

**Contract No. CV/2000/09**  
**Infrastructure for Penny's Bay Development, Contract 1**

**Submission to EPD under Environmental Permit No.: EP-097/2001/B, Condition 2.18**  
**Design of Stormwater Drainage System for Road Projects**

The following documents are included in this submission:

- Responses to comments from EPD on 20<sup>th</sup> June 2002;
- Explanatory notes;
- Summary drawing for stormwater drainage system for road projects (1 A3 size sheet);
- Detailed layout of stormwater drainage system for road projects (7 A0 size sheets); [1 | 2 | 3 | 4 | 5 | 6 | 7 ]
- Typical details of road gully pots (Drawing No: 91800/411/3040); and
- Typical details of oil interceptors (Highways Department Drawing Nos: H 3134 to 3144).

**Condition 2.18 of Environmental Permit EP-097/2001/B**  
**Design of Stormwater Drainage System**

**Responses to Comments on Submission from EPD on 20<sup>th</sup> June 2002**

Item	Comments	Responses
EPD's comments (Ref: (16) in Ax (6) to EP2/N9/O/65 VII, dated 20 June 2002)		
(1)	<p>The Permit Condition 2.18 requires that “..... <i>all surface run-off from the road projects at Pennys Bay shall be collected, treated by silt traps and oil and grit interceptors and shall not be discharged into the Western Drainage Channel.....</i>” As stated in the submitted Table of “Submission for Environmental Permit.: EP-097/2001/A, Condition 2.18”, <u>no oil and grease interceptor</u> was provided in the design. <u>Gullies instead of silt traps</u> are proposed for silt and grit removal. To meet the Permit Condition 2.18, please provide a revised drainage design to demonstrate that the collected surface runoff from the road projects will be treated by silt traps and oil interceptors. The Penny’s Bay area will become a world-class tourism attraction. The silt traps and oil interceptors could control accidental spillage around the theme park site and its surrounding waters. We note that Highways Department have themselves proposed to install oil and grease interceptors in the Tung Chung Road Widening project. Thus we do not see that the above permit requirements would impose serious construction and operational maintenance problem(s).</p>	<p>VEP-081/2002 was approved by EPD on 13<sup>th</sup> January 2003 and removal of oil and grease for stormwater from new roads in Penny’s Bay will not be necessary as any spillage of oil/petrol/grease will be handled in accordance with HyD’s contingency plan for containing oil spillage on public roads.</p> <p>All stormwater runoff will be collected by road gully pots for grit and silt removal. The typical details have been illustrated in Drawing no. 91800/411/3040A in the revised submission.</p>
(2)	<p>Typical drawings of the silt traps and oil interceptors should be provided. Their location should be clearly indicated on layout plans.</p>	<p>Typical drawings of road gully pots and petrol interceptors for grit, silt and oil removal have been provided in the re-submission. Their locations are clearly marked on the re-submitted drawings.</p>
(3)	<p>The trunk drains and the final discharge points of the collected surface runoff after treated by silt traps and oil interceptors should be clearly shown on the design drawings.</p>	<p>The required information has been provided in the re-submission.</p>
(4)	<p>The submission with a large number of A3-drawings are seems too “piece-meal” for review. Please provide a “summary” drawing and also large drawings (e.g. in A0-size) to demonstrate that the permit requirements are fully complied with. Explanatory Notes for the design are preferred in the re-submissions.</p>	<p>A summary drawing, A0 size drawings and explanatory notes have been provided in the re-submission.</p>

## Explanatory Notes

The requirements of Condition 2.18 of EP 097/2001/B, the recommendation of the EIA and the relevant design features of the stormwater drainage system are listed in the following table:

<b>Design Features of Stormwater Drainage System Relevant to Condition 2.18 of EP-097/2001/B</b>	
<b>Requirements under EP-097/2001/B</b>	<b>Relevant Design Features</b>
<p><b>EP Condition</b></p> <p><u>2.18</u> <i>To protect the water quality in the Western Drainage Channel as shown in Figure 2 attached to this Permit, all surface run-off from the road projects at Penny's Bay shall not be discharged into the Western Drainage Channel. The design of the stormwater drainage system shall be deposited with the Director within 6 months after the commencement of construction of the Project. Before submission to the Director, the design of the stormwater drainage system shall be certified by the ET Leader and verified by the IEC as conforming to the EIA Report.</i></p>	<p>All surface runoff from road projects will be collected through road gully pots. Silt and grit will be effectively retained in the road gully pots. The typical details of road gully pot are illustrated on Drawing No: 91800/411/3040. All runoff from road projects will not be discharged to the Western Drainage Channel as illustrated in the attached summary drawing.</p>
<p><b>EIA Report</b></p> <p><u>5.11.23</u> <i>The following mitigation measures should be implemented to prevent adverse operational impacts to water quality from the road links:</i></p> <ul style="list-style-type: none"> <li>- <i>all road run-off should be collected and discharged via a stormwater drainage system;</i></li> <li>- <i>oil and grit interceptors should be incorporated into areas where spills are likely to remove any oil or grease and sediment before being diverted to the public stormwater system;</i></li> <li>- <i>the contents of oil and grit interceptors should be transferred.....</i></li> <li>- <i>silt traps or sedimentation tanks should be installed to remove suspended solids, which may contain heavy metals and PAHs, from run-off water and, in the same way as oil and grit interceptors, they should be regularly cleaned and maintained in good working condition.</i></li> </ul> <p><u>Table 16.1b EM&amp;A Log Ref: A1, Table 16.1d, EM&amp;A Log Ref: A2 &amp; Table 16.1f, EM&amp;A Log Ref: A2</u></p> <p><i>Oil and grit interceptors shall be used to remove any oil or grease and sediment before being diverted to the public stormwater system. It is envisaged that, as a guideline, and depending upon their capacity, interceptors shall be installed at intervals of between 500 – 1,000 m along new roads, and also at PTI, car parks and utility yards.</i></p>	<p>All road runoff will be collected and discharged via a stormwater drainage system. Petrol interceptors will be installed at locations where spills are likely to remove oil, grease and sediment. These locations include the car park and coach park for the artificial lake (WRC) and transport interchange at Yam O. Silt traps and sedimentation tanks for grit removal will be provided in the form of road gully pots. All runoff from road projects will be collected through road gully pots.</p> <p>All road runoff will be collected through road gully pots at intervals of between 10-15 m for removal of silt and grit. Petrol interceptors will be installed at locations where spills are likely to remove oil, grease and sediment.</p>