**Potential parts to ‘buy’ / acquire**

**IR distance sensors (Cost: $25):** At this stage we think that we need 2 distance sensors in order to navigate around the maze when there is no line to follow. These can be theoretically mounted on the front and left-hand side of the AV. The front one will be used to detect when there is a wall ahead, and the left-hand side one will sense whether the robot is able to turn left or not. When used together, they can also be used to work out the position of the robot when it rotates.

**Lights (free):** We think we need one or more lights, which will serve for both functional and aesthetic purposes. The functional purpose will consist of having indicator lights, which can signal that the program and sensors are working, and when each sensor and camera has a signal. This would be beneficial for testing and programming purposes.

**Extra wheels (free?):** Making the total number of wheels 4 would greatly improve stability and could improve accuracy when navigating around the course.

**New mounting chassis (free?):** The current mounting board is far too big and clumsy to manoeuvre, especially as the current position of the camera and drive wheels are at the very front. Need something slightly wider and shorter which will hold the boards better. Have to keep in mind the recyclability of the material.

**Case/enclosure for Raspberry Pi board (free?):** This will serve the function of making the AV look nice and contain all of the components neatly. Have to keep in mind recyclability.

**New standoffs/mounting brackets for camera/brackets for extra wheels (free):** These will be required to make the boards fit together well and hold the camera in the correct position. The camera bracket may vary depending on how the program responds to the current placement of the camera.