

A possible executive summary follows:

Silver Bullets for Zebra Mussels

Silver Bullets is a company founded to provide an environmentally safe and effective control method, initially for zebra mussels but with subsequent diversification into a wider range of products for targeted solutions in aquatic environments.

Our business plan is framed around a method for controlling zebra mussels, an invading species which blocks industrial raw-water systems, notably power-station cooling-water supplies. The key to our product is encapsulating a toxin in microscopic particles of edible material. The mussel's natural filtering then concentrates the toxin from the water into their own bodies. Compared to simply dumping the toxin into the water supply (the current method) this allows a much lower quantity of toxin to be used; our estimates suggest at least 1000 times less. This represents an enormous saving both economically and in terms of environmental damage. This last point is particularly important in freshwater environments, such as the Great Lakes, which is where the zebra mussel problem is at its worst.

We have strong patent protection for our product. The patent may be defended on the use of food-encapsulated particles in aquatic environments, and on the particle size range appropriate for mussel filtration. This gives us broad coverage, not only of our first product but also a large range of other potential products for use on filter feeding freshwater or marine species. We plan to diversify our product range under this patent umbrella. We have already identified another invading species, the Asian clam, which we believe our product will efficiently control. We plan to position the business in the broad area of specific, environmentally friendly pest control. Another area we are planning to begin testing in is enhancement of edible bivalve production and quality. One product we plan to develop is a feed containing minerals or other nutrients which limit growth of farmed oysters, clams, or mussels; this is covered by our existing patent.

We have tested our silver bullet for zebra mussels successfully at the laboratory scale. Research and development work is still required to identify a manufacturing route, but this type of encapsulated particle is common in pharmaceutical and agrochemical applications, so we anticipate this being achieved within a year. Manufacturing will be on the scale of a few tons per year and is thus best subcontracted out. The key hurdle we need to cross is market penetration. We anticipate this being possible only with the aid of an established sales and marketing organization and so a key plank of our business plan is the establishment of an industrial partnership with a power, water, or environmental-control company.

Our market is large and growing fast geographically. Its core is the Great Lakes region, where we will concentrate our efforts initially. According to one source the total cost of zebra mussel infestations is five billion dollars annually. While this estimate is necessarily crude, it does give an indication of the scale of

the market available to our company. Another source estimates that Canadian companies on Lake Ontario alone currently spend eight million dollars annually in zebra mussel control.

We identify the strength of our business as being its simplicity. Product development will be fast and cheap and we anticipate no regulatory or legal difficulties in commercialization. We thus expect to be making our first sale in the third year of the company's existence, to be making a profit in the fourth year, and a very healthy return by the fifth year. We expect a steady-state turnover of a few million pounds with operating costs around three hundred thousand pounds. Financing will be in two stages; £60,000 seed funding, followed by £500,000 at the start of year two, will be provided by the industrial partner taking an equity stake. The investment will be justified by the company's profits within five or six years. The ultimate exit route would most likely to be a buy out by an established zebra mussel control company.

The company currently consists of the two founding scientists. While we are a young, dynamic, and imaginative partnership, we do not have the commercial skills required to take this project forward alone. Vital to the enterprise will be the assembling of a management team at the start of year two, following the major capital investment. Since we expect to be doing neither manufacturing nor sales ourselves, this team can be kept small and efficient. The role of the founding scientists will be that of the technical director. While we want an active and involved role in the company's direction, we do not plan to take a lead in its commercial development beyond the first year.