### 1. Considerations

**On the Ground**
- Aeroplane has tendency to weathercock into wind
- Position controls to compensate for wind

**On Takeoff**
- Allow for drift to track along the runway centreline

**In the Circuit**
- Allow for drift and headwind/tailwind on each leg
- Base leg will be affected the most

**On Landing**
- As crosswind increases amount of flap used decreases – to improve directional control
- More airspeed needed if gusty conditions
- Need to consider overall suitability of runway on crosswind conditions

### Maximum Demonstrated Crosswind
- In Flight Manual
- Limited by ability of rudder to control aeroplane
- For this aeroplane is _______ knots

### Calculating Crosswind Component
- Need W/V from TAF or METAR
- Convert the direction to Magnetic – apply variation

**Vector Diagram**
- Need pencil, paper, ruler and protractor

**Flight Manual Graph**
- Need pencil, paper, ruler and protractor

**Nav Computer**
- Need pencil, paper, ruler and protractor

**Windsock**
- Need pencil, paper, ruler and protractor

**Tower**
- Need pencil, paper, ruler and protractor

**Formula**
- Angular difference between wind and RWY
- Plot on watch face
- Percentage of distance around watch face x wind strength = X/W component
- 30° = half wind strength, 60° = full wind strength

### 2. Airmanship

- Making the calculations improves SA
- Max crosswind is a recommendation, but may be other limits
- Control position on ground wrt wind
- May need to use brakes
- Lift off at slightly higher speed than normal
- After lift-off make a gentle balanced turn into wind

### 3. Aeroplane Management

- Line-up, adjust reference point for drift
- Ailerons fully into wind, elevator neutral
- During takeoff roll reduce aileron to neutral by rotate point

### 4. Human Factors

- Assessing runway suitability
- Improved ADM
- Lift off at slightly higher speed than normal
- After lift-off make a gentle balanced turn into wind

### 5. Air Exercise

**Takeoff**
- Line-up, adjust reference point for drift
- Ailerons fully into wind, elevator neutral
- During takeoff roll reduce aileron to neutral by rotate point

**Circuit**
- Climb-out
  - Wings level, in balance
  - Adjust heading to track extended centreline

**Crosswind**
- Reference heading allows for drift
- Expect some headwind or tailwind

**Downwind**
- Allow for wind on downwind turn
- Track parallel to runway
- Assess runway and decide on speeds and flap setting to use
- Check downwind spacing

**Base**
- Allow for drift and headwind or tailwind
- Extend all the landing flap
- Anticipate turn onto final

**Final**
- Track extended centreline
- Power controls rate of descent

**Landing**
- Combination of kick straight and wing down methods

**Kick-straight**
- Crab into wind
- Just before touchdown, kick straight, aileron to keep on centreline

**Wing-down**
- From short final
- Wing held down, rudder to keep aligned with centreline – Sideslip
- Land on into wind wheel first

**Combination**
- Crab into wind on final
- During round-out switch to wing down method,
- Aileron to stay aligned with centreline, rudder to stay straight
- Into wind wheel touches down first