A method of manufacturing a protective structure for a preparatory mine workings includes the installation of a vertical riser and shaped horizontally arranged blocks interconnected with each other, which are installed one above the other with a gap above them. The shaped blocks are made of reinforced concrete slabs, and in the space between the slabs, at least two modernised pneumatic fires are placed symmetrically with respect to the vertical riser. Each of the upgraded pneumatic fireplaces is made of vertically oriented cylindrical shells located inside each other, the outer one of which is made of interconnected car tyres to be recycled. The vertical riser is made of two coaxially placed, horizontally cut fibre-reinforced concrete pipes, with a mesh container filled with coarse rock fines in the transverse section between them. The intertubular space of the riser is filled with fine rock to maintain coaxiality.