase in water demand for Yau Tong area; and
- (b) circumstances under which an Environmental Impact Assessment is required under the Environmental Impact Assessment (EIA) Ordinance (Cap 499).

**THE ADMINISTRATION'S RESPONSE**

**(a) Water demand for Yau Tong area**

2. As regards (a) above, in general, we assess the future water demands of an area on the basis of domestic, industrial, commercial and non-domestic service trade consumptions. While the former domestic consumption is directly related to the population in the area, the latter relates other consumptions are dependent on to the level of industrial, commercial and population associated service trade activities. They are normally only indirectly related to the size of population.

3. The projected increase in domestic demand is to cater for the population intake of proposed housing developments in Yau Tong area. We estimate that The domestic demand will increase to 24 096 cubic meters per day in 2002, 37 502 in 2004, and 52 337 in 2008 as a result of the population intake. Proposed major housing developments include Lei Yue Mun, Cha Kwo Ling, Yau

Tong Bay and the Eastern Harbour Crossing site as well as the re-development of Yau Tong Estate, Lei Yue Mun Road Estate and Ko Chiu Road Estate. projected increase in domestic demand in Yau Tong area is to cater for the population intake of the proposed housing developments and re-developments, whereas tThe

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projected growth in non-domestic demand caters mainly for the increased service trade activities and planned commercial developments of the Yau Tong Bay reclamation and Yau Tong industrial area. Details of the Our forecast of the water demand build-up is detailed shown in Annex 1 Enclosure 1.

### **(b) Environmental Impact Assessment**

4. As regards (b) above, the EIA Ordinance provides a framework for the prediction and assessment of potentially adverse environmental impacts from designated projects undertaken by the public and private sectors, and makes implementation of prevention and mitigation measures enforceable. The intention of the EIA Ordinance is to deal with those projects that have potential for adverse environmental effects.

5. New designated projects specified under Schedule 2 and 3 of the Ordinance must follow the statutory environmental impact assessment (EIA) process as shown in Annex Enclosure 2 attached.

6. Designated projects are listed in the Schedule 2 and 3 of the Ordinance (copied at Annex 3 Enclosures 3 and 4). These projects have potential for adverse environmental effects because of their nature, scale or location. They were drawn up on the basis of some 400 completed EIA studies, and in the light of actual problems resulting from different types of development projects. Relatively minor projects or projects for which there are already well established mitigation measures have not been included in the Schedules in order to make the workload manageable and to enable the system to focus efforts on major issues.

7. Under item E and item Q of the Schedule 2, the statutory EIA process is required for some water extraction and water supply designated projects, such as, reservoirs, water treatment works, submarine water supply pipelines and all projects partly or wholly in environmental sensitive areas.

8. For those gGovernment projects that are not covered by the EIA Ordinance, proponent departments still need to follow the procedures laid down in a Government technical circular to identify suitable mitigation measures for incorporation into the projects.

**91WC - Water Supply to New Developments in Yau Tong Area**

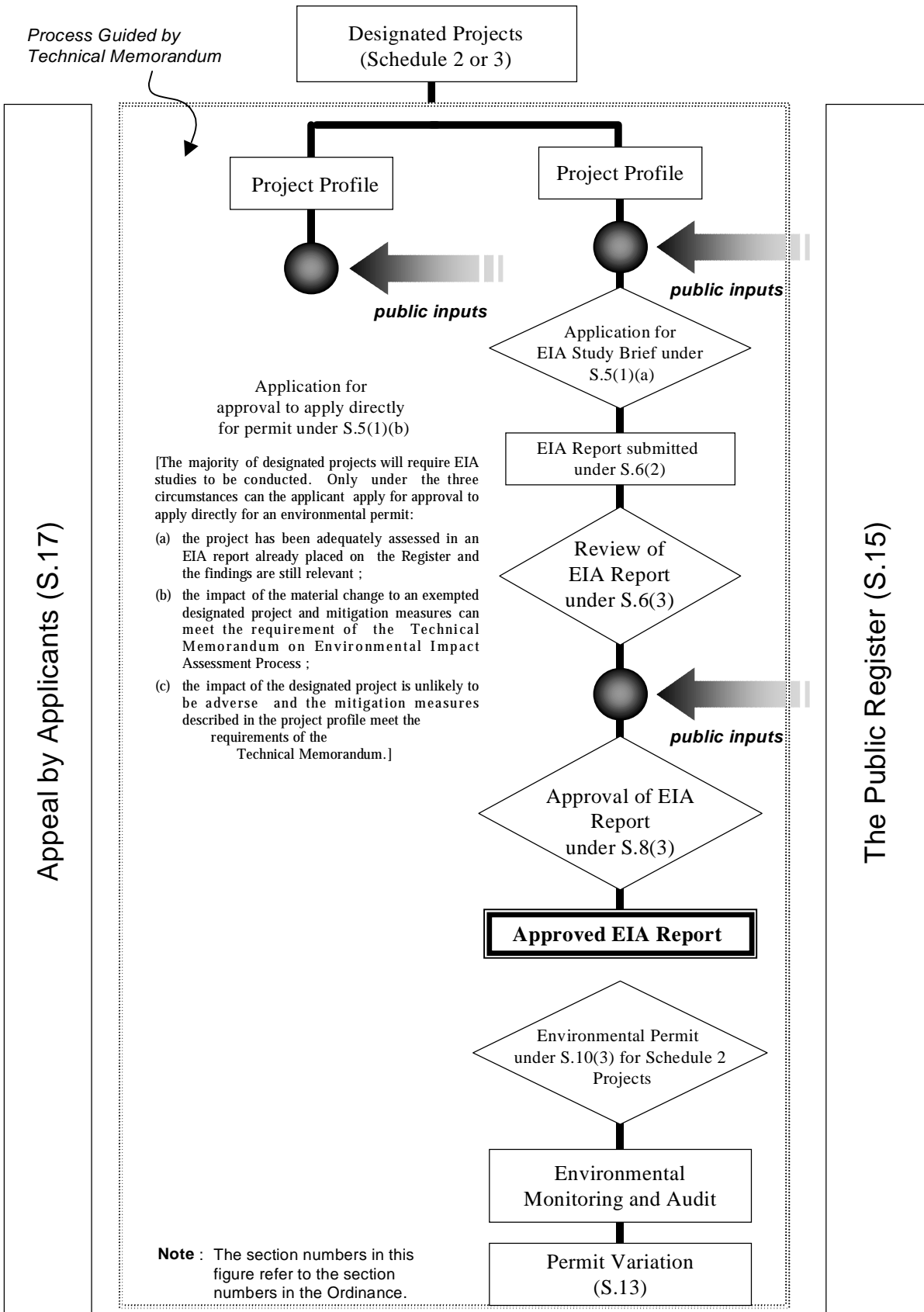
**Fresh Water Demand Build-up in Different Years  
for Yau Tong Fresh Water Supply Zone**

		<b>1999</b>	<b>2002</b>	<b>2004</b>	<b>2008</b>
(a)	Domestic Population (No. of persons)	50,219	103,397	160,963	213,507
(b)	Domestic Demand (Cubic metres/day)	11,044	24,096	37,502	52,337
(c)	Domestic Demand per Capita [(b)/(a)] (Cubic metres/day)	0.220	0.233	0.233	0.245
(d)	Demand other than Non- Domestic Demand (Cubic metres/day)	16,221	17,883	19,744	28,641
(e)	Total (mean daily demand) [(b) + (d)] (Cubic metres/day)	27,265	41,979	57,246	80,978

- (C) The variations in the domestic demand per capita in different years arising from the successive population intake for different categories of residential developments are relatively minor.
- (D) The variations in the total demand per capita in different years are quite substantial because the growth rates for domestic demand and other non-domestic demands are different.

# The statutory environmental impact assessment process

Process Guided by  
Technical Memorandum



## SCHEDULE 2

### DESIGNATED PROJECTS REQUIRING ENVIRONMENTAL PERMITS

#### PART I

##### A. ROADS, RAILWAYS AND DEPOTS

- A.1.** A road which is an expressway, trunk road, primary distributor road or district distributor road including new roads, and major extensions or improvements to existing roads.
- A.2.** A railway and its associated stations.
- A.3.** A tramway and its associated stations.
- A.4.** A railway siding, depot, maintenance workshop, marshalling yard or goods yard.
- A.5.** A tram depot located less than 100 m from the nearest boundary of an existing or planned---
  - (a)** residential area;
  - (b)** place of worship;
  - (c)** educational institution; or
  - (d)** health care institution.
- A.6.** A transport depot located less than 200 m from the nearest boundary of an existing or planned---
  - (a)** residential area;
  - (b)** place of worship;
  - (c)** educational institution; or
  - (d)** health care institution.
- A.7.** A road or railway tunnel more than 800 m in length between portals.
- A.8.** A road or railway bridge more than 100 m in length between abutments.
- A.9.** A road fully enclosed by decking above and by structure on the sides for more than 100 m.

##### B. AIRPORTS AND PORT FACILITIES

- B.1.** An airport (including its runway and the development and activities related to aircraft maintenance, repair, fueling and fuel storage, engine testing or air cargo handling).
- B.2.** A helipad within 300 m of existing or planned residential development.

- B.3.** A container terminal (including its container backup facility).
- B.4.** A public cargo working area---
- (a) of more than 1 000 m cargo working length; or
  - (b) with a cargo working length between 500 m and 1 000 m and within 50 m of an existing or planned---
- (i) residential area;
  - (ii) place of worship;
  - (iii) educational institution; or
  - (iv) health care institution.
- B.5.** A container backup area, container storage, container handling or container packing area (including a container vehicle parking area) more than 5 ha in size and within 300 m of an existing or planned---
- (a) residential area;
  - (b) place of worship;
  - (c) educational institution; or
  - (d) health care institution.
- B.6.** A facility for ship building or ship repairing yard more than 1 ha in size or with a lifting capacity in excess of 20 000 tonnes.
- B.7.** A river trade terminal.
- B.8.** A mid-stream operation facility.

**C. RECLAMATION, HYDRAULIC AND MARINE FACILITIES,  
DREDGING AND DUMPING**

- C.1.** Reclamation works (including associated dredging works) more than 5 ha in size.
- C.2.** Reclamation works (including associated dredging works) more than 1 ha in size and a boundary of which---
- (a) is less than 500 m from the nearest boundary of an existing or planned---
- (i) site of special scientific interest;
  - (ii) site of cultural heritage;
  - (iii) bathing beach;
  - (iv) marine park or marine reserve;

- (v) fish culture zone;
  - (vi) wild animal protection area;
  - (vii) coastal protection area;
  - (viii) conservation area;
  - (ix) country park; or
  - (x) special area;
- (b) is less than 100 m from a seawater intake point; or
- (c) is less than 100 m from an existing residential area.

**C.3.** Reclamation works---

- (a) resulting in 5% decrease in cross sectional area calculated on the basis of 0.0 mPD in a sea channel; or
- (b) occupying an area on plan in excess of 10% of any enclosed or semi-enclosed waterbody.

**C.4.** A breakwater more than 1 km in length or a breakwater extending into a tidal flushing channel by more than 30% of the channel width.

**C.5.** A typhoon shelter designed to provide moorings for not less than 30 vessels.

**C.6.** A dam more than 10 m in height.

**C.7.** A land borrow area of more than 200 000 m<sup>3</sup>.

**C.8.** A land borrow area of more than 50 000 m<sup>3</sup> of which---

- (a) a boundary of which is less than 500 m from the nearest boundary of an existing or planned---
  - (i) residential area;
  - (ii) place of worship;
  - (iii) educational institution;
  - (iv) health care institution;
  - (v) country park; or
  - (vi) special area; or
- (b) wholly or partly within a---
  - (i) site of special scientific interest; or
  - (ii) wild animal protection area.



- C.9. A marine borrow area.
- C.10. A marine dumping area.
- C.11. A public dumping area of not less than 2 ha in size.
- C.12. A dredging operation exceeding 500 000 m<sup>3</sup> or a dredging operation which---
  - (a) is less than 500 m from the nearest boundary of an existing or planned---
    - (i) site of special scientific interest;
    - (ii) site of cultural heritage;
    - (iii) bathing beach;
    - (iv) marine park or marine reserve;
    - (v) fish culture zone;
    - (vi) wild animal protection area;
    - (vii) coastal protection area; or
    - (viii) conservation area; or
  - (b) is less than 100 m from a seawater intake point.

#### **D. ENERGY SUPPLY**

- D.1. Public utility electricity power plant.
- D.2. Public utility gas generation plant.

#### **E. WATER EXTRACTION AND WATER SUPPLY**

- E.1. A primary reservoir.
- E.2. Water treatment works with a capacity of more than 100 000 m<sup>3</sup> per day.
- E.3. A submarine water supply pipeline with a diameter of 1 200 mm or more and a length of more than 1 km.

#### **F. SEWAGE COLLECTION, TREATMENT, DISPOSAL AND REUSE**

- F.1. Sewage treatment works with an installed capacity of more than 15 000 m<sup>3</sup> per day.
- F.2. Sewage treatment works---
  - (a) with an installed capacity of more than 5 000 m<sup>3</sup> per day; and
  - (b) a boundary of which is less than 200 m from the nearest boundary of an

existing or planned---

- (i) residential area;
- (ii) place of worship;
- (iii) educational institution;
- (iv) health care institution;
- (v) site of special scientific interest;
- (vi) site of cultural heritage;
- (vii) bathing beach;
- (viii) marine park or marine reserve;
- (ix) fish culture zone; or
- (x) seawater intake point.

**F.3.** A sewage pumping station---

- (a) with an installed capacity of more than 300 000 m<sup>3</sup> per day; or
- (b) with an installed capacity of more than 2 000 m<sup>3</sup> per day and a boundary of which is less than 150 m from an existing or planned---
  - (i) residential area;
  - (ii) place of worship;
  - (iii) educational institution;
  - (iv) health care institution;
  - (v) site of special scientific interest;
  - (vi) site of cultural heritage;
  - (vii) bathing beach;
  - (viii) marine park or marine reserve;
  - (ix) fish culture zone; or
  - (x) seawater intake point.

**F.4.** An activity for the reuse of treated sewage effluent from a treatment plant.

**F.5.** A submarine sewage pipeline with a diameter of 1 200 mm or more and a length of 1 km or more.

**F.6.** A submarine sewage outfall.

## **G. WASTE STORAGE, TRANSFER AND DISPOSAL FACILITIES**

- G.1.** A landfill for waste as defined in the Waste Disposal Ordinance (Cap. 354).
- G.2.** A refuse transfer station.
- G.3.** An incinerator with an installed capacity of more than 50 tonnes per day.
- G.4.** A waste disposal facility (excluding any refuse collection point), or waste disposal activity, for---
  - (a)** refuse; or
  - (b)** chemical, industrial or special wastes.
- G.5.** A facility for the treatment of construction waste---
  - (a)** with a designed capacity of not less than 500 tonnes per day; and
  - (b)** a boundary of which is less than 200 m from an existing or planned---
    - (i)** residential area;
    - (ii)** place of worship;
    - (iii)** educational institution; or
    - (iv)** health care institution.
- G.6.** A waste disposal facility for pulverized fuel ash, furnace bottom ash or gypsum.

## **H. UTILITY PIPELINES, TRANSMISSION PIPELINES AND SUBSTATIONS**

- H.1.** A 400 kV electricity substation and transmission line.
- H.2.** A submarine gas pipeline or submarine oil pipeline.

## **I. WATERWAYS AND DRAINAGE WORKS**

- I.1.** A drainage channel or river training and diversion works---
  - (a)** with a channel width of more than 100 m; or
  - (b)** which discharges or discharge into an area which is less than 300 m from the nearest boundary of an existing or planned---
    - (i)** site of special scientific interest;
    - (ii)** site of cultural heritage;
    - (iii)** marine park or marine reserve;
    - (iv)** fish culture zone;

- (v) wild animal protection area;
- (vi) coastal protection area; or
- (vii) conservation area.

**I.2.** A flood storage pond more than 10 ha in size.

## **J. MINERAL EXTRACTION**

**J.1.** An oil or gas extraction activity.

**J.2.** A mining operation.

**J.3.** A quarrying or quarry rehabilitation.

**J.4.** A coal industry works with a handling capacity of more than 100 tonnes per day.

## **K. INDUSTRIAL ACTIVITIES**

**K.1.** An industrial estate.

**K.2.** A brewery works with an annual production capacity of more than 0.4 million hecto litres.

**K.3.** A tannery or leather finishing factory with an annual production capacity of more than 500,000 m<sup>2</sup>.

**K.4.** A metallurgical works with a processing capacity of more than 200,000 tonnes per annum (expressed as metal).

**K.5.** A cement works or concrete batching plant with a total silo capacity of more than 10 000 tonnes in which cement is handled and manufactured.

**K.6.** A chemical or biochemical plant with a storage capacity of more than 500 tonnes and in which substances are processed or produced.

**K.7.** An oil refinery.

**K.8.** A petro-chemical plant with an annual production capacity of more than 70 000 tonnes.

**K.9.** A tobacco or cigarette manufacturing plant in a stand-alone, purpose built building.

**K.10.** An explosives depot or explosives manufacturing plant in a stand-alone, purpose built building.

**K.11.** A sand depot with a site area of more than 1 ha in size.

**K.12.** A bulk chemical storage facility with a storage capacity of more than 80 000 tonnes.

**K.13.** A dangerous goods godown with a storage capacity exceeding 500 tonnes.

**L. STORAGE, TRANSFER AND TRANS-SHIPMENT OF FUELS**

- L.1.** A storage, transfer and trans-shipment of liquefied petroleum gas facility with a storage capacity of not less than 200 tonnes.
- L.2.** A storage, transfer and trans-shipment of liquefied natural gas facility with a storage capacity of not less than 200 tonnes.
- L.3.** A storage, transfer and trans-shipment of coal or ore facility with a storage capacity of not less than 200 tonnes.
- L.4.** A storage, transfer and trans-shipment of oil facility with a storage capacity of not less than 1,000 tonnes.

**M. AGRICULTURE AND FISHERIES ACTIVITIES**

- M.1.** A fish culture zone---
  - (a)** more than 5 ha in size; or
  - (b)** a boundary of which is less than 500 m from the nearest boundary of an existing or planned---
    - (i)** marine park or marine reserve; or
    - (ii)** bathing beach.

**N. COMMUNITY FACILITIES**

- N.1.** An abattoir with a daily slaughter capacity of more than 500 numbers of livestock.
- N.2.** A quarantine station, or quarantine lairage, for animals.
- N.3.** A wholesale market.
- N.4.** A crematorium.

**O. TOURIST AND RECREATIONAL DEVELOPMENTS**

- O.1.** An outdoor golf course and all managed turf areas.
- O.2.** A marina designed to provide moorings or dry storage for not less than 30 vessels used primarily for pleasure or recreation.
- O.3.** A horse racing course.
- O.4.** A motor racing circuit.
- O.5.** An open firing range.

- O.6.** An open air concert venue with a capacity to accommodate more than 10 000 persons.
- O.7.** An outdoor sporting facility with a capacity to accommodate more than 10 000 persons.

#### **P. RESIDENTIAL AND OTHER DEVELOPMENTS**

- P.1.** A residential or recreational development, other than New Territories exempted houses, within Deep Bay Buffer Zone 1 or 2.
- P.2.** A residential development---
  - (a)** of not less than 2 000 flats; and
  - (b)** not served by public sewerage networks by the time a flat is occupied.

#### **Q. MISCELLANEOUS**

- Q.1.** All projects including new access roads, railways, sewers, sewage treatment facilities, earthworks, dredging works and other building works partly or wholly in an existing or gazetted proposed country park or special area, a conservation area, an existing or gazetted proposed marine park or marine reserve, a site of cultural heritage, and a site of special scientific interest, except for the following---
  - (a)** minor maintenance works to roads, drainage, slopes and utilities;
  - (b)** minor public utility works including the installation of telecommunication wires, joint boxes, power lines with a voltage level of not more than 66 kV, and gas pipelines with a diameter of 120 mm or less;
  - (c)** education and recreational facilities not otherwise designated projects listed in Parts A to P and approved by the Country and Marine Parks Authority;
  - (d)** all earthworks relating to forestry, agriculture, fisheries and the management of vegetation;
  - (e)** New Territories exempted houses;
  - (f)** footpaths and facilities relating to sitting out areas;
  - (g)** minor facilities relating to the management and protection of marine parks, marine reserves, country parks and special areas;
  - (h)** all works not otherwise designated projects listed in Parts A to P undertaken by the Country and Marine Parks Authority under section 4 of the Country Parks Ordinance (Cap. 208) or section 4 of the Marine Parks Ordinance (Cap. 476) for developing and managing country parks and special areas, marine parks and marine reserves;
  - (i)** maintenance of existing waterworks installations; or
  - (j)** minor works including---

- (i)** improvements to catchwaters;
- (ii)** the provision of---
  - (A)** water pipes and valves of diameter 450 mm or less;
  - (B)** water tanks;
  - (C)** hydrological stations and associated structures; and
  - (D)** village supply schemes.

**Q.2.** Underground rock caverns.

## PART II

### DECOMMISSIONING PROJECTS

1. Airports, including fueling and fuel storage, the aircraft maintenance and repair facilities.
2. An oil refinery.
3. A municipal, chemical or clinical waste incinerator.
4. A public utility---electricity power plant.
5. A public utility---gas generation plant.
6. A water treatment works of a treatment capacity of 100 000 m<sup>3</sup> per day or more.
7. An installation for storage or disposal of radioactive waste.
8. A waste disposal facility for pulverised fuel ash, furnace bottom ash or gypsum.
9. A metallurgical works with melting capacity exceeding 200 000 tonnes per annum (expressed as metal).
10. A petro-chemical works.
11. An explosives depot or explosives manufacturing plant.
12. A bulk chemical storage facility.
13. A store for liquefied petroleum gas with a storage capacity exceeding 200 tonnes.
14. A store for liquefied natural gas with a storage capacity exceeding 200 tonnes.
15. A store for coal and ores with a storage capacity exceeding 200 tonnes.
16. A store for oil with a storage capacity exceeding 200 tonnes.
17. A facility for ship building or repairing more than 1 ha in size or with a lifting capacity in excess of 20 000 tonnes.



**SCHEDULE 3**

**MAJOR DESIGNATED PROJECTS REQUIRING ENVIRONMENTAL IMPACTS ASSESSMENT  
REPORTS**

1. Engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100 000.
2. Engineering feasibility study of redevelopment projects with a study area covering more than 100 000 existing or new population.

(W0037/WIN2)