MANAGEMENT AND BUSINESS PLAN
FOR
MURTON ENVIRONMENT CENTRE

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EXECUTIVE SUMMARY

1. This report has been compiled from discussions and advice from many individuals and visits to the site and similar and related sites in the Angus and elsewhere.

Market interest

2. There is strong interest in the formal education market for facilities which demonstrate environmentally friendly use and re-use of natural resources. Indoor and outdoor demonstrations allowing a 'hands-on' approach by students are necessary. Ossifying the site with no opportunities for change and development would be counterproductive to this market. The site offers opportunities for demonstration of issues relevant to the curriculum at 5-14, Standard and Higher Grades and also for the Environmental Citizenship curriculum. Provided that the facilities are different from others within the local catchment area then the catchment should extend throughout Angus and into Dundee and Perth & Kinross in the early stages. At the outset it is estimated that around 50 school groups a year may use the facilities.

3. General public interest is difficult to gauge. There is enthusiasm amongst local council officials for an educational facility which is unique and they consider that it will attract local public interest. An estimate of around 3000 visitors a year in the phase appears to be realistic.

The facility

4. All parties interviewed identified the potential for the Murton site to be a unique environmental education facility in the Angus and Dundee areas, and further afield in the longer term. Development of the site should be focus on those activities which are not undertaken elsewhere and which are of value to the public, school children and public authorities.

5. The greatest prospects for success are to demonstrate to a range of audiences

   - the environmental processes which shape the land surface,

   - society's use of aggregates, and

   - the recycling of materials in construction, and, most especially, the reuse of domestic waste to provide new materials, including composting for soil improvement.

6. Developing these purposes will make the site distinctive from the local council Country Parks and the charitable sector's nature reserve.

7. It is proposed that the demonstrations be established on the area currently being worked as this has the easiest access from the public road and is furthest distant from the more sensitive areas of the site.

8. An indoor education centre should also be built on this site. The building(s) should demonstrate all of the best features of energy conservation and environmentally sensitive re-use of materials. It should comprise classrooms/seminar rooms, computer-based resource centre, displays along with shop, food preparation and eating area and toilets.

9. The current Nature Reserve should be modified to demonstrate poor and better environmental practices, including soil erosion and eutrophication.

10. The Murton Steading should not be incorporated into the facility as the costs of its refurbishment are likely to be too high (£315,000 before fitting out), the potential to demonstrate best environmental practice in the building is limited, access is over third party land and there are flood risks and neighbour disturbance concerns.

Costs and funding

11. The total development costs of the recommended option are around £250,000, subject to detailed verification. In addition, annual running costs of around £50,000 are estimated, half of these costs are for a fulltime Manager.

12. A funding package from a number of public, private, lottery and charitable sources is possible. No financial promises have been given by funders, as they must have a detailed proposal before they can make decisions. However, sufficient encouragement has been given to the consultant by potential funders to make the prospects of achieving a successful package high. Preparing the funding proposal, submitting it for consideration and receiving funders decisions should take about 6 months from start to finish.

13. Key funding sources are:
    - the New Opportunities Fund *Transforming Waste Scotland* and *Transforming Your Space*, administered by Forward Scotland and SNH respectively and the Scottish Executive *Sustainable Action Fund* for the building(s) and fitting it out;
    - Aggregate Industries through cash for the buildings and in kind support for the remodelling of the site, access and parking areas and paths to display areas,
    - SNH for project development and project operational support;
    - Business sponsorship for displays, particularly from aggregate, plastics industry associations; and
    - Murton Trusts for operating cost base support.

14. In addition, other income generating activities should be considered by the Trustees such as: proceeds from sale of the Murton Steading for residential development; sport fishing on selected lochans; income from franchise of the shop and café in the Education Centre.

Future Arrangements

15. If the Trustees approve the proposals, the next necessary steps would be to seek a grant from SNH for the support of a Project Development Officer. Matching funds should be provided by the Trust. The post holder would take the lead in drawing up the revised restoration plan for the whole site, develop applications for funding of the capital and operational costs and work with the various interests to promote the development.

16. The local community in Angus should be actively involved in developing the ideas for the site and in its the construction. To achieve this an Advisory Group should be established to work with the Project Development Officer. Community and educational interests should be represented.

17. Additional Trustees to represent community interests should be appointed to the Trust to diversify its membership and to help secure funding.

18. The proposals should be activitely promoted to local and other interests. It is recommended that an open day be arranged at Murton as soon as possible. Presentations should be made to key organisations off the site. The Trustees along with the factor and the consultant should take the lead in the first instance.

Recommendation

19. There is strong market interest in an environmental education centre at Murton which meets the Purposes of the Trust. Interest and enthusiasm were expressed by all interviewed. It is a small/medium-sized project which is capable of being funded through a variety of sources. It should be capable of paying its way provided there is ongoing financial support from the Trust and other associated Trusts.

20. I strongly recommend that the Trustees approve the proposals for the development of the Murton Environment Centre and sanction the next steps

1. STRATEGY AGREEMENT AND TERMS OF REFERENCE

The Trustees of the Murton Wildlife Trust for Environmental Education agreed a Strategy for the Trust's work at Murton in the light of recommendations by Roger Crofts in *'Linking purpose action – a strategy for the Murton Nature Reserve'*.

The key recommendations which must guide the development of the Management Plan are:

- the project is for environmental education of young people through demonstration and hands-on experience of natural heritage and wider environmental issues, and not a nature reserve;
- all activities and expenditure should meet the Purposes of the Trust;
- a reclamation Plan for agreement with Aggregate Industries and Angus Council is needed for the currently worked site;
- a costed management plan should be drawn up identifying the capital and recurrent items of expenditure and the phasing of the work; and
- an early decision to be taken on the development of an environmental education facility at Murton Steading.

In the light of the approved Strategy, the following terms of reference were given by the Trustees to Roger Crofts, working in collaboration with James Osborne:

- assessment of demand for the site and the proposed facilities;
- estimates cost of the capital works, including the proposed environmental education centre at Murton Steading;
- estimated cost of operating the site;
- assessment of the funding possibilities for capital and operational costs;
- consideration of the phasing of funding and site work;
- recommendations for the reclamation of the currently worked area once extracted is completed; and
- recommendations for access to the site and other issues requiring planning consent.

This report fulfils these terms of reference and makes recommendations for the Trustees consideration and decision at their meeting on 8 April 2003.

2. DEMAND FOR FACILITIES

2.1 Estimates of likely interest in visiting the facilities, as means of assessing overall demand, is by no means straightforward for this type of project. It is important to avoid estimates which have an air of accuracy but can be spurious. The approach adopted was to discuss the possibilities for facilities at Murton with a range of potential interests who are knowledgeable about the primary and secondary schools curricula, the opportunity for learning out of school, and the interest of other key partner organisations such as authorities dealing with waste, environmental education and the natural heritage. The overall approach taken has been to assess interest in the range of possibilities which were listed in the Strategy in order to assess which attracted the most interest and those which attracted least. I have deliberately not assessed the tertiary education market as I do not consider it so relevant to the Trust's Purposes.

2.2 The assessment which follows also takes into account other environmental educational facilities which are within the local catchment area for Murton, which is taken as an hour's drive by private transport and which are provided by local councils and others, such as charitable environmental bodies. A selection of these has been visited and discussions held with appropriate staff and others involved.

Nature Reserve

2.3 As expected, there is very little interest in nature reserve type facilities in the accepted sense, i.e. sites to see and enjoy birds and other forms of wildlife. The main reason is that there are many other sites in the area, including RSPB at Loch of Kinnordie, SWT at Rescobie Loch, and Angus Council at its Country Parks, including Forfar Loch. The conclusion is that provision of nature/wildlife reserve facilities in the area is abundant and in all probability is over provided in relation to demand.

2.4 This does not mean that the Nature Reserve at Murton is either redundant or was a mistake. Rather it means that it should be seen in the context of the reclamation of a quarry and the demonstration benefits that flow from that, and the opportunity to demonstrate forms of management of the land which are rarely evident on nature reserves, such as earth processes, dealing with invasive species and with nutrient flushes, and managing fluctuating water levels. Consequently the focus of the environmental education programme on the already reclaimed area should be on these facets, although not ignoring the demonstration potential of the arrival of birds to roost, feed and breed and the types of habitats that can be created from remodelled land.

2.5 In terms of demand estimates therefore a conservative approach is advised. Casual visitors wishing a short walk might average 10 per day given the other similar facilities in the vicinity. However, this could be expanded without detriment to the amenity of the area by the development and promotion of new facilities on the currently worked part of the site and linking pathways constructed, and by a formal link being made into the Forfar *Paths for All* network being developed by Angus Council and the Paths for All Partnership.

Primary School interest

2.6 The greatest source of demand is likely to come from Primary Schools for the simple reasons that a broad-based curriculum is taught which is usually project orientated and there are many components of the 5-14 Environmental Studies and Science curricula which can be illustrated at Murton. This is reinforced by the fact that Angus Council has produced its own detailed versions of all elements of the 5-14 curriculum; there are many opportunities to develop relevant activity at Murton.

2.7 Primary Head Teachers consulted were enthusiastic about the proposal and saw the connection with the curriculum. They wished to have hands-on activities at the Centre rather than traditional passive 'look and see' approaches. They did not want the site to become ossified and preferred continually evolving sets of activities and changes to the features of interest. Overall the site needs to provide a different experience from those which children can get from the media or in the classroom. Activities should be developed with teachers to align with the project format of the primary curriculum. A shop and toilet and eating facilities were considered to be essential at the Centre. The costs of transport to the site are a potential constraint on use. In the early years, it is recommended that no charge be made for school parties (this is in keeping with the Purposes of the Trust) and that grant assistance should be sought from funders to allow schools to visit the Centre.

2.8 In Angus, the Director of Education and the Adviser dealing with environmental education are prepared to commend the site to Primary Head Teachers as worthy of consideration for school visits, but they are not in a position to direct them to use Murton. A similarly supportive view was expressed by senior members of the Education Departments of Dundee City and Perth & Kinross Councils. Therefore it will be essential in the further development and implementation of the project to visit primary schools directly in order to interest them in the proposed facilities and even to encourage ideas and suggestions for schools which could be taken into account in the detailed design of the facilities. Having a friendly Primary Head Teacher as a member of an advisory group (see section 5) would be very beneficial. Help can also be obtained from the Angus Countryside Initiative and the Royal Highland Educational Trust Angus Branch, both of which have good contacts with local primary schools (around 64 Primary and 8 Secondary Schools).

2.9 The Councils for Angus, Dundee City and Perth & Kinross all have access to their own owned sites in Country Parks. These are usually the base for the individual Council's Ranger Service which has a remit to engage with schools both in the classroom and at the Country Parks. In close proximity to Murton, there are Country Parks at Forfar Loch, Monikie and Crombie and all of these have indoor education facilities. They are, however, geared almost entirely to traditional nature and wildlife education: pond studies, bird and tree identification and the water cycle. They do not, as far as it has been possible to ascertain, deal with the wider environmental issues of waste, energy, recycling or even earth heritage and earth processes. The clear message is that if Murton concentrates on these latter issues, provided that it is done in consultation and collaboration with schools, then demand will develop.

2.10 The key topics which should be provided at Murton of interest to Primary Schools are water management, land use, waste recycling, energy conservation and

earth processes. Demonstrating the changes that have occurred and measuring ongoing changes on different parts of the site will be beneficial. These should comprise demonstrations and explanations at the site and the production of explanatory material for use by teachers and children in the education centre and in the school classroom .

2.11 The level of use by Primary Schools of existing Country Parks is around 50 groups per year with group size varying between 30 and 60. Although the main source is schools in Angus, there is also use by schools in Dundee City, and adjacent parts of Fife and Perth & Kinross. The visits tend to be in May and June rather than spread throughout the year. In addition, it is normal for ranger staff to attend the school to ensure that the work during the visit fits in with the preparatory and follow-up work in the school. It will take time for the Murton to penetrate the market and therefore input from teachers in the detailed design of the site and the preparation of pupil materials, along side visits of Murton staff to schools will be essential.

Secondary School Interest

2.12 Interest from secondary schools is most likely to be from geography teachers as this subject covers the issues which can be demonstrated at Murton as part of the 5-14 Environmental Studies curriculum for Senior 1 and 2. It should also attract students in later years, i.e. those undertaking Standard and Higher Grade syllabuses, provided that the demonstration can be made relevant to the curriculum and that there are a variety of topics which can be covered. There is no longer a formal 'investigation' in the syllabus for either S or H Grade Geography and therefore no need for students to undertake any fieldwork. It is therefore down to the attitude of the Head Teacher towards out of school visits and whether the Principal Teacher of Geography is prepared to press the case for visits. At best, there is only likely to be one visit a year from each form in the secondary school, unless hands-on projects can be developed to fit with certain parts of the syllabus, such as soil formation and river development.

2.13 Geography pupils who have visited the site had many ideas on its interest to them including: physical processes such as soil formation, gullying, sedimentation, erosion, slope evolution; biological processes relating to water quality and indicator species of quality, and vegetation development; and, most especially, contrasting good practice with bad practice on adjacent parts of the site such as slope and soil management, water quality management, recycling compared with non-degradable materials. Interestingly, they saw these possibilities both in the context of improving their understanding of what they are taught in the classroom and preparing them much better for their role as citizens from an environmental perspective. They did emphasise the need for hands-on activities rather than 'look and see' approaches.

2.14 There is clearly a potential market at secondary school level and it will take some effort to cultivate it with help from sympathetic Head Teachers and Principal Teachers of Geography. In the first stage, involvement from one secondary school can be expected and it is fully expected that others will follow.

Overall schools conclusions

2.15 In conclusion on use by schools:

- a variety of topics should be demonstrated on the site,
- demonstrations of change are valuable,
- activities which are unique and distinctive from those at other sites will stimulate demand,
- materials for use in the school will be necessary,
- Primary Schools are likely to be the key market,
- Head Teachers are key to stimulating interest in the site, and
- indoor classroom facilities, along with toilet and eating facilities, will be necessary.

2.16 Direct engagement of sympathetic teachers, specifically a Primary School Head Teacher and a Secondary School Principal Teacher of Geography, will help to ensure that the facilities being provided are tailored towards the school market and provide a basis for more successful marketing of the facilities to schools.

2.17 The site will have to be assessed for risks if it is to attract schools parties. In any event, this will be necessary for the general public and this can be built into the project development and implementation work.

2.18 Costs of transporting children to and from the site will need to be built into the costing and funding raiding for the project.

General public interest

2.19 From discussions with many people in a range of public sector organisations operating in Angus provision of distinctive demonstration facilities should attract the public to visit the site. There was a unanimous view amongst those consulted that demonstrations and explanations of recycling, renewables and relating this to what individuals could do in practice should be the basis for the facility. Such an approach fits with the new Scottish Executive/SEPA *National Waste Strategy for Scotland* published recently, is complementary to the work of the Angus Council on waste recycling and working with the public to improve performance. The facilities should not be a waste disposal and recycling site as such as these are well-provided in the area by Angus and other Councils. In any case, development along those lines would require approval under The Waste Management Licensing Regulations 1994 which could be both costly and cumbersome.

2.20 There is also a common thread running through the policy and action programmes on waste reduction and recycling: the involvement of communities and improving their surroundings. Demand could be created, therefore, by engaging local communities in the design of the facilities and most especially in their development as a centre for community effort on waste reduction and recycling. This approach is likely to attract most funding from the various government and lottery schemes (see section 4).

2.21 Conservatively, I estimate that in the early years the numbers of general public visitors is more likely to be up to 3000 per year, but would anticipate that these numbers will increase.

3. PROPOSALS FOR DEVELOPMENT AND COSTS

3.1 There are many opportunities and options for development within the overall site to fulfil the Purposes of the Trust. Set out in this section is what the consultant regards as the maximum development option embracing work on Site A (the existing nature reserve), Site B (the currently worked site) and at the Murton Steading. There are variations on these options in the light of financial and practical issues factors.

Environmental Educational Centre at Murton Steading

3.2 The Strategy recommended, and the Trustees agreed, that detailed assessment of the options for converting the Murton Steading into an environmental education facility should be undertaken. This work has been done through a contract with John Duguid, chartered surveyors of Dundee, supervised by James Osborn and Roger Crofts, including a site visit.

3.3 The brief given to the surveyors was to cost the basic repair and maintenance of the structure to make it a viable building and to then convert it into a centre comprising: a large classroom in one of the wings of the Steading capable of subdivision through the use of partitions, an office for staff, a resource centre comprising a library and computer facilities to allow access to web based information, toilets, kitchen area, eating area, and space for displays. In addition, costs of accommodation in the surplus space was requested.

3.4 As predicted in the Strategy report, this is the single largest item of capital expenditure and the highest running costs and carries overall the greatest financial risk to the Trust. Nevertheless, it is important for the Trustees to consider carefully the conversion of this building as a gateway and centre-piece for the whole Murton site. All the cost figures exclude VAT and professional fees.

a. Costs for remedial works	£42,000
b. Costs of developing the building	£273,000
c. Costs for access from the main road	£14,000
d. Costs for creating parking area	£5,000
TOTAL	**£334,000**

Reclaimed site

3.5 Only a limited amount of further development is envisaged for the main site as follows and in the light of the proposals made in the Strategy document.

Water management

3.6 The water table is seasonally variable and, although measures to regulate the level in winter could be put in place, these would make the site less natural and also reduce the areas of bare ground in the summer. The conclusion reached by the consultant, in consultation with the hydrologist and the quarry company representatives, is that:

- Seasonally fluctuating water levels in the lochans should be retained.

- The bare ground around the newest lochans by Murton Steading in the summer should be left bare to demonstrate natural processes of colonisation and erosion, and provide different habitats for wading birds.

- An all-season connection between the northern lochans and the outlet lochan should not be put in place as this will require further engineering work without any guarantee of success and would be detrimental to the natural look of the this area of the site.

- In addition, the artificial channel which feeds Loch Fithie from the Burnside Mill lade must be maintained so as not to harm the flow of water to the loch.

- The main water channel in the old mill laid (which runs alongside the track and replaces the now dry and unused natural river channel on land owned by Laird Brothers) is subject to overflowing its banks in peak flood conditions. This has positive effects in terms of demonstrating natural processes in a confined water channel and supplying water directly to the wetland area lochans. It has more negative effects as the track is flooded and there is the potential to flood the ground of the cottage opposite the Murton Steading. A full containment approach would require extensive engineering works along the length of the channel from the Arbroath Road as far as the Community Hall. Although the cost estimated by the hydrologist is around £2,000, this approach is not recommended as it removes the current channel and the feed to the |nature reserve. Rather some embankments should be raised on the south side of the burn to protect the track and property, whilst still allowing overflow of water into the wetland lochans and along the ditch into Loch Fithie. The costs of this alternative work are estimated at £500.

- The track running past Taylor's Wynd southwards towards Murton Burn Cottage is subject to periodic flooding. This poses a nuisance for local residents and visitors. The lowest area of the track should be raised above the maximum level of the adjacent lochan. The cost is around £150 is labour, machine hire and materials.

Habitats presence and management

3.7 A limited number of key habitats should be represented on the site so that there is room for them to develop in a natural manner and to demonstrate the type of natural habitats which would be expected to be present on a site with the topography, soils and

water regime of Murton. Preference should, therefore, be given to dry grassland, wet grassland, wetland, and freshwater habitats.

3.8 Tree planting should only be undertaken where it provides visual enclosure for the site and not where it will restrict the views within the site. Therefore planting on the mounds between the main water bodies is not advised.

3.9 Ongoing action for managing the grassland, particularly periodic cutting/topping to allow lower plants and flowers to thrive, and keeping invasive species, such as broom and gorse, under control, should be implemented.

3.10 The overall operating costs are of the order of £2000 per annum and should be part of the Ranger's job with support from volunteer groups.

Earth processes demonstration

3.11 Current earth processes on the reserve should be demonstrated in the area adjacent to Burnside Mill where there is currently bare ground without soil cover. Already gullies are forming on these slopes and the finer material is being washed from the surface into the loch. This is natural and, although regarded as bad practice, should be kept to demonstrate the development of slopes without soil or vegetation cover and the consequent movement of the finer material into the adjacent loch. Different angles of slope should be created and their effects on the rates of erosion measured by students as an integral part of the educational programme.

3.12 The high nutrient status of the central reclaimed ground and the consequential algal blooms on the northern loch should be retained to demonstrate eutrophication and the types of action which would be needed to combat it. Students want to see and understand these negative effects and be able to measure the effects on water quality and on the presence of water species.

3.13 The costs of these activities are expected to be minimal and may be absorbed within the work programme of the ranger and helped by visiting students. A mechanical earth mover, such as a sizeable JCB, will be necessary to prepare the site and to allow periodic adjustments to be made. Hire and purchase options are costed into the proposal.

Visitor infrastructure

3.14 The current and planned walks are restricted to parts of the site. This assumes that a circular 'look and see' walk will be the main experience of the area by visitors, especially school pupils. This is out of step with the suggestions for a more hands-on approach. More walkways with periodic gathering and viewing points and points for activity should be put in place around the site, including at those points which give a good vista over the site, such as at the north west corner.

3.15 Given the emphasis on hands on approaches rather than the traditional nature reserve approach, there is unlikely to be justification for a further bird hide. Also more building on this site will mean that it will loose its more natural look compared with the proposals for the currently worked site.

3.16 The cost of paths to link the two parts of the site and also to extend access around the existing site are likely to be £3000. It is expected that this can be provided by Aggregate Industries as part of the restoration package.

Currently worked area

3.17 If the Trust is to deliver all of its Purposes at Murton, as was agreed in the light of the Strategy, then development on the currently worked site has to be distinctive and different from that on the reclaimed site. The proposals below reflect this key point and are also influenced by an analysis of sites in the locality which will compete for visitors, of emerging UK, Scottish and local environmental issues, and of the lack of facilities to meet some of the key Purposes of the Trust with respect to water, recycling and renewables in the context of sustaining the natural resources of the environment. If proposals along the lines suggested below are implemented, then Murton will attract attention and interest as a distinctively different environmental education facility and could justify being identified as the **Murton Environmental Centre**. In order to achieve the greatest benefit from this part of the site, proposals are also made for direct assess from the Forfar-Arbroath road, for parking facilities and for a building to be constructed as an education centre and wet-weather facility. This is the most exciting and innovative part of the development proposals which, as already indicated in Section 2, will create the greatest interest and, which is discussed in Section 4, has the greatest potential for financial support.

Earth heritage and earth processes demonstration

3.18 The first proposal is to show visitors the formation of the 'humps and hollows', i.e. kaimes and kettles, which are the basis of the landforms in the wider Forfar area. The current faces along the west, north and east walls of the excavation provide an insight into the environmental conditions and the natural processes of the period when the gravel deposits were formed towards the end of the last ice period (when there was a decaying ice sheet and vast meltwater rivers of high velocity in the vicinity). This type of information is normally only accessible in the field to experts or is found in obscure language in the scientific literature. The site is ideal for teaching students about the environments of the past. This proposal will further benefit from the fact that there is recent published scientific work on the deposits in the quarry on the north side of Loch Fithie and there are knowledgeable experts available who would be able to advise on the interpretation of the deposits.

3.19 Keeping the faces in the quarry open does have implications for the safety of visitors so restrictions on the proximity of visitors to the open faces themselves and on the top of the faces would be necessary. In addition, it will be necessary periodically to remove debris from the foot of the faces in order to freshen the faces and make the deposits clean and clear to see. This is a standard routine and would require use of a

JCB with an experienced operative under supervision to ensure the best educational effect was achieved.

3.20 The second earth heritage proposal relates to demonstrating the formation of slopes and river systems and the filling in of adjacent water bodies. Although these processes can be demonstrated on a small scale adjacent to the wetland lochans at Murton Steading, a much larger-scale demonstration can be mounted in the north west corner of the currently worked site where there are already slopes grading down to a shallow water body.

3.21 The costs of these preparations should be part of the reclamation agreement between the Trust, Aggregate Industries and Angus planning authority. Ongoing maintenance of the features and faces should be undertaken with a JCB under expert supervision. The costs are likely to be a few hundred a year (day rate is £70 with driver, weekly rate is £300 without driver) and might be less if an experienced operative was prepared to volunteer. Purchase of a JCB, at around £40,000, is unlikely to be cost effective.

Demonstrating the uses of aggregate

3.22 One of the purposes of the Trust is to demonstrate the use of natural resources. Many people are not aware of the linkage between a sand and gravel quarry and the use of these materials for their benefit. Building sand, concrete and artificial stone are among the uses. The proposal is that Aggregate Industries set up a demonstration of how the material which visitors can see in the faces of the quarry is won and prepared and the type of materials it is made into and their end uses. The demonstration would also provide information on the amounts of sand and gravel used by society, the other sources and what are the alternatives, such as artificial materials, recycling and reuse. And the demonstration would show how the original products can be re-used after their first use has expired.

3.23 The costs of developing this demonstration will depend and how much effort Aggregate Industries are prepared to put into it. It should be part of the agreed reclamation package.

Making soil and compost

3.24 The public's passion for gardening means that many people buy soil improvers, including such non-renewable materials as peat with consequent detriment to scarce habitats. They are becoming more aware of the use of waste materials, such as bark and coir, for improving garden soils. Also many gardeners do compost waste materials from their gardens and from their kitchens. Civic Amenity Sites run by local authorities, including Angus Council, provide facilities for depositing garden waste for recycling. A demonstration of techniques for composting garden and kitchen waste is proposed. This would illustrate the progression from the waste to soil improver and soil itself. If soil/soil improver is to be made on the site, then it is good educational practice to demonstrate the effects of the material on the productivity of soil by the establishment of a demonstration garden. This would distinguish between the growth rates of soil

which has been enhanced by the composts with those which have not. In addition, the use of different types of composting containers should be a key part of the demonstration.

3.25 In discussions, staff in the Environmental Health Department of Angus Council have indicated strong support for such a demonstration and also a willingness to provide the raw material for it. This latter offer is valuable as it is advisable not to have the site seen as a dump which requires application to SEPA for exemption from regulations governing the collection and management of waste.

3.26 The costs of developing this facility comprise labour and composting equipment. It is envisaged that volunteers, perhaps a local horticultural society/gardening club would undertake the work and that the compost bins and materials would be provided by Angus Council. In total this might amount to the equivalent of £5000.

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Demonstration of the uses and benefits of recycling materials

3.27 Recycling of waste materials from domestic use is now an area of major action and investment in Scotland. The Scottish Executive has set new, higher targets for the recycling of materials as Scotland much further behind that the rest of the UK and especially than other countries in Western Europe. Responsibility for recycling falls to local councils and Angus is at the forefront of best practice in Scotland, particularly as it is one of the few councils which has facilities for recycling plastic and has an active programme of education and information on recycling. However, the Council has limited resources to address the education of school students and the wider public to the level it considers is needed and is strongly supportive of the development of a recycling demonstration and education facility at Murton.

3.28 The proposal is that the recycling of all materials from domestic use, other than sewage and other effluent, is demonstrated at Murton. This would include the various types of plastic and metal containers, paper, cardboard, metals and glass. The reuse of these materials and the savings and costs of recycling would be explained.

3.29 The costs of developing these displays are estimated at £5000. Explanatory material is available from industrial associations and advice and guidance is available from Angus Council staff. It is expected that these facilities can be provided free of charge.

Infrastructure on the currently worked site

3.30 The various aspects to be demonstrated on this site should be laid out in a systematic way which maximises their impact on visitors and minimises their effects on the amenity of the site, the adjacent nature reserve and the residential properties in the immediate neighbourhood. A schema is shown in Annex 1.

3.31 Access to this site should be from the A932 Forfar to Arbroath road. Angus Council transport and planning staff advise that there are adequate sight lines for either

a single entrance/exit or separate entrance and exit. A parking area of hard standing should be provided at a point which does not detract from the demonstration facilities on the site. The costs of these facilities should be part of the reclamation agreement.

3.32 Demonstrating the use of recycled materials in a very practical way would be through the construction of a building on the site. This would also meet the needs of the educational and wider visitor market. The proposed eco-friendly building should be at a central location as the gateway to the site, as well as providing an information and education centre along with standard toilet and eating facilities. Around 400 square metres floor area would be appropriate for the facility and compares with the space available at Murton Steading.

3.33 There are many designs available and exemplars on sites elsewhere in the UK, for example at the Centre for Alternative Technology in Wales, Bishop's Wood, Worcestershire, London Wildlife Centre, Peckham. Advice is available on design and construction from a number of organisations of which the Walter Segal Self Build Trust is the most prominent. Costs are variable dependent upon whether labour is from the commercial market or whether it is from supervised volunteers. I estimate for the purposes of this report that £200,000 capital and fitting costs and operating costs of around £10,000 per year.

3.33 It is also proposed that ecofriendly accommodation, along the lines of the ecocabins used at the Centre for Alternative, should be constructed at a later stage in the development once the demand for the Centre as a whole and for such facilities in particular has been gauged. These will be for the use of volunteer parties working on the care and maintenance of the whole site, and for special educational programmes for students and for adults. No costs have been included at this stage.

3.34 A properly constructed path should link Site B with Site A. Also paths should be provided around this site to allow ease of assess for all to all of the demonstration areas. The costs should be around £3000 in total as indicated in paragraph 3.16.

Overall Cost Estimates

Capital costs

3.35 The overall estimates of **capital costs** for the proposals are as follows:

	£
Either Murton Steading repair and conversion	315,000
Or New Centre on currently worked site	200,000
Aggregate use display	5,000
Composting and gardening displays	5,000
Recycling displays	5,000
Paths	3,000
Access and parking Murton	20,000
Access and parking at new site	6,000
Water management	2,500
JCB	40,000
Total Murton Steading option	**£393,500**
New site option	**£266,50**

Development costs

3.36 The estimated development costs for detailed design and securing of funding are: **£15,000**.

Operating costs

3.37 The estimated operating costs of the facilities each year are **£40,000 per year** comprising:

Ranger fulltime whole cost	25,000
Building costs	10,000
Site management costs	5,000

Assessment

3.38 The highest capital and operating costs are associated with the education building. It is essential that the Trustees take an early view on the options of conversion of the Murton Steading and the provision of associated access and parking and the development of a purpose-built facility on the currently worked site.

3.39 The Murton Steading has a number of advantages:

- The building is basically sound,
- Planning permission for conversion should not be difficult,

- The current owners are prepared to hand it over to the Murton Wildlife Trust for Environmental education at nil cost, and
- The building is adjacent to the largest part of the site.

3.40 Against this are a number of disadvantages:

- The costs of conversion are high,
- The operating costs are high,
- There will be surplus space which will be difficult to utilise effectively,
- Access from the public road is not straightforward,
- Access is over third party land, and
- Parking will be in an area prone to flooding.

3.41 A new build facility has a number of disadvantages:

- Planning permission might be relatively more difficult, and
- Neighbour reaction may not be positive.

3.42 Against these are a number of advantages:

- The building will meet the purposes of the Trust more effectively,
- It will make the whole Centre more distinctive,
- It will be less costly,
- It provides opportunities for volunteer input in construction, and
- There are many exemplars and sources of help and guidance.

3.43 The consultant considers that the balance of advantage for the Trust in terms of applying its Purposes in practice and developing a facility which is most likely to capture the interest and imagination of users lies with a purpose-built facility on the currently worked site. I recommend that the Trustees agree to such a purpose-built facility.

4. POTENTIAL SOURCES OF INCOME AND FUNDING

Income generation

4.1 Income generation is dealt with first in this section on grounds that potential funders will wish to know what the developers are prepared to contribute.

4.2 Income generation at the facility is expected to be relatively low. The shop and café would be expected to make a modest profit. It is not anticipated that income from an entry fee would be applicable in the early years, but later a charge could be applied for entrance/parking.

4.3 Other facilities to create income could be considered provided they were in keeping with the Purposes of the Trust and did not detract from the primary educational purpose. For example, there is apparently a demand for affordable fishing facilities in Angus and a strategy has been developed by various public authorities. The disadvantage is that coarse fish are the preferred species.

4.4 Provision of accommodation on the site is not envisaged at an early date until estimates of demand can be ascertained. If these were developed at a later stage, then they would be expected to be at worst cost neutral.

4.5 If the Trustees accept the recommendation that a new purpose-built facility is developed, then the sale of the Murton Steading becomes a consideration. It is recognised that it is in private ownership but the consultant understands that the owners would be prepared to hand it over to the educational trust for a nominal figure. The possibility of sale of the property with planning permission for conversion to residential accommodation should be considered. Apparently there is no inhibition in Angus council's planning policies to stop this happening in principle. Sale with planning permission would add to the price premium of the property. If the proceeds could then be invested in the Murton Wildlife Trust for Environmental Education, either for use as a capital sum or as a basis for funding annual operating costs, this would be helpful. The cost is difficult to gauge as it will depend on market circumstances but a figure of no less than £70,000 should be considered.

4.6 Support for the current operating costs of the MWTEE comes from another Trust with an income of the order of £20,000 per year. Formal arrangements should be negotiated to sustain this income stream in the long term. Such a level of income is estimated to cover half the operating costs of the site and its continuation will make it much easier for the Trust to raise matching funding from other sources.

Funding sources

4.7 There are a range of funding sources available for educational projects, provided that they are linked to specific environmental outcomes, engage the community and wider public in their development and operation, and are not for the benefit of private sector profit-making organisations. Volunteer effort can be costed into most projects as a contribution. The funds are assessed in relation to the proposals recommended earlier in this report. Some funds are mutually exclusive of others and in putting together the applications advice can be sought from the different bodies to ensure that any application is not deemed ineligible.

4.8 The **Landfill Tax Credit** is administered by the Angus Environmental Trust. The Directors are representatives of public bodies, including Angus Council and SNH. A revised scheme is currently being devised by government and should be in place in summer 2003. It is likely to focus on waste recycling and waste minimisation, and on improving public amenity through landscaping and access. Grants are of the order of tens of thousands and are dealt with bi-monthly. I assess that this is worth trying once the new scheme is running. Further advice is available from the officials running the scheme in Angus Council.

4.9 The monies from the Aggregates Levy, which Aggregate Industries will have to pay £1.60 for every tonne of aggregate extracted from the site, funds the **Community Environmental Renewal Grants** scheme administered by Forward Scotland on behalf of the Scottish Executive. A total of £2m is available and is dispersed bi-annually. It is aimed at communities and other bodies who work with and for communities to improve the environment following the completion of extraction. I judge that this scheme fits with the Trust's plans provided that it builds in more community involvement through additional Trustees and through advisory groups and volunteer groups (see Section 5 for advice and recommendations on these points). I regard this scheme as the main public/lottery source of funding for the Murton project.

4.10 **Sustainable Action Grants** are administered by the Scottish Executive to spread good practice on sustainable activity; proposals need to be innovative and output orientated. In total £200,000 is available in each of the next 3 years and maximum funding per project is £40,000 per year. Again, the Trust's proposals can be readily made to fit this scheme, in particularly the Trust's emphasis on demonstrating good practice.

4.11 **Transforming Waste Scotland** is funded by the lottery New Opportunities Fund and administered by Forward Scotland and focuses on community waste recycling initiatives. Decisions are made quarterly and assistance is in the range £20,000-£300,000. Those elements of the Trust's proposals which fit with this scheme are education and demonstration, and the potential for networking with similar groups. Proposals must fit with the Tayside Waste Plan (in which Angus Council is a partner along with the other Councils and SEPA).

4.12 The New Opportunities Fund also supports a range of assistance under the umbrella of **Fresh Futures.** These are administered on behalf of government by Forward Scotland and SNH. £3m is available in total under the **Open Grant Programme**. This element focuses on energy and recycling and project support is in the range £3,000-£50,000. There are possible synergies with the Murton project and these should be explored further. Another element, **Transforming Waste Scotland,** with funds totalling £4.3m, is perhaps more doubtful as it focuses on community gardens, improving access and visual amenity and sustainability in building design. However, it is worth pursuing further.

4.13 Funding should be requested from **Aggregate Industries** as part of the reclamation and restoration package and as part of the company's corporate social responsibility initiative. It is in the interests of the company to demonstrate the after use of a site to the benefit of the local and wider community and to the environment. The Trust should major on these points in its negotiations with the company. The appointment to a new post of Corporate Social Responsibility manager is itself significant and the postholder has made a site visit and further discussions have been held. The work expected to be paid for by the company, provided the Trustees agree with the proposals in this report, would be specifically the reinstatement of the currently worked area to form the basis of the educational and demonstration facility, including access, parking, paths, landscaping and planting, and the provision of the display on the use of aggregates. In addition, and in lieu of the work to form a car park

and viewing area in the north west corner of the reclaimed site, a sum of £50,000 should be requested as a capital contribution to the new facilities.

4.14 Other businesses operating in the area should be approached for support. Prime targets should be **Strathmore Water** given its reliance on high quality supplies from within the gravel deposits and the need to encourage the re-use of plastic containers. **Scottish and Southern Energy** should be approached for assistance in renewable energy installations in the visitor centre and associated displays of the role of renewables. The various **trade associations** which represent the plastics, glass, paper and aggregates industry should be approached for support in kind for educational materials.

4.15 **Scottish Natural Heritage** has a grant scheme administered by staff based in its Airlie office who are familiar with the project. Grant aid is usually up to 50% of eligible costs but can be increased for those projects and organisations which are deemed worthy of additional assistance. Priority will be given to projects developed to benefit the community by charitable trusts and the private sector. The Murton project should score high. Initially support should be requested for part funding of a Project Development Officer to take forward to implementation stage the Trust's proposals. Funds are likely to be available in the year 2003-04 for this purpose. Funds for the development of displays relating to the natural heritage and its management should also be sought from SNH, particularly for those aspects relating to the earth history and earth processes and nature management of the site. SNH is also likely to be prepared to fund part of the costs of a fulltime ranger/manager for the site.

4.16 **Forward Scotland** has a Small Project Development Scheme which supports the development of business plans and advises on development of projects. It is limited to £1,000 but is worth applying for.

4.17 The **Small Business Angus** scheme, a joint operation between Scottish Enterprise Tayside and Angus Council, provides assistance for business planning and marketing which would be very useful. In addition, Angus Council can provide support in kind for skills training of staff, for organising trainee squads to work on projects at the site, and help to market the project through various web sites, including the Angus and Dundee Tourist Board.

4.18 Overall, I conclude that there is a diversity of funding sources which, bearing in mind eligibility criteria, proving the need for support and other factors, should be capable of providing resources for the development, capital projects and some of the operating costs of the programme. Along side this the Trust should make as much provision of finance and help in kind available as possible. However, given the responsibilities on Aggregate Industries and the close fit between the project and many of the current funding schemes, cash and in kind contributions are unlikely to need to reach 50%.

5. CONCLUSIONS AND RECOMENDATIONS

5.1 In the light of the material presented in the earlier sections of this report, I **conclude** that:

- development of a distinctive facility focussing on environmental management, including earth heritage, recycling and renew re-sue is widely welcomed;
- there is an educational demand for the Murton Environment Centre particularly from schools;
- demand could be stimulated for public use of the site;
- the costs of the development and the highest demonstration effect can be achieved through focussing the renewables activity, including a purpose-build all-weather facility, on the currently worked site;
- income for the Trust should be assured through arrangements for the sale of Murton Steading and from other sources available to the Trustees;
- the project closely matches the funding criteria for funds from lottery and public bodies;
- funds and support in kind should be available from other interests, most especially Aggregate Industries;
- funds for aiding the development of the project are available; and
- developing community awareness and involvement in the project is essential to capture funds and to deliver the benefits which the trust seek in its Purposes.

5.2 I **recommend** that the Trust agrees to:

- the development of the Murton Environmental Centre as proposed in Section 3 of this report;
- the sale of Murton Steading with planning permission for residential development;
- the establishment of an Advisory Group representing the main interests in the project to advise the Trustees and work with the Factor and the consultant on the details of the scheme;
- the appointment of a Project Development Officer, funded by the Trust, SNH, and Small Business Angus/Forward Scotland to develop the proposals, apply for funding and market the project to all relevant interests. The post holder would report to the Trustees through the Secretary and the Factor;
- the appointment of one or more additional Trustees to diversify the interests represented, and, in particular to ensure that there is appropriate community representation; and
- present the proposals both on site and off site to key local interests and potential funders in spring and summer 2003.

Roger Crofts
March 2003