

I CONSIDER THAT THE MOST SENSIBLE SOLUTION
IS TO DROP THE CAR PARK LEVEL BY SAY 0.20M
AND BASTER THE GROUNDS BACK AT 1m1
WHERE REQUIRED

I ASSUME THAT THE CAR PARK IS
LEVEL @ 4890

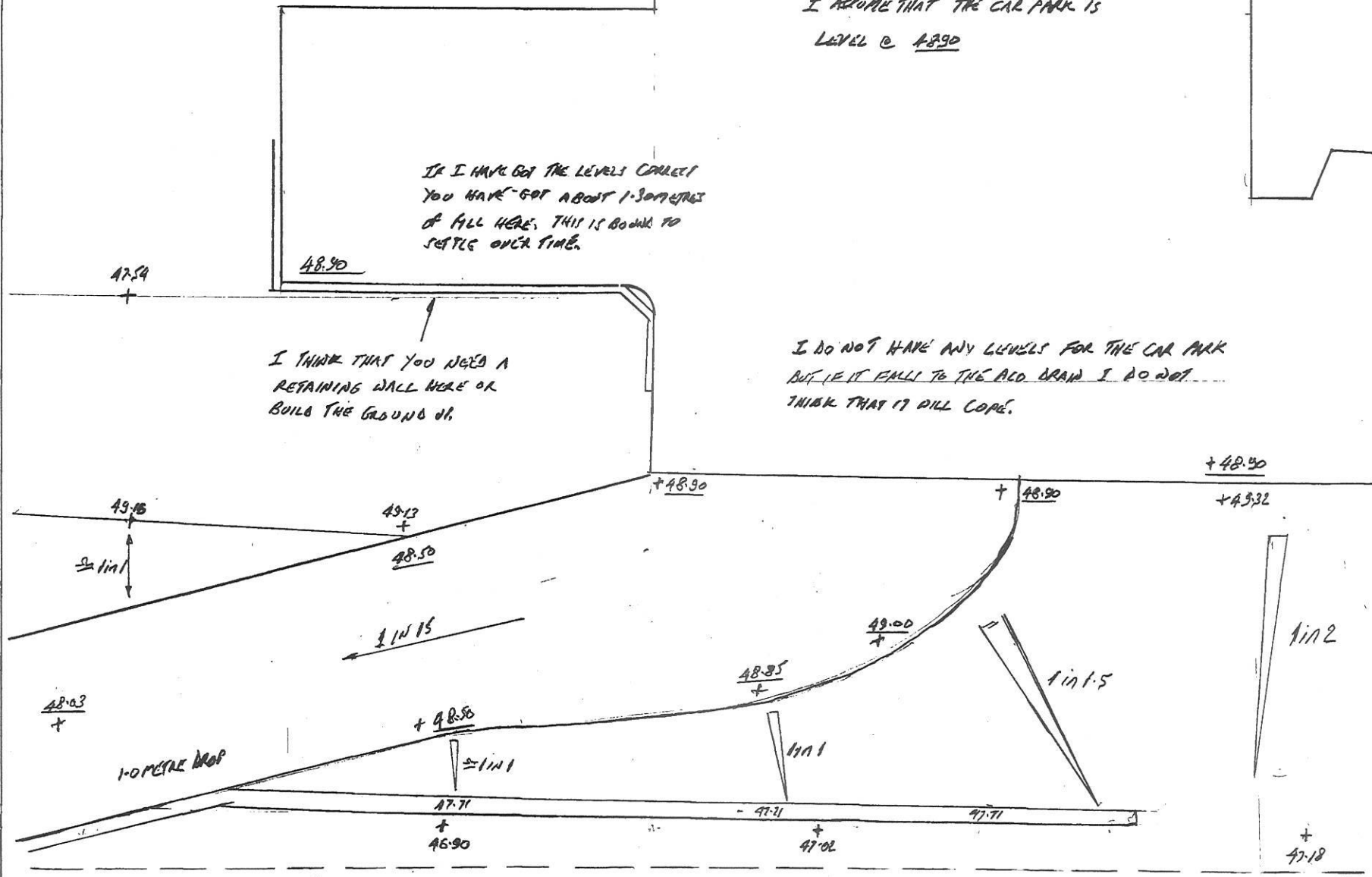
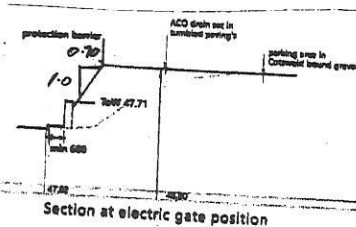
I DO NOT HAVE ANY LEVELS FOR THE CAR PARK
BUT IF IT FALLS TO THE ACD DRAIN I DO NOT
THINK THAT IT WILL COPE.

IF I HAVE GOT THE LEVELS CORRECT
YOU HAVE GOT ABOUT 1.30m JETS
OF FILL HERE, THIS IS BOUND TO
SETTLE OVER TIME.

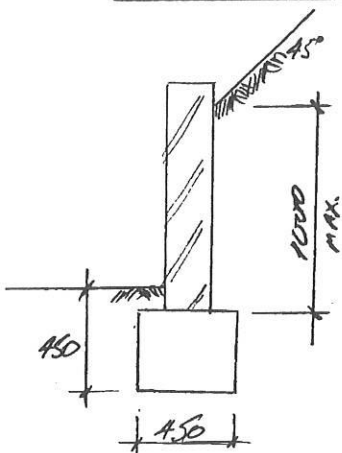
I THINK THAT YOU NEED A
RETAINING WALL HERE OR
BUILD THE GROUND UP.

I DO NOT KNOW HOW YOU
CAN FIX A RAILING ON THE
EDGE OF THE EXCAVATION
THAT CAN RESIST THE HORIZ-
ZONTAL LOAD FROM A CAR.

I CONSIDER THAT THE BIGGEST
THAT YOU SHOULD BATTLE
THE GROUND IS 1124.



date: 24th APR '26
ref: 27362/sk/3

DESIGN RETAINING WALL

THE SUB-SOIL IS CLAY WHICH CAN STAND VERTICALLY BUT FOR THIS DESIGN ASSUME A
SLOPE OF 45° AT SUCH A STEEP SLOPE I CONSIDER THAT IT IS NEARLY IMPOSSIBLE TO
IGNORE ANY SURCHARGE.

$$\text{SOIL DENSITY} = 18 \text{ kN/m}^3 \quad \text{SF} = 1.40 \quad k_f = 0.50$$

$$\text{O.F.} = 0.50 \times 18.0 \times 1.40 \times 10^3 \times 0.167 = 2.10 \text{ kNm} < 2.35 \text{ kNm}$$

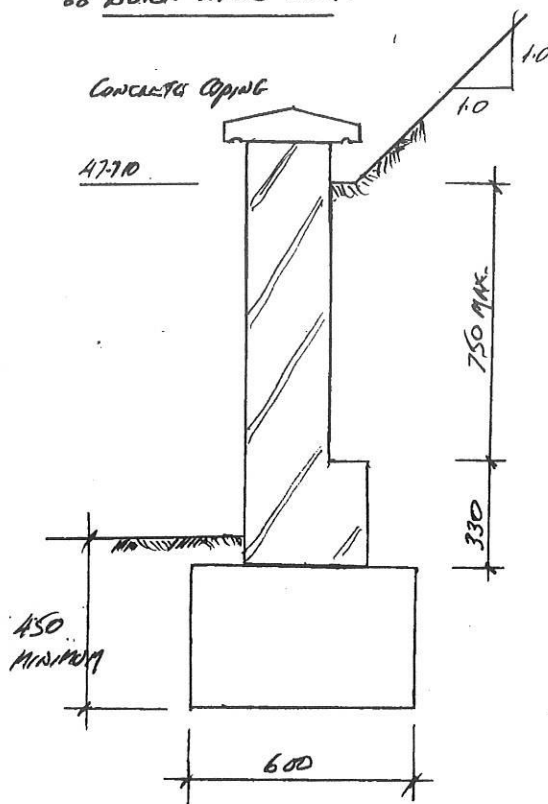
$$\text{Assume } f_{kz} = 0.40 \text{ kN/m}^2 \quad \text{SF} = 1.35$$

$$\text{FOR A 215 WALL CAPACITY} = \left(\frac{0.40}{1.35} + 0.02 \right) \frac{10^3 \times 215^2}{6} = 1.03 \text{ kNm}$$

$$\text{FOR A 330 WALL CAPACITY} = \left(\frac{0.40}{1.35} + 0.02 \right) \frac{10^3 \times 330^2}{6} = 2.35 \text{ kNm}$$

$$\text{MC 0.70} = 0.50 \times 18.0 \times 1.40 \times 0.75 \times 0.167 = 0.89 \text{ kNm} < 1.03 \text{ kNm}$$

∴ BUILD WALL THUS:



BUILD THE WALL WITH FIRST
RESISTANT BRICK TO BE LAIN IN

A 1:3 CEMENT MORTAR TO AN
ENGLISH OR DERBY WALL BOND.

OR BUILD THE WALL IN REINFORCED

BLOCKWORK AS PER SHEET 27362/CS/5