

(DESIGN REQUIREMENTS SUMMARY)

OPTION 1 - SOLID TIMBER HOARDING / MONOCLEX

POSTS - Provide 175mm x 100mm sections of C16 timber spaced maximum at 2.0m centres.

RAILS - Provide 3 number 50mm x 100mm sections of C16 timber spaced no more than 1.0m apart.

BASES - Provide C25 or GEN3 concrete of size 400mm x 400mm plan and 700mm depth minimum.

(RAIL - POST CONNECTION)

Provide 2 screws 4mm gauge of sufficient length for 45mm penetration into post.

(PLY/MONO-RAIL CONNECTION)

Provide 3.5mm gauge screws of sufficient length 30mm penetration into rails. Screw centres max. 600mm apart.

OPTION 2 - DEBRIS NETTING ON WELDMESH

POSTS - Provide 150mm x 100mm sections of C16 timber spaced maximum of 2.2m centres.

RAILS - Provide 3 number 50mm x 100mm sections of C16 timber spaced no more than 1.0m apart.

BASES - Provide C25 or GEN3 concrete of size 400mm x 400mm plan and 700mm depth minimum.

(WELDMESH - RAIL CONNECTION)

Provide 38mm staples every 500mm.

OPTION 3 - WELDMESH ONLY

POSTS - Provide 100mm x 100mm sections of C16 timber spaced no more than 2.8m centres.

RAILS - Provide 3 no 50mm x 50mm sections of C16 timber spaced no more than 1.0m apart.

BASE - Provide C25 or GEN3 concrete of size 400mm x 400mm plan and 600mm depth.

NOTE!!

— POST SPACING TO BE REDUCED BY 25% WHEN WITHIN 3.0m OF A CORNER OR RETURN.

Job title: GAN GLOR
WREXHAM WIND
LOAD CALCULATION
TO BS 6399-2

Job No:
Sheet No: 2 of 2
Made by: J. MACIE
Date: 28.03.14



(SITE)

- Post Code - LL13 9PE
- ALTITUDE - +70.0m = Δ_s
- DISTANCE FROM SEA - 40km
- TERRAIN - IN TOWN > 2km
- H = 2.4m

(WIND LOADS)

- Site Wind Speed, $V_s = V_b \times S_a \times S_d \times S_e \times S_p$
where $V_b = 21.7 \text{ ms}^{-1}$, $S_a = 1 + (0.001 \times \Delta_s)$
 $= 1.07$
and $S_d, S_e, S_p = 1.0$ (Worst Case)

$$\therefore V_s = 21.7 \times 1.07 \times 1.0 = \underline{23.22 \text{ ms}^{-1}}$$

- Effective Wind Speed,

$$V_e = V_s \times S_b, \text{ where } S_b = 1.16$$

1.123
1.42

$$\therefore V_e = 23.22 \times 1.16 = \underline{26.94 \text{ ms}^{-1}}$$

- Dynamic Wind Pressure,

$$q_s = 0.613 \times V_e^2$$
$$= 0.613 \times 26.94^2 = 445 \text{ N/m}^2$$

- Consider chart term loading as per BS 5975

$$\therefore q_{ss} = 445 \times 0.7 = \underline{0.315 \text{ kN/m}^2}$$

(SURFACE COEFFS)

$$\text{ZONE A} = q_{ss} \times C_{pe} = 0.315 \times 2.1 = 0.66 \text{ kN/m}^2$$

$$\text{ZONE B} = q_{ss} \times C_{pe} = 0.315 \times 1.8 = 0.57 \text{ kN/m}^2$$

$$\text{ZONE C} = q_{ss} \times C_{pe} = 0.315 \times 1.4 = 0.44 \text{ kN/m}^2$$

$$\text{ZONE D} = q_{ss} \times C_{pe} = 0.315 \times 1.2 = \underline{0.38 \text{ kN/m}^2}$$