

**NEW FOREST NATIONAL PARK AUTHORITY**

**AUTHORITY MEETING – 22 MAY 2008**

**MOBILE INFORMATION AND INTERPRETATION UNIT**

**Report by:** Nigel Matthews, Head of Visitor Services, and Jim Mitchell, Interpretation Officer

**Summary:**

The Authority considered a paper on the proposed mobile unit at its meeting on 26 March. A decision on the most appropriate fuel for powering the unit (and hence the vehicle to be purchased) was delegated to the April Resources and Performance Committee but this committee remitted the decision back to the Authority for further consideration of an alternative approach to unit provision. This paper therefore reviews the purpose, objective and approach to the mobile unit and asks the Authority to re-confirm its decision to operate a mobile unit and make a final decision on the vehicle to be used.

**Recommendations:**

- 1 To re-confirm the decision to operate a National Park mobile information unit.**
- 2 That the unit should be a small van staffed by a seasonal Authority-employed ranger assisted by Authority members and people from partner organisations.**
- 3 To decide which vehicle should be purchased for the mobile information unit from the choice of electric Megavan, diesel Megavan or Faam Truck Travel.**

**Resources:**

2008-2009 budget:

- Provision of £33,500 has been made for a mobile unit including initial fitting out and staffing

**Papers:**

**NFNPA 249/08:** Mobile Information and Interpretation Unit  
**NFNPA 249/08 Annex 1:** Megavan specification  
**NFNPA 249/08 Annex 2:** Electric Faam Truck Travel specification  
**NFNPA 190/07:** Education and Interpretation Strategy

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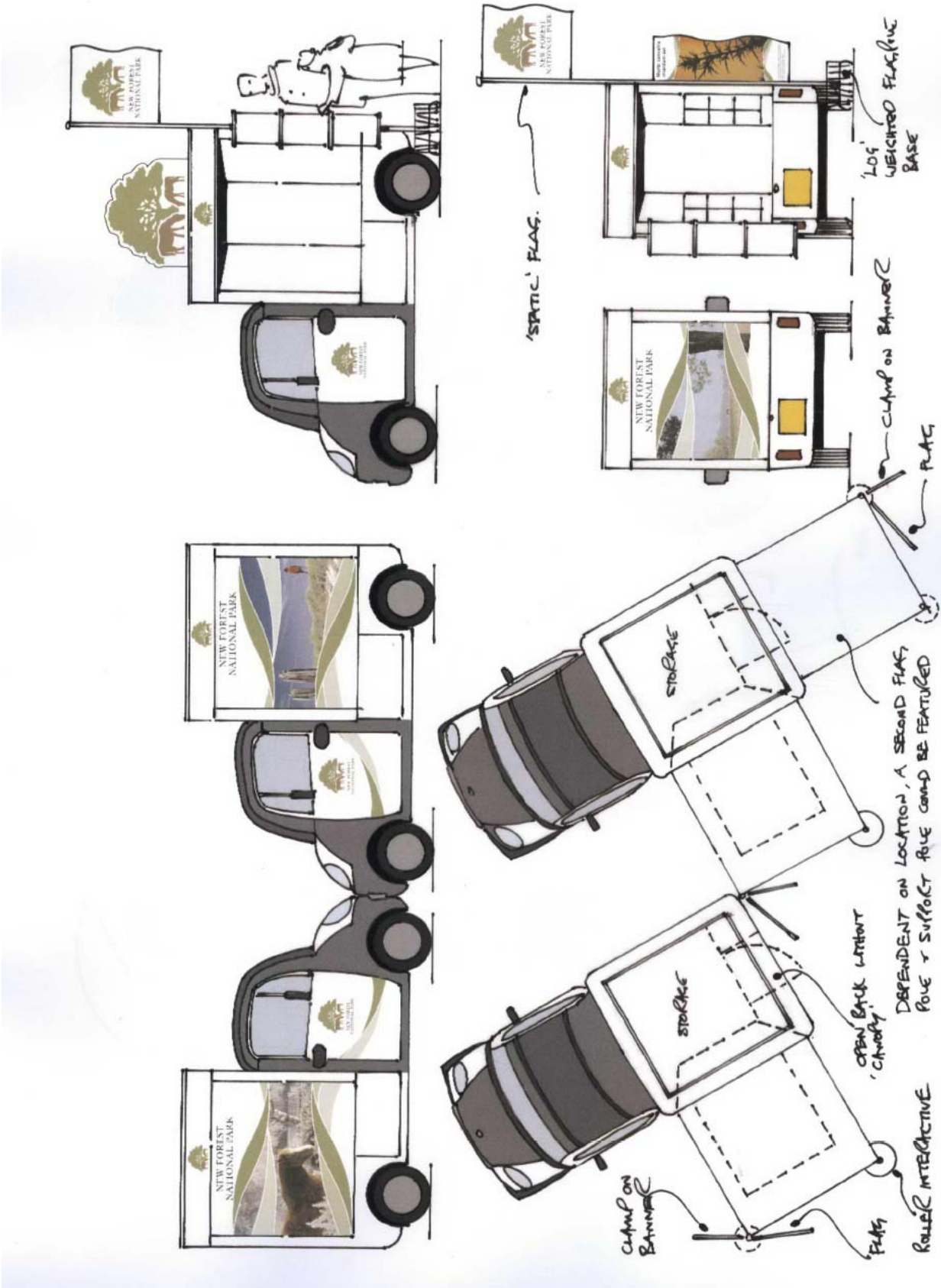
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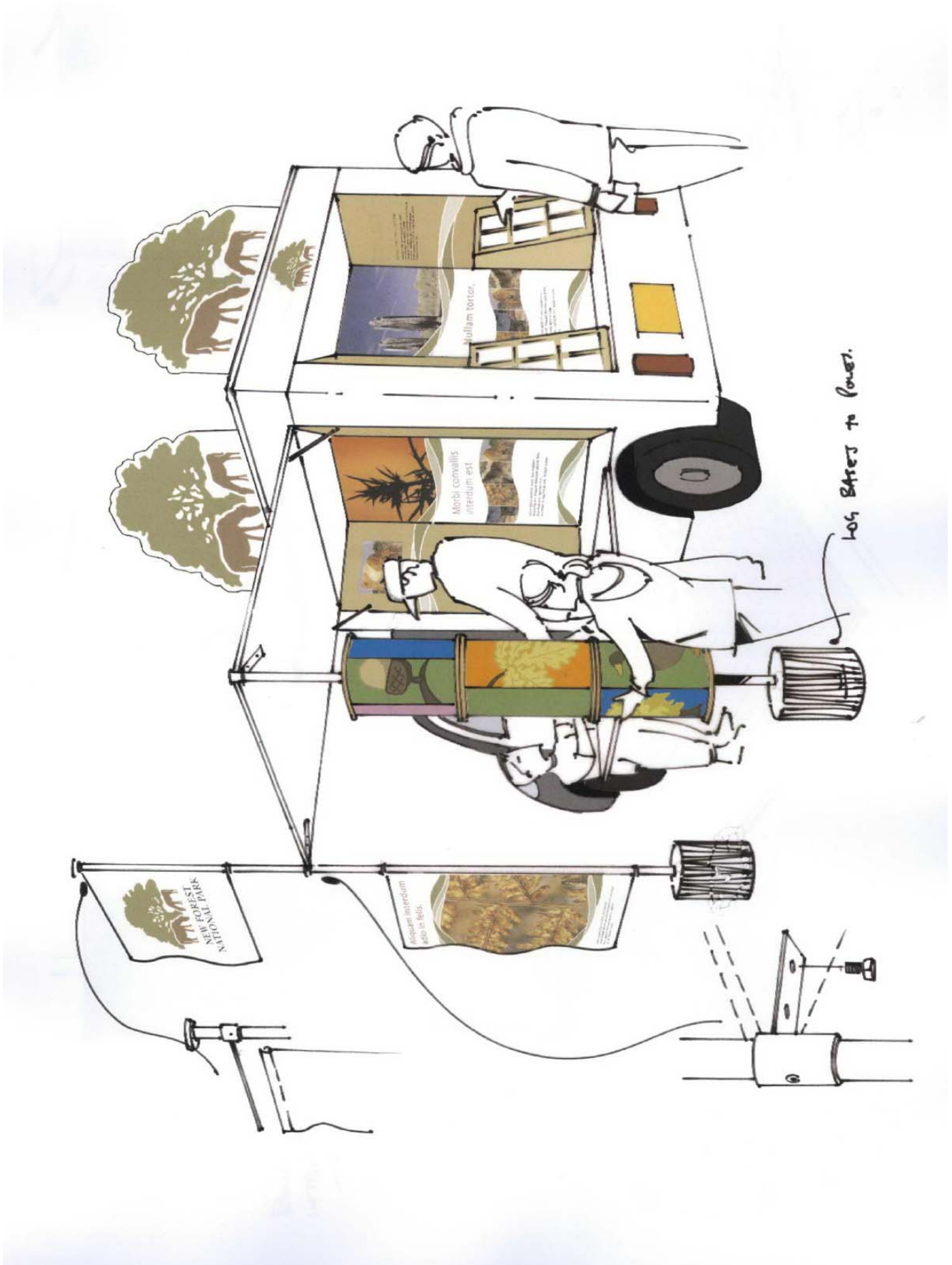
**1 Introduction**

- 1.1 In June 2007 the Authority approved a strategy to guide the New Forest National Park Authority's education and interpretation provision from April 2007 to March 2010.
- 1.2 Item 7.4.13 of the strategy committed the Authority to 'investigating the potential for a mobile information unit'. The rationale given was that these are used by a number of national park authorities to provide information and interpretation at key sites and at key times, and that in the New Forest, where new permanent structures are often undesirable, such a unit could work well.
- 1.3 The Interpretation Officer contacted officers from other national parks and undertook a great deal of research on mobile units and potential suppliers and designers referring to the Management Board at key stages. Tenders were invited from six companies to assist with deciding on the type of unit and providing the content. We looked for innovative and new ideas to enable it to become more than an information unit and more of an interpretation resource for visitors to learn fully about the New Forest National Park. There was also an emphasis on sustainability. Haley Sharpe Design was chosen to advise on the nature of the unit and how it would function: the drawings in Section 1.5 were provided by them.
- 1.4 A proposal to go ahead with the mobile unit in the form of a specially tailored diesel Megavan 600 was brought to the Authority meeting held in March 2008. The unit was to be fitted out with:
  - display panels conveying information about the Park
  - eye-catching banners and awnings
  - an A-board to advertise its presence at a particular location
  - large family-friendly games such as stepping stones, jigsaw puzzles, a magnetic interactive and National Park snakes and ladders
  - leaflet racks for free literature
  - maps and reference books about the New Forest.
- 1.5 The three visuals which follow are based on the Megavan 600 but illustrate what could be done for any of the vehicles discussed later in the paper.

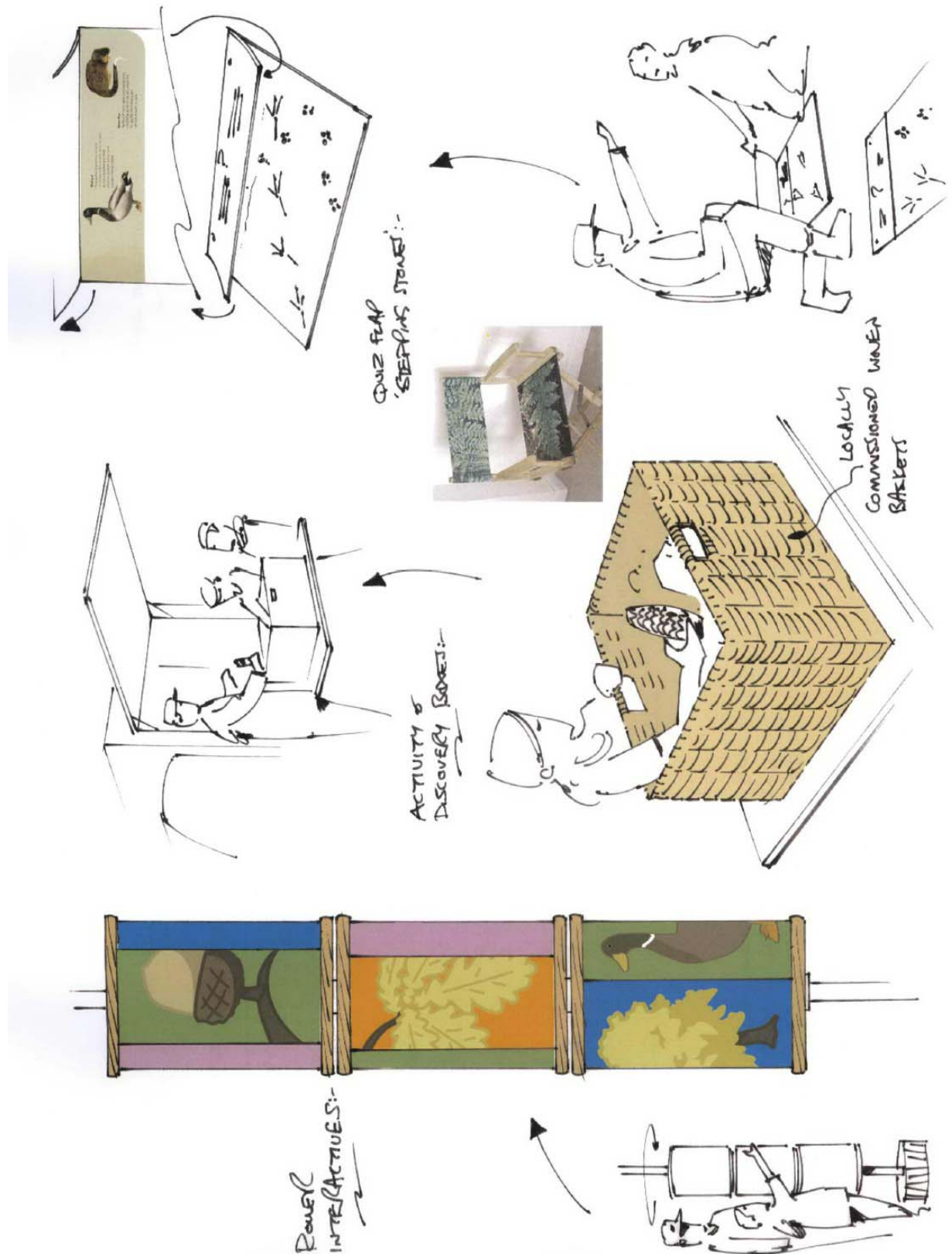
Visual 1



Visual 2



Visual 3



1.6 At its meeting on 27 March 2008, members expressed approval for the concept of a mobile unit, but disappointment that the proposed vehicle,

although very fuel efficient and having a small engine capacity, would not run on a renewable energy source. Members were advised that other fuel options had been considered and rejected for practical reasons prior to the report being brought to the Authority, but nevertheless decided that because sustainability was at the heart of the Authority's work, officers should review the options, agreeing that the decision on this should be delegated to the April meeting of the Resources and Performance Committee.

- 1.7 A detailed appraisal of different fuel options was prepared for the Resources and Performance Committee meeting. This paper included further details of the Megavan 600, a 3.5 ton electric delivery van called a Modec which had been considered and rejected by officers and Management Board prior to the March Authority meeting, and one additional electric vehicle: the Faam Truck Travel, which was offered as an alternative to the Megavan. Although Committee members were asked to choose between the Megavan and the Faam Truck Travel on the basis of their environmental credentials and ease of use, Mel Kendal made an alternative proposal: that the Authority should consider purchasing a trailer, to be towed by existing vehicles (notably the Land Rovers used by Agisters to which the Authority had contributed funding). He also suggested the Agisters be asked to assist with staffing the unit.
- 1.8 This paper and associated annexes draw together all these different issues so that members can fully consider the rationale behind the proposals and options for delivering what we hope will be an innovative, low-impact and successful means by which people can learn about the National Park face to face with representatives of the Authority. An electric Megavan has been added to the choice of vehicles offered. Although the proposed unit cannot now be in service until mid August, officers still believe the project should be progressed as soon as possible to achieve some of the expected benefits in the latter part of the summer / early autumn season.

## **2 Rationale for a National Park mobile unit**

- 2.1 The Tourism South East 2005 Visitor Survey found that only 10% of visitors used information boards and only 6% used visitor information centres. Therefore, even though there is a growing range of interpretative material mentioning the New Forest National Park (for example boundary markers, awareness panels, and displays in the New Forest Centre), the vast majority of visitors to the New Forest leave it without having come across fixed interpretation about National Park.
- 2.2 The fact that the Authority has deliberately chosen not to replicate the 'ground force' of existing organisation also means that only a minute percentage of visitors to the National Park are able to talk face to face with someone employed by or representing the Authority. This is not to

say that little is being done, for the National Park is 'highlighted' at the New Forest Show, in talks to local community organisations, at a small number of public events, at the New Forest Centre and Reptile Centre (Aren't Birds Brilliant project) and through the ranger posts shared with the National Trust (in the north of the Park), the Forestry Commission (on the Waterside) and Hampshire County Council (on the coast). However, this still leaves vast numbers of people, especially local people who enjoy daily walks in the Park and who would not normally seek out information about the National Park, largely 'unreached'.

- 2.3 In essence, there is a very significant opportunity for the Authority to increase its presence and its National Park messages 'on the ground' at some of the many focal points across and beyond the Park. Car parks, markets and local fairs all attract large numbers of people and a mobile unit could call in at a range of these over time, enabling face to face contact with thousands of people.
- 2.4 A National Park mobile unit would convey National Park information and messages, encourage sustainable enjoyment of the New Forest and increase understanding of what makes it special. No special permanent structures or facilities would be needed; the unit would be low-impact and versatile. It would primarily rely on face to face conversation, arguably the best form of communication, and thereby retain the flexibility to adapt to specific circumstances, locations and visitors. It would have a range of interactive 'games' to help convey different messages and the people staffing it could organise impromptu guided activities where appropriate. The unit will also allow us to gain information and views from visitors on a whole range of issues. There will be opportunities to survey visitor attitudes and behaviour to inform our work.
- 2.5 The unit would be used at a variety of locations in and around the Park:
  - coast (Lepe Country Park, Calshot, Keyhaven, Milford on Sea)
  - Crown Land (main recreational sites including car parks: Balmer Lawn, Hatchet Pond, Bolton's Bench, Deerleap, Whitefield Moor, Wilverley Plain, Linford Bottom, Blackwater, Cadnam Cricket, Picket Post, Dibden, Reptile Centre and campsites)
  - other open areas (Hampshire County Council commons, National Trust commons)
  - visitor attractions (Paulton's Park, Otter and Owl Centre, Sandy Balls, Motor Museum)
  - towns and villages (Burley, Beaulieu, Brockenhurst, Lymington, Exbury, Waterside, Ringwood, New Milton, Fordingbridge)
  - further afield (Christchurch, Southampton, Bournemouth, Salisbury).
- 2.6 Forestry Commission PROGRESS survey data show that many Crown Land car parks are regularly used by over 200 people each day, and attendance at other locations, for example town centres and visitor attractions, would be much higher. An average daily attendance of

only 150 people would give a total audience of 15,000 if the unit was used on 100 days between July and October. The actual total would depend on various factors including weather conditions, publicity about the location of the unit, choice of location depending on time of year and the percentage of visitors at a location who choose to visit the unit.

- 2.7 Officers will also continue to work with other organisations and their venues to find ways of raising awareness of the National Park's special qualities and of ways in which people can enjoy it and help conserve and enhance it. Over time, messages will become more consistent and better known and we hope that greater understanding and respect will follow. The proposed mobile unit would work hand in hand with this partnership approach and greatly strengthen the joint messages we all wish to promote.

### **Recommendation 1:**

**To re-confirm the decision to operate a National Park mobile information unit.**

## **3 Proposed approach for a National Park mobile unit**

- 3.1 Key elements of the proposed approach are:

- that the Authority should have overall responsibility for ownership, scheduling, operation and core staffing;
- that partnership with other organisations, especially assistance with staffing, will be essential and very beneficial;
- that the unit should be small and therefore easy to move, set up, maintain and update;
- a preference for a van-like vehicle (with an integral engine) rather than a trailer towed by a separate vehicle.

The rationale behind each of these is outlined below.

### *Authority role and core staffing*

- 3.2 The Authority should take the lead in acquiring and funding the unit, fitting it out, setting its daily schedule and providing the core staffing. As an Authority-led project, we can ensure it reflects the whole of the National Park, its special qualities and our key messages – and we can manage the project to ensure it reaches the Authority's key audiences.
- 3.3 Some current staff have, as a key part of their job description, a responsibility to engage with the public. Thus the Education Officer spends time with school groups both in school and in the field. The Interpretation Officer coordinates a programme of public events, either National Park Authority events (such as a guided walk) or larger partnership events (such as the Spring Wildlife Day at Keyhaven). Both officers would expect occasionally to join the unit, and use it as

part of a school visit or event but both have other functions and could not spend many successive days staffing it.

- 3.4 Ideally the unit should have two people staffing it at all times. This would enable an effective service at busy times, short guided activities or walks from the unit by one member of staff, as well as lunch and toilet breaks. It would also be a safer working environment with two staff in the case of an accident or emergency.
- 3.5 The best option for sourcing these two people would be for one to be a paid Authority officer and for the other to be a volunteer or paid officer representing the organisation which owns or manages the site on which the unit is located that day. This provides a good balance of ensuring that the unit runs safely and effectively, promoting both the National Park messages and those of partners (see also Partnership below).
- 3.6 Whilst some visitor hotspots are busy at any time of year, many are much busier during the summer – with people on holiday and with local residents. People will also be more likely to spend time discussing the National Park during warm sunny weather than when it is cold and wet. The most productive season for a mobile unit would therefore be from the Easter school holidays through till the autumn half term at the end of October.
- 3.7 The proposal is therefore to appoint a full time seasonal mobile unit ranger to provide the main Authority presence on the unit and work with partner representatives. In a normal full year we expect the contract would start in March and run to October or November. Easter, summer and half-term school holidays, Bank Holidays and weekends would be key times for the unit to be in situ and therefore for the ranger to be employed. In 2008 the proposal is that the ranger would start in August.
- 3.8 Some Authority members have expressed interest in helping to staff the unit. This would be excellent, especially when the unit is located in parts of the National Park for which the member has particular responsibilities or local knowledge.
- 3.9 Out of the main summer season the unit could still be used by permanent staff and members. Markets, city centre locations and schools would all be good venues even in mid winter.

#### *Partnership*

- 3.10 The presence of staff from partner organisations (owning or operating the site) would enhance the work of the Authority officer, potentially extend the information available to users and demonstrate the very real (but often unrecognised) ways in which the Authority works with other organisations to the benefit of the National Park as a whole. Space

would be allocated for temporary location or partner-specific information.

- 3.11 Partners have indicated a willingness to commit staff or volunteer time to this project, including the Forestry Commission (on Crown Lands), National Trust (for example at Moyles Court and Rockford Common) and the New Forest Centre (the education officer, who also is the education representative for the commoning community, has indicated that Centre staff and local commoners could assist). New Forest District Council officers have also expressed a willingness to assist with the unit operation where time allows. These organisations would provide an officer or volunteer to work alongside the mobile unit ranger. If the unit were used at a show or in a village or town location then additional Authority officers (or members) could be brought in for that day

#### *Size and ease of use*

- 3.12 Options considered for a mobile unit range from someone with a box of literature in the boot of their own car, through a small van or a trailer towed by separate vehicle, to a 3.5 tonne van. Whilst each has its advantages and disadvantages it is important to bear in mind the following points:
- The unit is primarily intended to facilitate face to face interaction between the people on duty and members of the public. It is not intended to be a large standalone exhibit to be left for people to browse alone; nor should it be so small that it goes unnoticed alongside a row of cars in a car park.
  - The unit should be small enough to be easily manoeuvred single-handed into tight spaces (such as within a farmers' market) and not be too large for the Forest's narrow roads. Discussions with several companies and other mobile unit operators (including other National Parks) emphasised that the best solution is one which is easy to use, move and set up.
  - The unit must satisfy health and safety considerations. Thus it would not be acceptable for mobile unit staff to be left 'stranded' in a remote car park unable to pack things away and drive to safety if the need arises.
  - Larger units will usually be more expensive – to purchase, to fit out with interpretation, to run and eventually to dispose of.
  - In order to meet the needs of disabled users and to make the unit as accessible as possible, it is envisaged that people would stand or sit alongside (not inside) the unit. Displays, literature stands and flaps need therefore to be at a suitable height to create a setting in front of which the people on duty would stand.

- 3.13 For ease of comparison, the images overleaf show relative sizes (roughly to scale) of three of the vehicles discussed later in this paper. The ideal size of unit is a small van. Anything smaller might go unnoticed and provide too small a facility. A large van would be more dominating, more difficult to manoeuvre and would necessitate unnecessarily extensive fixed interpretation.

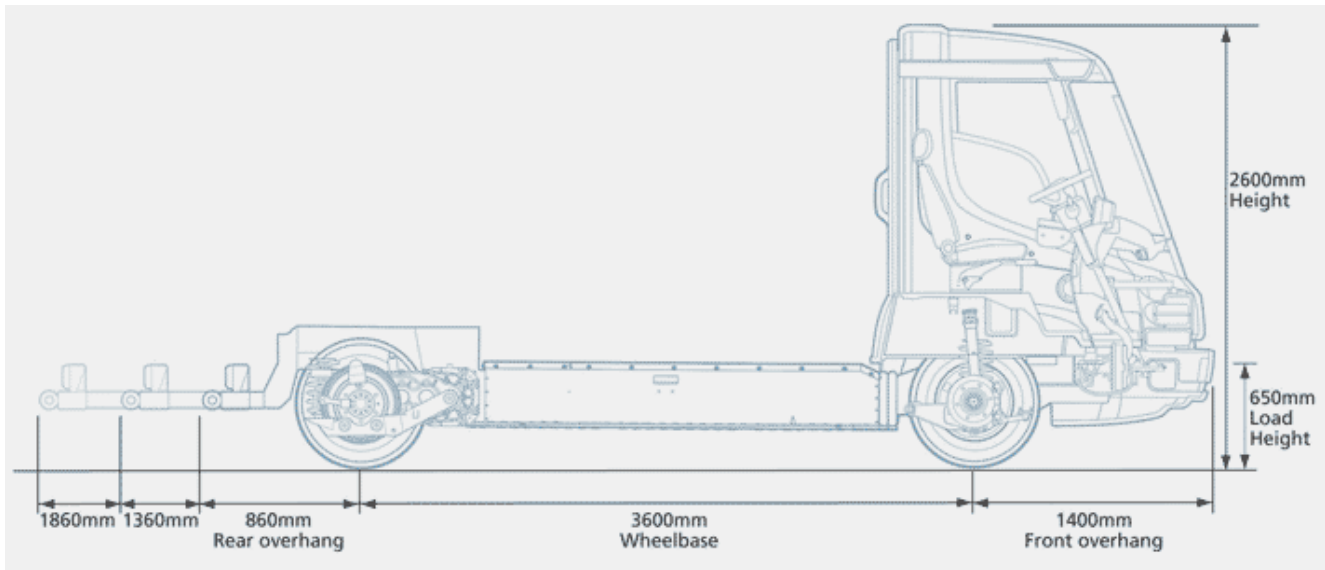
*Van or trailer*

- 3.14 Trailers come in a variety of sizes so one of a suitable size could be fitted out much the same as a van. A trailer is a logical solution if towing vehicles are readily available. For example, other National Park Authorities, who have rangers or other staff with Land Rovers, have opted for trailers as a cost effective method of housing the mobile unit. However the New Forest National Park Authority does not own such vehicles, so would either have to rely on partners who do have them or purchase one.
- 3.15 Following Mel Kendal's proposal at the Resources and Performance Committee, the Official Verderer was approached to see if the Agisters, who received a grant from the National Park Authority toward their Land Rovers, could assist. Whilst very sympathetic to the request, the response was that the nature of the Agisters' work means that it is not possible for them to accommodate towing a mobile unit in their schedule. Key issues cited in the response were:
- The Agisters' work is so unpredictable that they never know what they are going to be called to or how long it will take. They have to be available to answer calls 24 hours a day and must be able to respond immediately. An innocuous call to a lame animal often results in the need to spend a long time catching and caring for the animal.
  - Agisters can spend as much as 50% of their time towing their own trailers carrying their riding horses or sick or injured Commoners' stock. They could not simply leave a loaded trailer somewhere in order to move the unit to another site.
  - All five Agisters are rarely on duty at the same time due to days off, and holidays which they often have to take between June and mid August. Therefore although they have their own areas they are constantly covering for each other and a call can suddenly take them to the other end of the Forest.

### Faam Truck Travel



### Modec



### Megavan 600



- From the middle of August to the end of November, the Agisters are busy with the Drifts. These normally take the whole day, often leaving one or two remaining Agisters on call to deal with emergencies.
- The Land Rovers do only about 14 miles per gallon and would be an expensive way of moving the unit around the Forest.
- A trailer obviously necessitates one or more vehicles powerful enough to tow it.

### 3.16 Use of a trailer has some inherent disadvantages:

- staff could be left without transport if the towing vehicle leaves for the day;
- the extra cost of the towing vehicle and additional mileage generated (to collect and drop off) if partners' vehicles could be used;
- relative lack of manoeuvrability compared with a small van;
- trailer driving regulations require an extra qualification if the trailer is over 750kg;
- the towing vehicle needs to be more powerful than a small van with a similar-sized box (a large estate car or Land Rover would be required).
- an electric or fuel efficient car such as a hybrid (which could double as an Authority pool car when not pulling the unit) would not be powerful enough to pull the required weight.

### **Recommendation 2:**

**That the unit should be a small van staffed by a seasonal Authority-employed ranger assisted by Authority members and people from partner organisations.**

## **4 Fuel options**

### *Introduction*

- 4.1 At the Authority meeting on 26 March 2008, members asked for further consideration to be given to an 'environmentally friendly' option for fuelling the proposed Mobile Information Unit and for the decision on sourcing the Unit to be delegated to the Resources and Performance Committee. Most of the details below, reviewing the methods of fuelling, were presented to that committee on 14 April.
- 4.2 The fuels reviewed are: diesel, bio-fuels (including recycled oil, bio-ethanol and biogas), liquid petroleum gas (and natural gas) and electric. Other future fuels such as fuel cells and hydrogen are not yet options in the UK. Mention is also made of specific vehicles although these are covered in greater detail in Section 6.

### *Diesel*

- 4.3 Diesel-powered cars generally have a better fuel economy than equivalent gasoline engines and produce less carbon dioxide (CO<sub>2</sub>) pollution. Their greater economy is due to the higher energy content per litre of diesel fuel and the intrinsic efficiency of the diesel engine. However, diesel also produces higher particulate pollution than unleaded petrol.

### *Bio-diesel*

- 4.4 The most common form of bio-fuel used in engines is bio-diesel. Bio-diesel is a non-petroleum-based diesel fuel, typically made up of vegetable oils or animal fats, which can be used alone or blended with conventional petro-diesel. It can be made either from crops grown specifically for the purpose, or from recycled oil such as cooking oil.
- 4.5 Using bio-diesel can result in lower emissions of CO<sub>2</sub>. However, the reduction depends on a number of factors. There are also concerns about the environmental impact of bio-fuels, in terms of the CO<sub>2</sub> produced in growing bio-fuels large scale (for example in fertilisers), in the clearance of land such as rain forest to grow bio-fuels (causing CO<sub>2</sub> to be released into the environment) and in the socio-economic implications of changing land use from food crop production to bio-fuel crop production. Most environmental organisations now urge caution in the development of bio-fuel targets and the recent EU target to have 10% bio-fuel use in transport by 2020 has been criticised by such groups.
- 4.6 The Energy Saving Trust website does not list any bio-diesel sellers in Hampshire. Blends of bio-diesel with petro-diesel are possible but would result in CO<sub>2</sub> emissions dependant on the engine size. High petro-diesel to bio-diesel blends can be used in regular diesel engines (for example the New Forest Tour has run on 5% bio-diesel, although this has caused some problems). Recently the Government has introduced a Renewable Transport Fuels Obligation (RTFO) that requires petrol stations to supply at least 2.5% at first, later 5%, of its petrol and diesel from plant-based material. High bio-diesel to petro-diesel ratio blends requires conversion of the engine. According to the suppliers, the diesel Megavan 600, as proposed at the full Authority meeting, will not run on bio-diesel. A local taxi business, 'Our Friends in the South', has started running taxis on recycled cooking oil. The Authority could not source oil from them as they would need to be registered as a refinery to sell oil. The option of refining oil from waste at South Efford House is not considered appropriate nor feasible.
- 4.7 Other bio-fuels such as bio-gas (produced from rotting food waste, municipal waste or sewage), bio-ethanol and pure plant oils are not available locally and in the case of bio-ethanol only give limited reductions in CO<sub>2</sub> emissions.

- 4.8 Based on the general doubts being expressed about crop grown bio-diesel, and the difficulty of sourcing and storing recycled cooking oil, bio-diesel as the main fuel is not recommended as a practical method of fuelling the mobile unit.

*Liquid petroleum gas (LPG)*

- 4.9 LPG is a blend of propane and butane and is produced either as a by-product of oil refining, or from natural gas (methane) fields. The Energy Saving Trust website states:

‘It is generally accepted that LPG gives a 10-15 per cent carbon dioxide reduction in comparison to petrol and is on a par with diesel. LPG also delivers 80 per cent lower nitrous oxide emissions than diesel, along with zero particulate emissions. Significant additional reductions can be achieved if the LPG system is fully integrated at manufacture rather than through conversion.’

- 4.10 LPG conversions are readily available to a small van but their performance will be on a par with diesel in terms of CO<sub>2</sub> emissions. No micro-van LPG off the shelf or LPG conversions could be found with a smaller engine size than the diesel Megavan 600. LPG does offer zero particulate emissions but an LPG small van would have a larger carbon footprint than the Megavan. LPG conversions also require considerable space which would then limit the space available for storage.
- 4.11 Once factors such as the manufacture of the vehicle and the size of the engine are taken into account, a small van LPG conversion does not offer a significantly smaller environmental footprint than the diesel Megavan 600, and would have higher CO<sub>2</sub> emissions, although the precise difference cannot be verified due to the lack of CO<sub>2</sub> data for the Megavan 600.

*Electric*

- 4.12 Electric-powered vehicles offer the greatest potential for a low or close to zero environmental impact. The Energy Saving Trust states that electric vehicles (EVs):

‘produce no vehicle tailpipe emissions in the course of their operation and EVs, which are recharged using energy sourced from renewable energy technologies are as close to being zero emission as possible (there are emissions associated with their manufacture). Even when EVs are charged using standard grid electricity, they are still cleaner than all other cars on the road.’

- 4.13 Electric vehicles have become more widely available in the last couple of years. However it has been difficult to source an electric van which has the range required for a mobile unit within the National Park. We have defined the *minimum* range as a return journey to the North of

the Park, or to Southampton, about 50 miles. Longer journeys, for example to Portsmouth or Poole would not be an option for an electric vehicle. Many vehicles have been looked at as possibilities; four are discussed in Section 6, with three presented for consideration by the Authority.

## 5 Summary of fuel options

5.1 In simple terms, the different fuel options are compared in the table below.

Fuel type	Greenhouse gas emissions	Particulates and other pollution	Rainforest / crop impact	Availability
<b>Petrol</b>	High*	Medium*	Low / none	Easy
<b>Diesel</b>	High*	High*	Low / none	Easy
<b>Biodiesel</b>	Medium**	Low	High**	Difficult
<b>LPG</b>	Medium*	Medium*	Low / none	Medium
<b>Electric</b>	Low / none	Low / none	Low / none	Easy

\* This also depends on the number of miles/gallon the vehicle does.

\*\* This depends on source of biodiesel: if rainforest has been cleared emissions of greenhouse gases can be very high.

## 6 Vehicle options

6.1 As already stated, not all fuel options are available for all vehicle types, so in practice, the vehicle has to be considered alongside fuel options. The Unit needs to be functional, easy to use, flexible, efficient and value for money as well as having a low environmental impact. The vehicles available using non fossil fuels vary considerably in cost and practicality, as well as in terms of the overall impact of the operation of the Unit on the environment. It is difficult to determine the exact environmental impact of a particular vehicle because of insufficient information, for example on the footprint of a vehicle over its entire life and the materials used in construction. In addition, information on reliability and durability is not available for some relatively newly available models. Four vehicles are specifically considered below: the Megavan 600 (both diesel and electric), the Modec (electric) and the Faam Truck Travel (electric).

### *Diesel Megavan*

6.2 The diesel Megavan 600 is a small van produced in France and sold through a number of dealers in the UK. It can be driven on a normal licence, is very fuel efficient (80 miles/gallon) and meets EU emissions regulations. The 0.6 litre Kubota diesel engine means that it can be serviced easily, using local garages. It is currently being used in the National Park by Warbourne Farm for delivery of their organic box scheme. It comes with a high-sided box on the back which is suited for coffee vending and as such is ideal for our use as a mobile unit.

Hayley Sharpe used this taller version for their illustrations (Section 1.5); the specification in **Annex 1** shows a shorter version but is the same in all other ways.

- 6.3 The diesel Megavan 600 engine is not tested for CO<sub>2</sub> emissions, because the engine size is too small. The engine makers Kubota do not publish emission figures and, as the vehicle is classed as a quadricycle, they are under no legal obligation to do so. The makers state that if a standard test was conducted it would read close to zero as the diesel engine used does not reach the temperature specified for the current CO<sub>2</sub> test.

#### *Electric Megavan*

- 6.4 This was the option first seriously considered. As an electric vehicle it makes an excellent environmental statement. However the vehicle is designed for 'urban short haul and estate use'. Its range is limited to 40 miles and it has a top speed of 30mph; the limited range especially would impact on where it could easily be deployed. If it started in the central Forest, places like Lepe, Woodgreen and Hurst Point would be at the limits of its range and Southampton and Bournemouth (key outreach locations) would be beyond reach. The specification in **Annex 1** applies to the electric (as well as the diesel) Megavan.

#### *Electric Modec*

- 6.5 This is a large electric delivery van (see Section 1.5 for size-comparison). It has the required range and speed but at 3.5 tonnes before loading is not suitable as a small, friendly mobile unit, suited to the Forest environment. It costs £60,000 once the battery has been leased (the battery costs £25,000 and the vehicle costs £35,000). A 'C1' license is also required. If the driver passed their category B test before 1 January 1997 their licence will already show C1, but if not a three to five day training course is required costing £600 to £1,000 per person depending on experience. This training requirement, leaving aside the cost, could severely restrict the unit's flexibility of use because of the limited number of people likely to be licensed to drive it. This alternative is therefore discounted as a serious option.

#### *Electric Faam Truck Travel*

- 6.6 Further research after the Authority meeting revealed an additional electric vehicle option. Faam is an Italian company specialising in electric vehicles for which an importer has been found. Detailed specifications of a Faam Truck Travel can be found in **Annex 2**. The truck shown in the annex is not the lithium battery version which has a better range (68 miles). The truck can be supplied as a cab and chassis only by Faam. The UK importers have added the cost of adding a box similar to that on the Megavan, which would then have to be modified by Haley Sharpe Design to carry the hatches, storage and display material as pictured for the Megavan. Unlike the Megavan and

Modec, the Faam Truck Travel is only available as a left hand drive which would increase the risk of accidents. At present we believe we would be the first and only user of the Faam Truck in the UK.

## **7 Summary of vehicle options**

- 7.1 Discounting the electric Modec on the grounds of it being too large and expensive the three remaining options (the diesel Megavan, the electric Megavan and the electric Faam Truck Travel) are summarised under three headings: environmental impact, practicalities and cost.

### *Environmental impact*

- 7.2 The best fuel source from an environmental perspective is electricity. Electric vehicles have no tailpipe emissions, and the potential to have virtually no operating emissions if charged from a sustainable energy power source. They also make a clear sustainability statement. The diesel Megavan however is far from environmentally unfriendly when compared with almost every other vehicle type. This is due to the very small 0.6L engine. The vehicle is very light giving very high miles per gallon, and correspondingly very low emissions per mile travelled. Emissions from construction, delivery and recycling have not been calculated as no data are available but as the three vehicles are of similar sizes any difference is not likely to be significant, and all are advertised as high in components which can be recycled.

### *Practicalities*

- 7.3 The three vans will have the same capability to fulfil their interpretive function at a particular site, as the Faam Truck Travel would be modified to carry a similar size box as the Megavan.
- 7.4 The diesel Megavan offers a longer range, ease of refuelling, and easier maintenance, as it has a regular diesel engine. There is greater risk of difficulties with repair and maintenance of the Faam Truck Travel, as it is new to and not widely used in the general motor trade. Being left hand drive it carries a greater risk of accidents. The electric Megavan is slow (max 25mph) and has a low range which will limit its ability to operate outside a 10 mile radius around the charging source. It is designed for urban city centres and country estates.
- 7.5 Balancing these factors the diesel Megavan is the more practical option (although not risk free, as it too is unconventional).

### *Cost*

- 7.6 For capital costs the Faam Truck Travel is significantly more expensive than the diesel Megavan. The running costs are marginally cheaper for the electric Megavan and the Faam Truck Travel. The costs are summarised in the table below. The current budget for the Information

and Visitor Services Directorate only allows for the cost of purchasing the electric or diesel Megavan

## 8 Final comparison and conclusion

8.1 The various environmental, practical and financial aspects of the three vehicles are brought together in the table below.

	<b>Electric Megavan</b>	<b>Diesel Megavan</b>	<b>Faam Truck Travel</b>
<b>Environmental issues</b>			
Environmental statement	Excellent (electric is cleanest option)	Good (diesel 80mpg)	Excellent (electric is cleanest option)
Battery type	Awaiting answer	N/A	Lithium Ion battery pack
Environmental impact	Excellent	Good	Excellent
Training for us to maintain	Awaiting answer	N/A	2 day course provided only in Italy
<b>Practicalities</b>			
Interpretation functionality	Excellent	Excellent	Probably excellent (yet to see it and box to be made as one-off by importer)
Others already in UK?	Yes	Yes (Warbourne Farm deliver to South Efford House)	No – leaders in the field or unwise risk?
Range	40 miles maximum (although 30 in practice)	No limit	68 miles (adequate, though could not be used further than say 30 miles radius)
Top speed	30 mph	40mph	37mph
Training in maintenance	N/A	N/A	2 days in Italy (if this was the seasonal ranger, this would be an annual commitment)
Maintenance	Awaiting answer	Easy – local garage	Trained person to do

	<b>Electric Megavan</b>	<b>Diesel Megavan</b>	<b>Faam Truck Travel</b>
Repair	Awaiting answer	Easy – local garage	Trained person only or warranty might be affected). Emergency support in Merseyside? Parts from Italy.
RH Drive?	Yes	Yes	No (higher risk of accidents especially with inexperienced driver)
<b>Cost</b>			
Vehicle cost	£17,500	£13,500	£24,199
Or lease (5 yrs total cost)	£21,000	£16,200	£32,373
Or hire purchase (5 yr total cost)	£21,233	£16,380	£32,373
Hire purchase cost/year	£4,247	£3,276	£6,475
Fuel cost (5000 miles)	£50	£300	£50
Livery and additional vehicle coachwork, insurance	£1,500	£1,500	£1,500
Initial interpretative design, artwork, display and fixtures	£18,700	£18,700	£18,700
Staffing and running costs year 1 (3½ months)	£4,200	£4,200	£4,200
Staffing and running costs (7 months) years 2-5	£8,400	£8,400	£8,400
Other equipment (year 1)	£3,000	£3,000	£3,000
Other equipment (year 2-5)	£6,000	£6,000	£6,000
<b>Total year 1 cost</b>	<b>£31,697</b>	<b>£30,976</b>	<b>£33,925</b>
Total cost in subsequent years	£18,697	£17,976	£20,925

8.2 The choice of vehicle is a finely balanced decision which needs to be made in the absence of full environmental performance information. On the one hand, the diesel Megavan 600 meets the Authority's requirements in offering a small, flexible, practical and economic unit which is wholly in keeping with the purposes for which it will be used and offers a durable, reasonably reliable, low environmental impact vehicle. On the other hand, the environmental performance of the electric Megavan and Faam Travel Truck is somewhat better. The electric Megavan is slow and has limited range and the Faam

Truck Travel is more expensive. There is less information about the reliability of the electric vehicles and the operational risks in terms of servicing, repairs and possible 'down time' are greater. The difficulty obtaining training and of sourcing parts from Italy and the fact that it is left hand drive gives extra risk for the Faam Truck Travel.

## **9 Timescale**

- 9.1 £33,500 has been identified in the Information and Visitor Services 2008-09 budget bid to implement this project.
- 9.2 Because of the delay in deciding whether or not to go ahead with a mobile unit, the 2008 trial season would now start in mid-August and ideally run until the end of November. We hope this 3½ month contract would attract good applicants for the post of seasonal mobile unit ranger, enable us to experience the busiest time of year, experiment with different options for the autumn and start planning for 2009. Between December 2008 and February 2009 the unit would be available for officers and members to use, but it would not have an officer dedicated to using it as frequently as would be the case in the summer.
- 9.3 The schedule of key dates is currently as follows:
- 22 May: go-ahead given by members;
  - 23 May: Hayley Sharpe awarded contract and vehicle ordered;
  - 24 May: detailed design commenced;
  - End May: job advertised;
  - 28 July: vehicle delivered to Hayley Sharpe for installation;
  - 11 August: successful applicant starts (until end November 2008);
  - 15 August: unit and content delivered.

### **Recommendation 3:**

**To decide which vehicle should be purchased for the mobile information unit from the choice of electric Megavan, diesel Megavan or Faam Truck Travel.**