

## AREA CALCULATION SHEET AS PER APPROVED

### LAYOUT PLAN

PROPOSED PROTECTED FOREST LAND TO BE DIVERTED FOR ENTRY/EXIT APPROACH TO  
HINDUSTAN PETROLEUM CORPORATION LIMITED RETAIL OUTLET ON BAHRAICH-  
FAIZABAD-AZAMGARH ROAD (SH-30) IN KM. NO. 57 (RHS), AT GATA NO-58,  
VILLAGE:-MUNDERWA KALAN, TEHSIL:-GONDA, DISTRICT:- GONDA (U.P.)

#### **Entry Area approach to Retail Outlet**

$$\begin{aligned} &= AA1A2 + A1A2A3A4 + A3A4B5 + B3B5A4 + B3B4B5 + B2B3B4 + B1B2B3 + BB1B2 \\ &= \{1/2 \times (30.0m \times 5.5m)\} + (32.42691m \times 5.5m) + \{1/2 \times (7.573091m \times 5.5m)\} + \{1/2 \times (5.42515m \times \\ & \quad 7.0m)\} + \{1/2 \times (6.126591m \times 8.8m)\} + \{1/2 \times (5.09523m \times 10.9m)\} + \{1/2 \times 6.40437m \times 11.0m\} \\ & \quad + \{1/2 \times (5.74925m \times 11.9m)\} \\ &= 82.5 \text{ SqM} + 178.348 \text{ SqM} + 20.826 \text{ SqM} + 18.988 \text{ SqM} + 26.957 \text{ SqM} + 27.769 \text{ SqM} + \\ & \quad 35.224 \text{ SqM} + 34.208 \text{ SqM} \\ &= 424.82 \text{ SqM} \end{aligned}$$

#### **Area of Earthen Shoulder along Entry approach to Retail Outlet**

$$\begin{aligned} &= AA2G1G + G1G2A2A4 + G2A4B1 \\ &= (30.0m \times 2.25m) + (32.42712m \times 2.25m) + \{1/2 \times (14.70489m \times 2.25m)\} \\ &= 67.5 \text{ SqM} + 72.961 \text{ SqM} + 16.543 \text{ SqM} \\ &= 157.004 \text{ SqM} \end{aligned}$$

#### **Area in Between Entry & Exit (Separator)**

$$\begin{aligned} &= A1FB + BCEF + CED1 \\ &= [(51.5m \times 17.86m) - \{3.14 \times (51.5m \times 17.86m)/4\}] + (12.0m \times 17.86m) + [\{(81.5m \times 17.86m) \\ & \quad - \{3.14 \times (81.5m \times 17.86m)/4\}] \\ &= 197.755 \text{ SqM} + 214.32 \text{ SqM} + 312.952 \text{ SqM} \\ &= 725.027 \text{ SqM} \end{aligned}$$

#### **Area of Exit approach from Retail Outlet**

$$\begin{aligned} &= DD1D2 + D1D2D3D4 + D3D4D5 + D3D5D6 + D5D6C5 + C4C5D6 + C3C4D6 + C2C3C4 + \\ & \quad C1C2C3 + CC1C2 \\ &= \{1/2 \times (30.0m \times 5.5m)\} + (62.73564m \times 5.5m) + \{1/2 \times (7.26437m \times 5.5m)\} + \{1/2 \times (4.41946m \times \\ & \quad 7.4m)\} + \{1/2 \times (7.45715m \times 4.2m)\} + \{1/2 \times (8.76847m \times 2.6m)\} + \{1/2 \times (9.60182m \times 2.2m)\} + \\ & \quad \{1/2 \times (4.46808m \times 10.4m)\} + \{1/2 \times (10.76053m \times 3.8m)\} + \{1/2 \times (6.21128m \times 11.0m)\} \\ &= 82.5 \text{ SqM} + 345.046 \text{ SqM} + 19.977 \text{ SqM} + 16.352 \text{ SqM} + 15.66 \text{ SqM} + 11.399 \text{ SqM} + \\ & \quad 10.562 \text{ SqM} + 23.234 \text{ SqM} + 20.445 \text{ SqM} + 34.162 \text{ SqM} \\ &= 579.337 \text{ SqM} \end{aligned}$$

*Sanjay Kumar*  
15/01/21

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**Area of Earthen Shoulder along Exit approach from Retail Outlet**

$$\begin{aligned} &= \text{HH1D2D} + \text{D2D3H2H1} + \text{D3H2C1} \\ &= (30.0\text{m} \times 2.25\text{m}) + (62.73556\text{m} \times 2.25\text{m}) + \{1/2 \times (12.48623\text{m} \times 2.25\text{m})\} \\ &= 67.5 \text{ SqM} + 141.155 \text{ SqM} + 14.047 \text{ SqM} \\ &= 222.702 \text{ SqM} \end{aligned}$$

**Total Protected Forest Area Proposed to be Diverted**

$$\begin{aligned} &= 424.82 \text{ (Entry Area) SqM} + 157.004 \text{ (Entry Earthen shoulder) SqM} + 725.027 \text{ (Separator) SqM} + \\ &579.337 \text{ (Exit Area) SqM} + 222.702 \text{ (Exit Earthen shoulder) SqM} \\ &= 2108.89 \text{ SqM} \\ &= \mathbf{0.210889 \text{ Ha.}} \end{aligned}$$

**Total Area of Non-Forest Land as per Layout Plan**

$$\begin{aligned} &= \text{Non-Forest land area calculation} = \\ &= \text{area of parallelogram shape plot} = \{\text{base (m)} \times \text{height (m)}\} \\ &= (35.0\text{m} \times 35.0\text{m}) = 1225.0 \text{ SqM} \\ &= \mathbf{0.1225 \text{ Ha.}} \end{aligned}$$



15/8/21

**(Authorized Signatory)**

**Hindustan Petroleum Corporation Ltd.  
Gorakhpur Retail Regional Office**

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