

# **Business Plan for an Elephant Enclosure at Noah's Ark Zoo Farm**

## **1. Executive Summary**

After 35 years of being a tenant dairy farmer at Moat House Farm, Anthony Bush had the opportunity of buying the farm when the milk quota was at its highest value. Fearing a future collapse of this value, the farm was purchased by Anthony and Christina Bush in 1995 and turned into an arable farm on the arable acres, leaving 90 acres of grassland for other use. The decision was made in 1997 to diversify the grassland into an open farm with zoo animals, called Noah's Ark Zoo Farm, using the farm buildings for education, for adventure play and for animals. Expansion has continued, using the profits ploughed back into it, till Big Cats were installed in 2009-10.

We would now like to build the best Elephant enclosure in the UK of which the whole country can be proud, as an extension to our zoo farm and for which we have received planning permission.

Keeping elephants in captivity has come under criticism because of the animal's short longevity, compared with elephants in the wild. Almost all animals live longer in captivity, but not elephants. A huge step forward in elephant management needs to be taken to address a number of health issues, all of which we do in devising the plans for our Elephant Enclosure. Issues concerning elephants in captivity are; poor diet leading to obesity, consequential bad feet, lack of provision of space for locomotion and lack of stimulation within a whole herd. In addressing all these matters our enclosure has become much bigger than the minimum sizes that continue to be the permitted standards in zoos. To provide the right "browse" diet, we have already planted 11 acres of willow coppice woodland, for up to half their ration in branches to be fed each day. We provide 12 acres of grassland to provide grazing and space, the largest sized enclosure in the UK by some way. Eventually we could keep a ten elephant herd that the 'Best Practices' which the Coalition of Captive Elephant Well-being (2005) recommends, but we begin with three females and a male. All the fencing is "hot-wired" and designed to be strong enough to withstand a 7 tonne bull elephant in musth, yet be subtle enough to look unobtrusive in our Green Belt site.

The building itself is dug into the ground to also make least impact in the Green Belt. It is three times bigger than the minimum allowed by European Standards, but for the first time in Europe, big enough to satisfy 'Best Practice'. We provide sand yards, 2m deep indoors and 1m deep outdoors; all laid to wash clean, with drainage and good indoor daylight. There is a large bathing pool for stimulation and skin care, to enable three elephants to swim at once, along with rainwater harvesting, pumping and recycling facility through a reed-bed drainage system. Enriched feeding regimes are built in throughout the fields and building, and facility for good interaction within the herd. We will be operating on a 'Protective Contact' system, whereby the ankus, which is a goad used in free contact, but seen by many as cruel, will not be used. Instead training will be done on training walls built into the building and walk-through crush or chute, where there will also be a weighbridge for daily weighing.

We expect this enclosure to be a bench-mark by which all European elephant keeping will be judged. The whole operation is the biggest step forward taken by this zoo-farm, providing extra employment, both short term in its construction and long-term in farm staff and off-farm support jobs. Britain is a country of animal lovers, so it is appropriate that a new facility to house the world's largest land mammal should be excellent. But excellence comes at a price, even though the prices we have achieved through quotes are exceptionally low, due to highly motivated builders keen to see the project to fruition. They are much lower than any other elephant enclosure built in recent years. Any grant funding that is available is imperative if this project is to become possible and to allow us to provide this revolutionary step-forward in elephant husbandry which the animal-keeping industry so needs. In the long term; this funding would allow thousands of visitors to learn about these important, specialized mammals, for the benefit of the species in terms of public education, appreciation and conservation.

## **2. General Information**

**Organisation name** – Noah's Ark Zoo Farm

### **Mission Statement**

*"To build a place where people of all ages, faiths and backgrounds can come and learn the wonders of Creation through fun, adventure and scientific discovery; should see the best of conservation of native and exotic species and learn the urgent need for responsibility towards the future of the Earth, its flora and fauna.*

*Visitors are encouraged to see and experience the Christian faith in action through the excellence of the visitor experience and our high standards of animal care.*

*Through serving the public, Noah's Ark Zoo Farm aims to create an environment for recreation and discovery and inspire appreciation of wildlife, conservation issues, and a better understanding of farming and food production."*

### **Achievements to date**

We began in 1998 with a trial period of 20 days to see if there was a place for a Noah's Ark theme park with farm animals and adventure play on about 5 acres and in a few old farm buildings. About 1600 visitors attended on Fridays and Saturdays in August and September.

The following shows our growth with key additional features and awards:

**1999** - With more indoor play apparatus and more animals, attendance was

**2000** - (having installed all the main farm animals and education about their food role)

**2001** - (late start through FMD, new animals did not arrive till August)  
**2002** - (having acquired a zoo license and some zoo animals, a Show Arena, more adventure play)  
**2003** - (having installed more adventure play and reptiles and meerkats)  
**2004** - (having built giant hedge maze and more adventure play) Achieved the *National Farm Attractions Network 'Highly Commended' (award)*.  
**2005** - (having acquired rhinos and built for them)  
**2006** - (having acquired giraffe and built for them) Achieved the *North Somerset 'Top Attraction' Award*.  
**2007** - (having acquired gibbons, zebra, their buildings and installed new adventure play)  
**2008** - (disappointing very wet summer; acquired alligators and ostriches) *South West Tourism Finalist (award)*.  
**2009** - (having acquired tigers and built for them, and new adventure play) *Green Tourism Silver Award*.  
**2010**- More adventure play area. *Learning Outside the Classroom Quality Badge (award)*.

Each of these major zoo animals has demanded a unique building researched by visits to other zoos, and designed by Anthony Bush and senior staff to include farm technology as well as zoo technology. So uniquely, Noah's Ark had containment chutes or races for all its big zoo animals, so that they can be held, examined and treated for minor ailments without tranquillising. Tree-leaf silage has been utilized for all natural browsing animals; also unique among zoos. We have tried to encourage our visitors to see each animal's important place in nature and to get close to all the animals and treat them with respect.

**Vision for the future** Noah's Ark plans to further develop to ensure long term sustainability of the zoo, employ an operations manager and further senior staff to replace Anthony Bush, who is aged 72 and who as Owner and CEO does not draw a salary. We need to extend our influence, brand name and visitor numbers.

**Products and services** Our main product is an interesting, entertaining and worth-while day out, learning about sources of food crops and food animals; and the importance of exotic animals. We sell snacks and meals in the café or kiosks, made from as local food as possible. The gift shop sells a variety of gifts, including fair trade and locally produced goods. We also sell popular 'Keeper-for-a-day' experiences, where visitors can have individual time with a keeper, looking after big zoo animals or primates and reptiles, or big cats.

**Legal Status/organizational structure.** Noah's Ark Zoo Farm is a partnership and Anthony and Christina Bush are the owners of the land and zoo, with no mortgage or debts. The zoo land has planning permission for Tourism and Zoo purposes; the zoo as a whole carries a DEFRA Zoo License, and a Pet Shop license. The staff are organised in teams, each with a team leader: Buildings (senior team leader), Animals, Grounds, Office,

Ticket Office, Hygiene, Shop. The Café is franchised out on an annual license. There is a Zoo Vet, who carries out a whole zoo visit each month.

**Summary of proposed investment.** A Five-year-plan was required by the Council Planning Department, finally delivered in 2009. This included all proposed buildings to make the zoo complete and sustainable. Elephants were accepted as part of this proposal. Planning Permission was then applied for and received in May 2010, for a 12.5 acre enclosure with a 28m x 24m Elephant House with sand yards for male and for female elephants, along with outdoor sand yards, a pond with water recycling, and adequate fencing throughout. Included in the plans are good facilities for the visitors to be close to and view the elephants, both indoors and out.

**(ADDITION) The enclosure has now been extended to 20 acres to provide extra space for elephants. Our planning permission has included this extension.**

### **3. What we want to do**

This project aims to make use of Axis 3 funds delivered through Measure 311 – *Diversification Into Non-Agricultural Activities*. The project will do this by expanding an already very successful farm diversification with the introduction of an elephant enclosure – now a rarity on the Zoo circuit and certain to be a headline attraction at Noah’s Ark Zoo. Our plan is to create the best elephant enclosure in the country, an enclosure by which all others will be judged and where the highest standards of elephant keeping will be found. It will need to be very good indeed, as elephants do not have a good history in captivity. But there is no reason why the obesity, bad feet and lack of exercise, which are key factors in poor elephant keeping, should exist in a large elephant enclosure in a farm diversification which offers them the right large space and well-designed management techniques, including a walk-through training chute with weighbridge, and a recently planted 11 acre willow coppice wood. Only a farm like ours can offer all this space and expertise, with the aim of considerably improving the standards of elephant welfare within the industry.

We aim to achieve higher visitor numbers through having this higher profile zoo, leading to more publicity, more first time and repeat visitors, more visitors wanting ‘keeper experiences’ with elephants, more gifts sold at the gift shop of an elephant nature. We will be able to raise our entry price. We have many entries in our visitor’s book this year saying we are good, or even very good, value for money. Due to the scarcity and difficulty of keeping elephants at close proximity to the public, we will be adding a big extra to the visitor experience. Our prices are currently below Bristol Zoo, who have a good reputation, but much smaller space, and much less for young visitors to do. Elephants are only kept at 13 of Britain and Irelands 350 zoos. The nearest elephants are 100 miles away from Noah’s Ark. No nearer zoos have plans to keep elephants. Four zoos within 100 miles, Bristol, Dudley, Cricket St Thomas and Longleat have stopped holding

elephants due to their lack of space or poor facilities for the species in recent years. There are no others south of Kidderminster, or west of Reading.

Higher visitor numbers and higher margins will also help us be sustainable into the future. A direct knock on benefit will also be felt by local businesses providing complementary services such as hoteliers, bed & breakfasts, campsites, other attractions, pubs & restaurants (including the franchised café on site) and of course the core farming enterprise will achieve greater security.

**How will the programme contribute to the RDPE and RIP** This diversification project will help to achieve the following ‘Overarching Principles’ outlined in the SW RIP:

	<b>Overarching Principle</b>	<b>Comments</b>
✓	Achieving sustainable development in rural areas through the integration of environmental, social & economic objectives.	This project will offer both economic benefits by increasing visitor numbers, creating at least six (but hopefully ten or more) new staff posts, & providing benefits to other local businesses such as hotels, bed & breakfasts, the franchised café on our site & other related businesses. Environmental benefits will be achieved through the promotion of conservation & primarily by reducing the need to travel long distances (100 miles+) to view happy, healthy elephants.
✓	Respecting the limits of the region’s environment, natural resources & biodiversity.	An expansion into elephant keeping will make a better use of the Zoo site and will also help to secure the core farm business of arable farming. Periodic biodiversity surveys are conducted on our site to monitor native species and we already promote conservation through special Event Days and, actively, with the establishment of a protected Conservation Area and the planning work of our ‘Green Team’ of staff.
✓	Maintaining and enhancing the natural asset base of the region.	Ensures that a profitable business can remain at Moat House Farm through careful expansion of the Noah’s Ark Zoo business and the arable farming enterprise which is a member of the Entry Level environmental stewardship scheme.
✓	Working towards a low	Securing the attraction of a high quality

	carbon economy.	elephant enclosure that will reduce the need for regional visitors to travel 100 miles + elsewhere. Scope for using elephant-generated visitor income towards further green projects here, such as a second wind-turbine.
✓	Supporting the region's efforts to mitigate and adapt to climate change.	As above, further, by securing a non-farming income the arable enterprise will be less prone to the effects of poor or unpredictable harvesting conditions due to climate change/extreme weather conditions.
✓	Supporting sustainable growth in the rural economy.	Ensures that the farming enterprise & Zoo can continue to improve and grow at a manageable, sustainable rate & that rural jobs will be created and safeguarded.
✓	Meeting the needs of a diverse rural population and ensure equality of opportunity.	Ensures that a quality, farm-based attraction is available in the South West for both the local population & visitors, for jobs and for enjoyment.

The key cross-cutting themes of the SW RIP that will be delivered by this project are Business Development and The Environment.

#### **4. Sustainable development/ climate change/ resource management**

We have designed the zoo-farm for increased people-flow, so that we now have many under-used parts of the zoo-farm that could take more visitors very easily, if our marketing proves increasingly successful. We have anticipated this development by planting 11,000 willow trees for the elephants to eat as browse rations on a three year rotation.

The elephants' diet will be carbon neutral in that they eat vegetation, root crops, hay, which will in turn absorb their manure. The extra trees should more than cover their heating and pumping requirements and the carbon of visitors coming to see them.

Water is essential for elephants. We plan to harvest all roof water, approximately 1100 cu m per year, and pipe it to a reservoir. We currently use rain-water harvesting successfully in other parts of our site. The enclosure is designed so that all yard run-off and drainage water is cleaned through a reed bed and along with spring water, collected and recycled into the reservoir. We currently use another reed bed waste management system for animal effluent which has been very successful and praised in our recent achievement of Silver Award as part of the Green Tourism Business Scheme (GTBS). This reservoir is broad and shallow to help sunlight also clean the water. This recycled water will be used for the pond and for washing the sand yards.

We plan to grow mature hay or haylage, of a lower digestibility than that which is normally fed to elephants and which contributes to their present obesity in captivity.

We have recently installed a wind turbine to provide the electrical needs of the elephant enclosure.

We plan in addition, when funds allow, installing solar power to provide most of their heat requirement in the winter and excess in the summer to be put back in the National Grid.

## **5. The Market and rationale**

When looking to expand our visitor numbers and diversify further we have looked at the possibility of improving our café, or adding to our children's adventure play area, or adding other animals. To make significantly interesting adventure play like big rides has been precluded by the Planning Authority as we are in the Green Belt. The café we judge would not increase our visitor numbers significantly, as we have found more visitors come with picnics at this time of recession. We have allowed and encouraged picnics over the years, so we feel it would damage our visitor base to stop this.

Elephants are available to us and are a significant zoo attraction: an iconic species of much interest to the general public, who, we have found from research, would be keen to visit NAZF to see them.

Our marketing team conducted a market research project using questionnaire forms both inside the zoo with our visitors and in surrounding towns with the general public. These contained a core set of 6 questions to identify opinions and views on the proposal of elephants at NAZF, whether there was in fact a market for the project and whether this would generate the desired increased visitor numbers necessary to make the proposal viable.

By taking percentages of the survey data for each of the 6 main questions asked, it may be taken that the visitor responses (from 103 participants) generally represent the views of the general public and would remain broadly the same with a larger sample size. As the project develops, we would look to conduct broader research with a significantly larger sample size to assess these initial findings.

Overall the data showed five trends (see the Business Plan Appendix for charts):

- i) a desire to see elephants in Bristol, rather than travel further
- ii) a general agreement that the size of the planned enclosure for elephants at NAZF demonstrated welfare was being taken seriously (an important public perception for this project)
- iii) a trend for widespread interest in seeing elephants at NAZF and a predicted increase in visitor numbers per year as a result
- iv) a willingness to pay more for an adult (but not a child) ticket, demonstrating a scope to partially cover some associated costs of the project through a price increase

## **The Competition**

There are several Farm Parks nearby; Avon Valley, Puxton Park, Court Farm, Cattle Country, all providing a farm experience for local people and visitors, but none of these has Zoo animals, nor as much space and ‘adventure play’.

Apart from Longleat Safari Park there are no other large animal zoos west of Reading and south of Kidderminster, till South Devon’s Paignton Zoo. Longleat and Paignton do not have elephants. So there are no other elephants in the southern west of England. We think this is an important niche to fill with the UK’s biggest and most modern elephant complex.

## **Current marketing strategy**

Our marketing team currently focuses on presenting Noah’s Ark as a large, competitive zoo farm but also as an extensive family attraction where a full day is needed to experience everything on offer – something which is different to most other regional zoos where 2-3 hours would be enough time to visit.

At present we offer a visit for an adult at £11 (incl VAT) and a child at £9; priced slightly lower than some other zoos and definitely competitively within the industry with scope for inflation upon further development of the site. Group discounts are also available at different rates for size of group and different numbers of free teachers. We offer free coach and car parking and free entry (and free café vouchers) for coach drivers. We allow free carers for the disabled.

Our main marketing tool is our leaflet, printed and distributed widely through four distributors. We also give leaflets to school children who come on school trips, with money-off vouchers.

We distribute professional posters to various holiday parks and shops, which have money-off incentives on, for tracking.

Using tourism journals, children’s ‘to-do’ papers, and other magazines, advertising success is tracked through ‘£1 off’ and ‘2 for 1’ vouchers. We advertise on two very popular radio channels, in cinema and on large printed bus shelters, phone box posters and bill-boards, tracking the success of each through a ‘text for money off’ discount tracking scheme. We cover the nearest five counties in England and also South Wales, all within about 100 miles.

Much investment and effort has been put into our large website, which the leaflet and all other advertisements refer to and compliment. This carries our animal news, educational details, risk assessments, prices and how to get to us, and we experience high levels of site traffic on a daily basis due its it user popularity.

We use a technical Google online marketing program called ‘adwords’, to pay per click for certain words and web searches, which improves our ranking in Google search queries and refers more potential customers to our website.

Publicity is very important to us and work for press and media inclusions forms a large portion of our teams workload. We issue press releases every week on animal arrivals, births and items of interest; these cost little and are welcomed by the press. Like other zoos, we have had some attack from anti-zoo minorities in the press and media, but have



been complimented for our openness and politeness in professionally answering and responding to group and individual dialogue on these issues. This attitude is of great value to us.

An important source of additional income is from our ‘Keeper Experiences’; we use online Google marketing to advertise these products. Our Experiences rank between positions 1-3 on Google, which makes us very competitive within the industry, whilst our brand name is also well known and ranks highly in relevant search terms on Google.

We have two webcams on our own website and on the popular [www.checkitlive.com](http://www.checkitlive.com) streaming live footage 24 hours a day of our tapirs and big cats.

To adapt with the times, we now use social media on a daily basis, including Facebook and Twitter pages, where we give information about new animal arrivals and events; social networking is the new marketing tool of this generation and increases our brand awareness further.

An important part of ensuring return business and creating a firm members base is achieved through our Season Ticket scheme and communicating with ‘keeper experience’ participants and others who sign up on our website – our new electronic newsletter is sent to thousands of our contacts keeping them up to date with news and events.

Noah’s Ark utilizes membership of tourism bodies for Bristol and for the South West, who advertise for us with hospitality tourism bodies and with their tourism leaflets. We have corporate discount schemes with several large local businesses.

Additional facets of our marketing program currently include outreach to schools and elderly care homes, fetes and community groups and school assemblies. We also use on-site and off-site events with our animals to attract further business.

Our Education team works closely with our Marketing department, producing education events and open days and free teacher visits and mail-outs to schools. We have recently been awarded the ‘Learning Outside the Classroom Quality Badge’, recognizing our attraction as being a professional venue for education within the UK for school trips.

### **Competitors charges:**

Without elephants: Bristol Zoo Adult £11.81

Longleat Adult £22

With elephants: Whipsnade Adult £18.50

West Midland Safari Park Adult £12.95

**Market research:** We have questioned visitors on the street and on our premises and found 58% appear likely to come more often and 64% would likely visit more than once a year to see elephants. (See Appendix 1 of this Business Plan) We have questioned the only zoo that has gone from no elephants to keeping elephants – Dublin Zoo. They report a huge increase in visitor numbers in 2008 when the elephant house was built and filled with three elephants, after two years with no elephants and building work going on.

**Marketing and promotional plan:** We would look to action a specific advertising campaign for the project in the build up to an official public ‘unveiling’ and opening ceremony. This would include outdoor posters, a radio ad and national, regional and local press coverage through press releases, interviews and photo-calls. We would base this around a chosen name for the new elephant attraction, similar to our ‘Tiger Territory’ theme in 2009 (see the Appendix for copies of promotional campaign artwork from 2009). Our marketing team competently generate press and media interest in a normal week; this effort would be increased further in the period around completion of this project to generate a high level of publicity and encourage more visitors to visit. We would aim to sustain as much publicity as possible around this project throughout the first year in the drive for the higher visitor numbers necessary to help finance the project. In addition, when the time was right (based on elephant temperament and keeper agreement, we would begin promotion of elephant ‘keeper-for-a-day’ experiences, as part of our very popular program of one-on-one zoo keeper packages.

**What will happen if no RDPE grant is available?** Anthony Bush, at 72, is beyond the usual retirement age, but has wide experience of keeping large animals, having been a dairy farmer for 35 years. He is brave enough to build this enclosure despite its difficulty. But he is unwilling to go seriously into debt for it despite its obvious advantages. The recent ‘Best Practices’ conditions published by ‘The Coalition of Captive Elephant Well-Being’, agreed with animal welfare organizations, are a considerably more expensive commitment than previous zoo-accepted standards. NAZF’s desire is to work to these conditions and provide better captive elephant keeping than has ever been practiced in the history of the zoo industry. Normally elephant enclosures are put up by big charity zoos, which have access to lottery funding visitor gift-aid and do not pay VAT on visitor admissions. So if no grant is available this elephant enclosure would not be built, unless sponsorship can be found. The recession means that sponsorship is very unlikely for the whole amount, but might be possible for some of it.

## 6. Options identification

Option	Advantages	Disadvantages
<b>1. Install elephants</b>	More visitors, income  More employment, incl. Manager  Wider return visitor base  Security to compete with other zoos	Expensive circa £1.8m project

<b>2. Build new café</b>	More returning visitors Increased reputation for food Increased café jobs Outline planning permission granted	Low return on cost No increase in zoo jobs
<b>3. Other interesting animals</b>	Lower cost Small increase in visitor/income Help maintain job numbers Outline planning permission granted	Less ‘new visitor’ interest Cost
<b>4. Do nothing</b>	Low cost Develop existing facilities	No increase in visitors/ income Jobs threatened
<b>5. Install Adventure Play</b>	Fun for children	No Planning Permission likely High cost of good equipment Not fulfilling Mission as well

## **7. Financial Assessment – including detail of quotes for each section of the project**

### **PRELIMINARY WORKS**

Planting 11,000 willow trees for elephant feed

**January 2010**

Planning application including drawings

**May 2010**

Topographical survey and plans

**October 2010**

Move electricity pole and dig in new cable,

cost of digging only. Install transformer  
and feed cable to new site

**September 2010**

**DIGGING**

**April 2012**

ALVIS BROS: TERCON CHURNGOLD

Excavating site of elephant house, 6m deep  
53m wide, tapering down over 34m = 5,400 cu m  
taking top soil to store, building part of field higher,  
and carrying stone to new road;

Digging drainage ditch, for 190m x 1ft pipe,  
3m deep at lower end;

Digging 8 x sand yard and connecting drain trenches, water pipes and  
electricity cable trenches, approx 250m;

digging pond, 5m x 12m x 3.5m deep, with 8m slope  
and with trench for pipes to fill and empty; and similar  
sized (200cu m) reservoir with pump.

Dig new pipe, 10m to reed-bed drainage system  
and dig 30m x 5m reed bed. Dig electricity to reed  
bed pump and back to elephant pond

**DRAINS TO SAND YARDS, PONDS, incl. 3 CHAMBERS, etc May 2012**

NOAH'S ARK BUILDING TEAM: KELSTON SPARKES: CHURNGOLD:

**CONCRETE**

**June 2012**

CHURNGOLD: TERCON: NOAH'S ARK BLDRS:

Laying drainage pipes, electricity cables,  
water pipes into trenches,

Lay concrete service yard 42x12m, floor to keeper area,  
12 x 12m, crush 6x8m and connecting passage 3x12m,  
total 750sq m

**BUILD POND AND RESERVOIR**

**June - August 2012**

Build pond on DPM, 12m x 5m x 3.5m deep and walls.

Build reservoir with DPM 20m x 4m x 2.5m deep

J&S WYATT: KELSTON SPARKES: & INCL. REED BED. NOAH'S ARK:  
CHURNGOLD:

**DIG AND PLANT REED BED, landscape & fence it. July 2012**

NOAH'S ARK ZOO FARM GRNDS TEAM: GEOSYNTHETIC TECHN. KEYTECH:

**STEEL FRAMED BUILDING & CONCRETE PANELS, STEEL GATES,  
BARRIERS**

**March - August 2012**

J&S WYATT: POPHAM: LC Ltd

Erect 32m x 35m (7x 15ft bays) steel barn, including concrete foundations to 60 stanchions,  
7m high at eaves complete with green 100mm insulated roof and 20% insulated roof-lights;  
100mm cladding sheets on barn down to 4.0m above ground; open over centre concrete division and 100mm insulated cladding on lean-to, down to 4m over elephant pens and 1m above ground in keeper area. Reinforced concrete panel walls, 180mm thick, against bank, 120mm for remainder, with insulation overlapping gap between concrete wall and cladding. 10 holes through panel for feeding and drinking; 2 x 2m doors, 1x 3m door, all hydraulically closing, 5 x 3m visitor viewing windows on south side under a roof. Roof on south slope strong enough to take solar panels. Erect 4m high 4.58m concrete panel wall to sand yards and to Service Yard.

**August 2012**

Fit elephant barriers, 3m high with diagonal bars 100m box metal with 125mm box metal frames: 2 x 12m long, a crush with front and back gates and two sides along with 2 x 3m and 1 x 2m outside sheeted doors, 8 x 3.5m, and 2 x 3m, 1x2m, gates all for elephants; also 4.6m main door and 2x ventilation doors.

**September 2012**

## **SAND**

**August 2012**

STONE SPSS: TRAVIS: NEEDS:

Fill inside sand yard with 20m x 27.5m x2m deep, less 0.5x 77cu m = 622cu m, plus 250 cu m for inside bull yard, plus 500 cu m outside sand yards, all coarse sand. Total: 1800 cu m.

## **ELECTRICAL**

**September 2012**

C2 ELECTRICS: GLADWIN CO (EE):; FUSELAND:

Electrical work, lights, hoists, central heating, 2 x pumps for reservoir and reed bed circulation, pressure hose for cleaning and hosing elephants; plugs, water heater and lights for keeper room and area. All cables, fittings. Emergency generator linked to essential supply.

## **GAS FIRED CENTRAL HEATING**

**November 2012**

OCTAGON HEATING SERVICES: WESTEX HEATING: HULSE: UES:

## **KEEPER ROOM**

**NOVEMBER 2012**

NOAH'S ARK BUILDERS: J.WYATT:

Plumbing all troughs, sink, pressure washer, pond pump  
Building feeders, stub walls below cladding on keeper section

## **BOUNDARY FENCE**

**August 2012**

NOAH'S ARK BUILDING TEAM & SEVERN BORE PILING: COUNTY FENCING:  
J&SWYATT & SEVERN BORE PILING

Erect six-hawser, 4m high metal post fence 885m long  
round fields, 50m x 4m high beside yard  
Erect vertical 3 wire electric protective fences round trees and hedges.

**STAND-OFF FENCE** round southern field. **August 2012**  
Noah's Ark Grounds team: P.A.Sawyer fencing:. E.J.Crocker Fencing:

**INTERNAL ELECTRIC PROTECTION FENCES** (to divide fields and protect trees  
and hedges) **September 2012**  
Noah's Ark Grounds team: Fence Line Ltd: Secure-a-field:

**VISITOR VIEWING POINTS, PATHS, BARRIERS AND POND FINISH**  
NOAH'S ARK BUILDING TEAM: Tercon Ltd  
**September - December 2012**

**\*Reclaiming VAT**

AJ & CF Bush are registered for VAT and reclaim it every 3 months, Jan-Mar, etc.  
Quote figures here exclude VAT (giving the actual cost of the project). Figures on the  
related RDPE Application Form include VAT for assessment purposes.

The choice of preferred contractors for each section of the project was reached based on an  
evaluation of the expertise offered by each company, existing connections with and  
knowledge of particular contractors and the overall value for the investment being made.

**PREFERED CONTRACTORS' TOTAL COSTS:**

<b>DIGGING:</b>	<b>ALVIS</b>
<b>DRAIN LAYING</b>	<b>NOAH'S ARK BLDRS</b>
<b>CONCRETE</b>	<b>NOAH'S ARK BLDRS</b>
<b>RESERVOIR, POND AND REED BED</b>	<b>K.SPARKES</b>
<b>STEEL FRAMED BLDG 32x35m</b>	<b>J&amp;S.WYATT</b>
<b>SAND FOR YARDS</b>	<b>TRAVIS PERKINS</b>
<b>PERIMETER FENCE</b>	<b>J.WYATT + SEVERN P.</b>
<b>INTERNAL ELECT. FENCES</b>	<b>NOAH'S ARK G. T.</b>
<b>STAND-OFF FENCE</b>	<b>NOAH'ARK G.T.</b>
<b>KEEPER ROOM</b>	<b>NOAH'S ARK BLDRS</b>
<b>ELECTRICAL WORK</b>	<b>C2 ELECTRICS</b>
<b>GAS CENTRAL HEATING</b>	<b>OCTAGON H. S</b>
<b>VISITOR VIEWING PATHS &amp; FINISH</b>	<b>NOAH'S ARK BLDRS</b>
	<b>TOTAL (ex VAT)</b>

## 8. Uncertainty and risks

The risks that may prevent successful delivery	Actions to minimise risks of the project
1. An economic downturn so severe that the tourism industry is severely threatened.	Try to ensure good marketing and good value
2. Continuous bad weather of the sort not experienced for several years and that lasts for a long time.	Try to ensure good all-weather possibilities for visitor enjoyment.
3. The unexpected death of Anthony Bush before the project is properly underway.	
4. Disease like FMD striking our actual locality, putting visitors off for a long time	Work with other farms to improve public awareness on minimal public health risk.

## 9. Project delivery

Overall project manager will be Anthony Bush.

Site and building manager will be employed.

Building must start by **May 18<sup>th</sup> 2013**, to fulfill Planning requirements. We would like to start a year earlier if funds allow.

### Earliest preferred proposed timing is:

<b>September 2011</b>	Plant proposed enclosure area to grass
<b>May 2012</b>	Excavation and trench digging. Marketing dept arrange VIP start.
<b>June</b>	Lay foundations, drain pipes, electric cables, water pipes, gas pipe Begin pile-driving perimeter fence. Continue fencing till finished
<b>July</b>	Lay all major concrete areas; approach roads; AI pit; pond walls and pumping arrangements
<b>August</b>	Contractors erect steel barn and concrete panels, all other stanchions. Fill sand yards and cover to protect sand from building bits, before all walls built.
<b>September</b>	Begin internal plumbing, electrical work, build internal keeper room concurrent with outside visitor viewing areas, windows, in fine weather.

**November** Erect external concrete block walls, internal metal walls, doors and gates, central heating system.

**December – January 2013** Complete internal hoists, water troughs, keeper kitchen, external gates.

**February - March 2013** Finish all unfinished work ready for first elephant arrival by **Easter 2013**

Bring in elephant food, purchase small loader tractor for elephant keeper use.

## **10. Monitoring and evaluation**

Marketing will follow attendance figures closely from first publicity onwards. Attendance increase is expected from start of building.

Bookings will be taken for elephant ‘keeper-for-a-day’ to begin two months after elephant arrival.

Press interest will be encouraged, including opposition to be debated, from start.

## **11. Project closure**

As the building of the enclosure is the part that needs funding, on completion the project is expected to pay for itself and recover investment costs steadily and immediately.