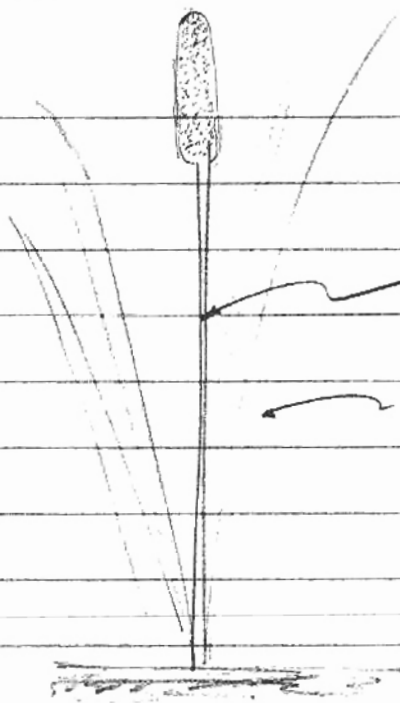


BULRUSHES



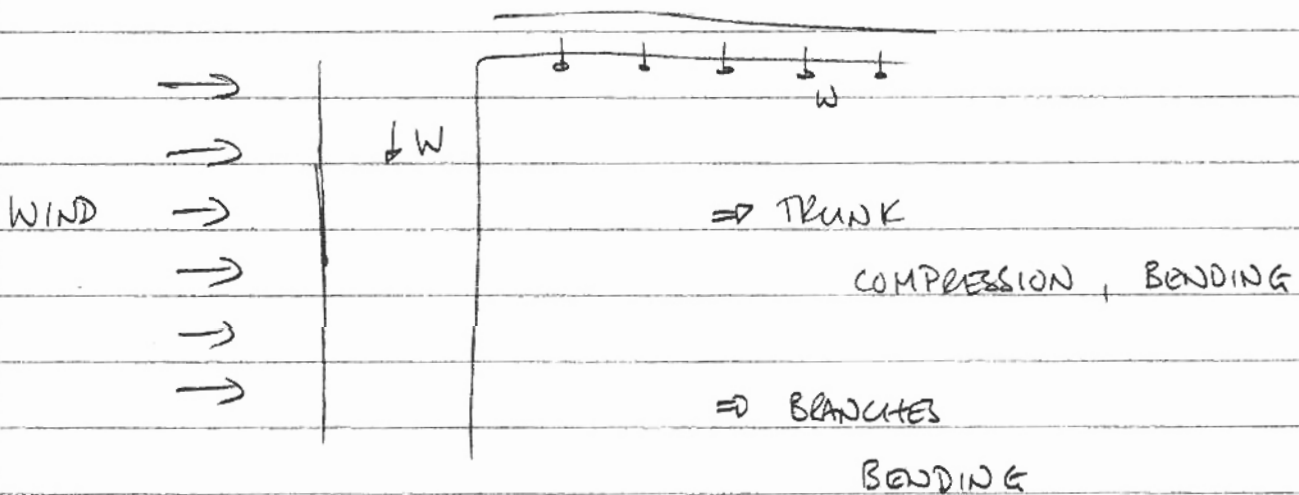
STEM: CIRCULAR CROSS-SECTION, LIKE GRASSES

LEAVES: LIKE IRIS LEAVES

LOADS: SELF WEIGHT, WIND, RAIN.

TREES

- MICROGRAPHS OF WOOD
- LOADS: SELF WEIGHT, WIND



⇒ TREE HEIGHT LIMITED BY COMPRESSIVE

- COMPRESSIVE STRENGTH OF WOOD
- BUCKLING RESISTANCE OF TRUNK
- BENDING STRENGTH OF WOOD

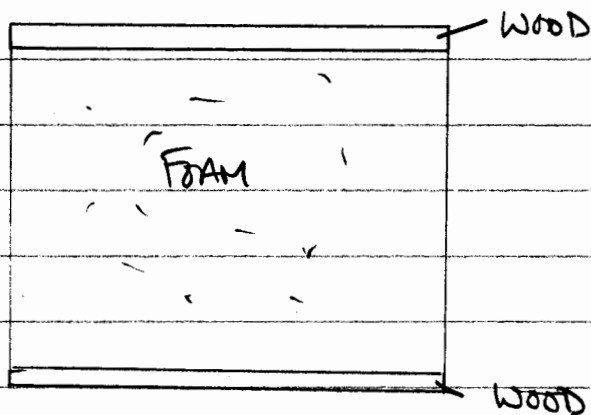
WOOD AS AN ENGINEERED MATERIAL

GLULAM - TAKE STRIPS OF WOOD + BOND TOGETHER

PARALAM - " SLIVERS " " " " " " "

⇒ ELIMINATES DEFECTS

FOAM CORE SANDWICH PANELS



⇒ SANDWICH STRUCTURE INCREASES MOMENT OF INERTIA WITH LITTLE INCREASE IN WEIGHT

⇒ GOOD AT RESISTING BENDING

⇒ FOAM CORE: THERMAL INSULATION.