

Laser Protective Eyewear Use at AWE

- **Risk assessment required – written into legislation**
- **Apply ERICPD**
 - **Eliminate**
 - **Reduce**
 - **Isolate**
 - **Control**
 - **Protect**
 - **Discipline**
- **Laser safety management hierarchy of controls**
 - **Engineering controls**
 - **Administrative/management controls**
 - **LPE is final layer of protection**

LPE Selection

- **LSO will identify requirements based on risk assessment**
- **LPE chosen according to standards BSEN207 or BS EN208**
- **BSEN207 is the normal standard to apply
identifies OD requirements
also requires survivability requirements for the eyewear –
filter and frame**
- **OD determined from max output but only intended for
accidental protection not for prolonged exposure**

LPE NOT for normal operations

– infrequent set-up/maintenance etc

LPE Issues

- **LPE with required M rating initially not available**
 - **tested with vendor within facility**
 - **own in-house tests with sub-ps oscillator to check for filter damage**
- **Fogging an issue with wearing for prolonged periods**
 - **particular concern as we have people working at height**
 - **inserts help**
 - **booths to take off eyewear and wipe built into Orion**

Multi-laser/wavelengths

- for multiple lasers in one lab restrict operations to one laser only i.e. no simultaneous operation
 - eyewear locked and only one key to unlock eyewear with key to operate laser
- temporary LCA allowed to operate independently in own screened off area
- Green pumped Ti:sapphire servicing – eyewear blocks both wavelengths.
 - Low VLT compensated by local additional lighting
- Supercontinuum
 - Filtered
 - fibre-coupled