

# **Merkinch Local Nature Reserve** **Management Plan**

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for Merkinch Greenspace

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Note: This is a slimmed down version of the full plan and does not include maps and illustrations. For a full version please contact Bill Taylor (email address above)

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## Summary

Merkinch Local Nature Reserve was **designated on the 28<sup>th</sup> November 2007** after the signing of a formal agreement between the Highland Council and British Waterways on 14<sup>th</sup> November 2007. It is the only Local Nature Reserve in the Highland Council area and the 50<sup>th</sup> in Scotland

Merkinch Local Nature Reserve consists of **54.7 hectares** of land and foreshore to the west of where the River Ness enters the sea. To the south it is bounded by the Caledonian Canal, where it enters the Beauly Firth; the north western boundary of the Carse Industrial Estate and to the east by the main housing area of Merkinch. The northern boundary is down to the low water (spring) mark

The management plan will

- explain how the site will be managed, and why
- describe responsibilities
- evaluate the current situation
- set outcomes and evaluation systems
- identify resources.

The timescale for the production of the Plan was less than two months and this precluded a full consultation exercise. The information gleaned from those involved has been invaluable in determining the future direction of management for the Reserve. The writers of the Plan express their thanks to all those who have helped.

### **Main issues raised by the local community:**

- **People like the area and would like to spend more time there.** Words used to describe the area – invigorating, unsafe, pleasure, freedom, open space.
- **Lack of knowledge of what the Reserve area has to offer is limiting people's use of it**
- Suggested **improvements to the Reserve** area include: establishing dry, level surfaces to the exiting paths, seating throughout the Reserve, cutting back of vegetation where this impedes access along paths, provision of low-key signing and information of the opportunities the Reserve provides.
- The **main concerns** are: the noise and disturbance by the trail bikers, dog fouling and stray dogs, with litter being considered a problem to a lesser degree.

### **Other important issues relating to the management of the Reserve are as follows:**

- The level of knowledge of the biological assets of the Reserve is limited. This does not allow for detailed management prescriptions to be determined
- The Reserve is subject to various anti-social behaviours
- The Reserve is little known outside the Merkinch community and its status locally is not adequately recognised
- The provision of the old ticket office as a focus for environmental and heritage education is under threat

The Reserve is within walking distance of the main housing areas of Merkinch, South Kessock and the village of Clachnaharry. This comprises a total population of 12,331 (2001 census), and is within 5kms of the majority of the population of the City of Inverness (67,700 in 2004).

The Reserve has no conservation designations directly applicable to the site, but is recognised as being of local value for biodiversity. The Low Water Mark is the southern boundary of the Moray Firth European Special Area of Conservation (SAC) – for protecting the famous population of the northern bottle-nosed dolphins. To the west of Clachnaharry is the Inner Moray Firth Special Protection Area (SPA) for birds, another European Union designation.

The Reserve is predominantly in the ownership of the Highland Council and is managed by the steering group of Merkinch Greenspace. There are no members of staff currently dedicated to the management of the Reserve.

As a result of the information obtained through the consultation and research period the following aims are recommended:

### **Reserve Aims**

These are overarching aims which the Reserve must deliver on if it is to achieve its vision of being the best Local Nature Reserve in Scotland: a place where people and biodiversity co-exist to each other's mutual benefit

1. To increase the benefits to individuals and communities through active involvement with the Reserve.
2. To celebrate the biodiversity value of the Reserve through the conservation and sustainable management of its habitats and species
3. To maximise the learning opportunities afforded by the Reserve, and to communicate the importance of biodiversity to the local community, Inverness residents and visitors to the area
4. To improve and upgrade access provision to and within the Reserve.
5. To establish governance for the Reserve that will sustain its management through innovative access to funding sources
6. To deliver best practice management for a Reserve that will be an exemplar for other Reserves

A total of 34 Objectives and 41 Measures have been identified that will go towards delivering these aims.

The following are some of the key measures identified:

- Upgrade footpaths
- Habitats and species surveys
- Deliver programme of events
- Identify local voluntary reserve rangers
- Feasibility study for new visitor facility

## Introduction

Merkinch Local Nature Reserve was designated on the 28<sup>th</sup> November 2007 after the signing of a formal agreement between the Highland Council and British Waterways on 14<sup>th</sup> November 2007. It is the only Local Nature Reserve in the Highland Council area and the 50<sup>th</sup> in Scotland

Local Nature Reserves (LNRs) are areas of land designated by a local authority under Section 21 of the National Parks and Access to the Countryside Act 1949. They provide protection for sites of special local interest for nature and offer opportunities for both environmental education and community involvement, and for delivering a wide range of benefits to local communities and to visitors.

This management plan will

- explain how the site will be managed, and why.
- describe responsibilities
- evaluate the current situation
- set outcomes and evaluation systems
- identify resources.

Management planning is a process, the output of which will be a ‘fit-for-purpose’ management plan. The purpose of the management plan is to set out what management will be undertaken and how this will be achieved.

This Management Plan has been drawn up to meet the needs of Merkinch Greenspace Steering Group, who have oversight of the Reserve’s management, the Highland Council as principle owners and Scottish Natural Heritage as a pre-requisite for future funding applications.

The plan was prepared during February and March 2008 by Bill Taylor, Toni Clark and Phil James with the assistance of the above named groups and organisations and many community members and activists. The timescale for the production was short which precluded a full consultation exercise but the information gleaned from those involved has been invaluable in determining the future direction of management for the reserve. A summary of the methodology for consultation undertaken is given in Appendix 1

The writers of the Plan wish to express their thanks to all those who have helped.

## 2. Vision Statement

The Management Group have a vision for what the Reserve can achieve in the next 10 years. This is as follows:

*To create the best Local Nature Reserve in Scotland: a place where people and biodiversity co-exist to each other's mutual benefit.*

With support from the community, from partners and from funders it is believed that the Local nature Reserve can achieve the following outcomes:

### **Merkinch Local Nature Reserve in 2018**

Merkinch Local Nature Reserve is 10 years old and is now seen as one of the most important local assets for the communities of Merkinch and South Kessock. It is widely recognised as the best Local Nature Reserve in Scotland: a place where people and biodiversity co-exist to each other's benefit.

Ten years ago it was scarcely known outside of the local community and many of them did not visit. Today people from other communities in Inverness come to enjoy the views, the walks and the wildlife. Many visitors to the City find the Reserve a surprising green haven away from the hustle and bustle of the City centre. Often the Reserve is an unexpected highlight for visitors making longer journeys around Inverness on foot or cycling.

Key to this transformation has been the community of Merkinch taking the Reserve to their heart. They have developed a sense of care and pride that has ensured that the Reserve is well loved and carefully managed, by them, for all the community and the wonderful array of wildlife supported by the Reserve. It is the development of local skills and expertise in management within the community that is one of the greatest testaments to the success of the last 10 years.

But it is not just the wonderful wildlife, the great views to the sea and to the mountains and the sense of space that attracts visitors. The Westfield Centre opened 6 years ago has been a great success and acts as a focal point for all that the Reserve offers. Winner of many awards for its visitor facilities, its sustainable design and its environmental programmes the Centre is a meeting place for groups, for old friends to have a coffee and enjoy the views over the Beaully Firth, and a location that employs many local people within the other associated businesses – all of which complement the ethos of the Reserve. It is here that business and the environment truly go hand in hand. The ongoing support of BTCV has been a key element in the success of the Centre.

The Centre also provides a focus for the many volunteers whose efforts have made the Reserve such a success. Here all their records of the 200+ bird species are kept and shared with the many bird watchers that use our hides. Here visitors can watch the kingfisher's nest on the latest CCTV monitors. And from here the management and monitoring of the lagoons is co-ordinated. The study of the delicate balance between the freshwater and saltwater vegetation is now in its 8<sup>th</sup> year and is yielding

interesting results that are helping scientists understand the effects of sea level changes in the Beaulieu Firth. The Reserve is also proud to have just celebrated its 5<sup>th</sup> PhD student who has worked on the site, and the partnership with UHI goes from strength to strength. Studies of the fascinating invertebrates on the Reserve are regularly revealing new species for the Reserve and it is one of the key sites within the Highland Biological Recording system. When it comes to biodiversity, there is always something wild going on!

The work that local schools have undertaken on the Reserve has meant that all local children have grown up with the Reserve as their local outdoor laboratory. The Highland Council Countryside Rangers have been a huge help with this work too. Creating the Learning Space on the Reserve website and the Virtual Library have been an important part of this and young students from the early years are now helping as adults, to ensure their kids get the same enjoyment from the Reserve as they did. Everything about the Reserve is helping the local community understand their relationship with the environment and helping to demonstrate the benefits of sustainable living.

For many a visit to the Reserve is not about learning or wildlife – it is just about enjoying a walk in a safe and beautiful environment with wide horizons over the sea to the mountains beyond. The early upgrading of the paths was a major stepping stone for the Reserve in opening the area up to a wider audience. It was through visiting and seeing first hand what the Reserve has to offer that the community got behind the developments that we see today.

For many the highlight of the Year is the Annual Reserve Celebration – and it is many things but it is not reserved! This has now become the key event for celebrating the wildlife diversity of the whole City and Merkinch is rightly proud of this responsibility.

Perhaps the greatest achievement is that it is the community itself that has achieved this through its hard work and commitment. A few people at the beginning had the vision and managed to pass this onto others who could share this, and the web of those involved spread. Now the management group are regularly called on to share their experiences and knowledge with others locally and further afield. What they have achieved is widely recognised as an outstanding example of community action benefiting all.

Merkinch Local Nature Reserve truly is a place where people and biodiversity co-exist to each other's benefit.

### 3. Site Description

#### Location

The Local Nature Reserve consists of land and foreshore to the west of where the river Ness enters the sea. To the south it is bounded by the Caledonian Canal, where it enters the Beaully Firth; the north western boundary of the Carse Industrial Estate and to the east by the main housing area of Merkinch. The northern boundary is down to the low water (spring) mark. See Map 1 for Boundary details

#### Site Ownership

There are two landowners. The majority of the site is owned by the Highland Council, with the area of wooded embankment leading up to the Muirtown Canal Basin owned by British Waterways (see Map 2). The railway embankments and crossings are excluded from the Reserve boundary.

The Reserve is managed by the steering group of Merkinch Greenspace. There are no members of staff currently dedicated to the management of the Reserve. The Highland Council Ranger for Inverness visits the site once a month.

#### Site Description

The total area of the Reserve is 54.7 hectares.

For the purposes of this Plan the Reserve has been zoned as follows (see Map 3):

##### Zone 1 Foreshore:

1a West Foreshore; area included in Westfield below

1b East Foreshore; east of the South Kessock ferry slipway and part of the intertidal area towards Carnac Point – 0.7 ha. Intertidal area between high and low water mark.

Zone 2 Westfield: bounded by the housing to the east, the railway to the south, the canal to the west and the low tide mark to the north) – 48 hectares. This is known as Westfield. Managed grassland, coastal grassland, stony beach, freshwater pools, reed-bed, wet heath, scrub and woodland.

2a North Amenity area;

2c North Entrance area

2e Woodland

2b South Amenity area

2d Wet grassland

2f Westfield lagoon

Zone 3 Kingfisher lagoon

Zone 4 Witches Coffin lagoon

Together these 2 areas, bounded by the railway, industrial estate and canal) cover 6 hectares. The area consists of grassland, mudflat, saltmarsh, saltwater, brackish pools, reed bed, scrub and woodland.

## Site History

The area has been affected by significant periods of construction which can be summarised as follows:

|          |                                     |
|----------|-------------------------------------|
| 1803-22  | Building of the Caledonian Canal    |
| 1834-35  | Building of the seawall             |
| 1861-62  | Building of the Railway             |
| 1930-40  | Building of Merkinch Housing        |
| 1980-90s | Building of Carse Industrial Estate |

Up to the late 18th Century the Merkinch was an island. The River Ness had two outlets; the one we see today and another, which left the river-course in the vicinity of what is now Wells Street. The Roy map of 1747-55 shows this outflow to the Beaully Firth had been filled in.

The mouth of the former outlet of the River Ness was very wide and stretched in an arc from Clachnaharry across the then smaller Carse lands to the South Kessock Pier. At this time there were unenclosed strips of cultivation but little in the way of buildings apart from the ferry cottage.

The outlet from the Ness was filled in to become, in time, Abban Street (the word Abhainn in gaelic means, a river). The much increased flow of water, which surged through the remaining outlet of the river contributed greatly to the later development of industry on the Merkinch and the Shore Street banks of the Ness. The building of the canal started in 1803 and was completed and opened in 1822. Muirtown locks were built in 1813, thus separating the site from the village of Clachnaharry.

Additional changes were created by the construction of the seawall, thought to have been built in 1835, that runs from the canal to the old ferry slipway, enclosing the mini-estuary.

This enclosed (presumably drained) field systems. Sluices in the sea wall allowed some tidal flow allowing the salt marsh and mudflat to remain, though these were no doubt made to allow water flowing from the wetlands out to sea. The next major event was begun in December 1861, when the keystone of the original Ness Viaduct was laid. The swing-bridge over the Caledonian Canal was completed soon after, and the section between Inverness and Dingwall was opened on 11th June 1862. This finally cut off the area to the south east of the line from the sea and creates the freshwater lagoon to the north of the railway embankment. A burn still flows parallel with the canal at the bottom of the southern embankment.

No open water was mapped on the first OS map in 1870 but the lagoon area was noted as "liable to flood". In the 1900 OS map a lagoon was noted behind the sea wall and the remaining area behind the sea wall is mapped as wetland.

In the ten years between 1930 and 1940, four hundred and ninety dwellings were constructed on the South Kessock site. The accommodation provided was a mix of houses, and two storey flats ranging in size from 2 to 5 apartment..

## **Access to Reserve**

The LNR is within walking distance of the main housing areas of Merkinch, South Kessock and the village of Clachnaharry. This comprises a total population of 12,331 (2001 census). The entire population of the City of Inverness (67,700 in 2004) is within 5km of the reserve. The immediate housing area has a population c 4,500 and has ready access onto the reserve, either from the access point at the Turning Circle or from 4 pedestrian accesses between the houses off Carnac Crescent.

Bus access is available through a regular half-hourly service from the City Centre (No 14) during the day and an early morning (into town only) and evening service (No 2&3). There is a Sunday Service (No 66) from 1200 until late evening.

Car parking for 15 cars is available at the turning circle at South Kessock and there is also parking available at the south end of Muirtown Locks (800m from Reserve entrance). There is very restricted parking at Clachnaharry village.

## **Physical Information**

Inverness is relatively dry for the Highlands and Islands with an annual average of 640mm 1781-1972.

|                        |         |         |     |
|------------------------|---------|---------|-----|
| Mean daily temperature | Maximum | January | 5C  |
|                        | Minimum | January | 1C  |
|                        | Maximum | July    | 17C |
|                        | Minimum | July    | 11C |

## **Hydrology**

The site is a complex one with the area to the west of the sea wall and north of the railway being entirely below the High tide line: the area to the south of the railway is subject to tidal inundation at the higher tides. This area will have considerable diffusion of saline and freshwater particularly after periods of heavy rain. There is freshwater flow from the SE into this area, and at low tide this input can dominate. The south and west of the Westfield itself is also subject to flooding and maintains a high water-table.

At this stage it is impossible to say what the impact of sea level rise will be on the Reserve apart from the fact that the area will inevitably become wetter. There are likely to be more occasions when the influence of saline conditions will prevail and this will have an inevitable impact upon the vegetation communities present.

## **Geology/Geomorphology**

The Reserve is underlain by Middle Old Red Sandstone and lies just to the west of the Great Glen Fault. Prior to the construction of the seawall in 1835 the area would have had a superficial covering of glacial material. It is expected that this material was excavated to create the pool areas both north and south of the railway line and may have actually been used in the construction of the railway embankment. The surface of the site has been heavily influenced by periods of construction as outlined in the history of land use above

## Biological Information

The Reserve has no conservation designations applicable to the site. The Low Water Mark is the southern boundary of the Moray Firth European Special Area of Conservation – for protecting the famous population of the northern bottle-nosed dolphins. To the west of Clachnaharry is the Inner Moray Firth Special Protection Area for birds, another EU designation.

## Habitat information

Current knowledge of the vegetation of the Reserve is limited and dated, and is based on species lists (limited to vascular plants) from 1995 with no spatial referencing, and a Phase 1 map of similar age with no supporting species data. To inform management of the site, full species and habitats information is required as a first step, with supporting information on the hydrology to help understand the present dynamics and future trends.

The following are available as survey results from the past

1. Gallagher, P (undated). Inverness District Phase 1 Habitat Survey 1992 to 1995. Unpublished, copy supplied by THC, original held by SWT.
2. Vickers, W (1996). Management Plan, Muirtown Basin, Westfield, South Kessock, Merkinch. Unpublished, copy supplied by THC, original held by SWT.

The only mapped survey is from the Scottish Wildlife Trust's Phase 1 survey from the early 1990s. The site was mapped at a scale of 1:10,000, and was verified as largely accurate, by the authors. There is an accompanying target note as follows:

*Muirtown Pools. Area of high habitat diversity with mudflats supporting wading birds, brackish pools with small areas of saltmarsh, freshwater pools with reed beds dominated by reedmace (Typha spp.) (with swans and other birds nesting), and area of scrub to the north-east and a wooded area with a variety of ground flora on the embankment by the canal basin. The north-eastern pool by the scrub supports a small area of saltmarsh, with an area dominated by wet heath adjacent supporting species including cross-leaved heath (Erica tetralix) and bog asphodel (Narthecium ossifragum). This is a very unusual habitat combination. Some development for public access has taken place with boardwalks and footpaths. However, it is unclear whether the management of this interesting site has been considered beyond that of amenity improvement.*

Eight distinct habitats were mapped in that survey; these are saltmarsh, swamp, scrub, scattered scrub, scattered trees, tall ruderals and wet modified bog (as well as amenity and improved grassland). These do not match the above quoted paragraph well, and the areas of scrub and tall ruderals are not now shown in that survey, almost certainly due to management activities.

Vickers (1996) describes coarse grassland, gorse-dominated scrub, recently-planted woodland, species-rich fen, stands of tall ruderals, saltmarsh, and other unclassified

vegetation possibly best described as species-rich grassland with varying brackish influences and stands of invasive herbs. The following points arise from this report:

- The vegetation in the wet corner north of the railway line and east of the sea wall is dominated by *Eriophorum vaginatum* (Hare's-tail cotton-grass) and *E. angustifolium* (Common cotton-grass), with some *Juncus gerardii* (Saltmarsh rush), *Eleocharis uniglumis* (Slender spike-rush), *E. palustris* (Common spike-rush) and *Triglochin maritimum* (Sea arrowgrass).
- The wooded area had only recently been planted (1994), and at that time was dominated by tall ruderals, especially *Chamerion angustifolium* (Rosebay willowherb), and some dense stands of *Ulex europaeus* (Gorse).
- Four orchids were recorded: *Platanthera bifolia* (Lesser Butterfly Orchid), *Gymnadenia conopsea* (Fragrant Orchid), *Dactylorhiza maculata* (Heath Spotted Orchid) and *D. purpurella* (Northern Marsh Orchid).
- Plants were recorded in all areas (except the grassiest parts closest to the houses) that are indicative of brackish conditions.

A species list from Vickers (1996) is provided in Appendix 2.

As part of the preparation of this plan the above work was assessed. Due to the seasonal, climatic and water-level conditions this was very limited. No attempt was made to map habitats as a thorough survey will need to be carried out soon. The current assessment is that there are at least six broad habitat types: marshy grassland, broadleaved woodland, scrub, saltmarsh, swamp and wet modified bog.

- Marshy grassland includes the largest proportion of the grassland between the seawall and the new woodland. It is dominated by grasses, sedges and rushes, and there are signs of a varied herbaceous flora (confirmed by Vickers species list).
- Wet modified bog is only present in a small area to the north of the railway, and is dominated by *Eriophorum spp* (Cotton-grasses) and *Narthecium ossifragum* (Bog asphodel). Small areas seem to be 'quaking', ie are floating mats of peat. No *Sphagnum* mosses were seen on our visit, although they are mentioned in Vickers (1996). Note that there is a large and varied transitional zone between this and the surrounding marshy grassland, and that there is occasional alder and willow regeneration on both the marshy grassland and the bog.
- There are two separate stands of woodland: one is a narrow well-established strip on the canal embankment; the other comprises recently planted trees and a small contiguous strip that extends along the railway towards the houses at the corner of Carnac Crescent and Rosehaugh Road. The former contains mature ash, birch and sycamore, with an occasionally dense underscrub and a field layer that resembles a recognisable woodland plant community (with ivy, honeysuckle, roses, brambles and many ferns). The latter comprises pole-stage alder and birch with a little oak, rowan, ash and several shrub species. Although the field layer is poorly developed, it is starting to take on the character of lowland alderwood, with brambles, nettles and coarse grasses.
- There are several stands of gorse which in many places are interspersed with a variety of other shrubs (including elder, flowering current and snowberry).

The total area of scrub seems to be much less than in the mid 1990s, presumably due to cutting and some stands being subsumed into the newly-planted woodland.

- Neither the saltmarsh nor the swamp have been examined in any detail.

## **Species Information**

71 records were obtained from the Highland Biological Recording Group and these are available as Appendix 3

### **Mammals**

There are records for otter, stoat, common shrew and roe deer. The water vole, which is an important UK biodiversity species, is not recorded from the site, but would be worth assessing for presence or absence.

### **Birds**

The Reserve provides a rich diversity of habitats for birds. Although it is not recognised to the wider public as a place to go bird watching the reserve does offer good opportunities to see, waders, ducks, passerines and occasional migrants. A strong point is the diversity of species that can be seen in the one location.

The foreshore is an important element of the whole Beaully Firth system which is protected for the following species that are found in the area in significant numbers:

Summer – osprey, common tern

Winter - Bar-tailed godwit, Greylag goose, Red-breasted Merganser, Redshank

Appendix 4 lists the specific conservation interests that have led to this designation.

The foreshore of the Reserve is counted every month in the winter as part of the national Wetland Birds Survey. The records for the years 2000-2004 and the most recent count for Feb 2008 are attached at Appendix 5

Bird records were obtained from Al McNee the Inverness and Nairn County Recorder These list 46 species of bird known to breed and a further 104 species recorded (see Appendix 6).

### **Butterflies**

11 species of butterfly have been recorded. Further work would be worthwhile for this group

### **Dragonflies**

Only 2 species have been recorded. Further work required

### **Beetles**

Only 3 species recorded, again further work required

### **Bugs**

24 species have been recorded

## **History of past site management**

- 1978 Merkinch Community Council – created viewing point on the banks by the shore overlooking the Beaully Firth. Two benches installed. Improvement of standard of housing was felt to be of greater importance at this time so no more done. Houses were renovated a few years later.
- 1982 Ferry between South and North Kessock withdrawn
- 1991 Fly-tipping cleared up by local residents. NCH Action for Children Girls' Group entered Grizzly Challenge run by Youth Club Scotland – they won equal first prize. (Pop. Of Merkinch 4304)  
Mott MacDonald – landscape improvement opportunities plan drawn up for area between railway line and turning area and sea wall and back of Carnac Crescent.
- 1992 Area put forward as a Beechgrove Garden project. Area was tidied, made more accessible, first phase of tree and shrub planting (eg. Eucalyptus at entrance). South Kessock Project born at this time.
- 1993 South Kessock Dolphin-watch group formed at Merkinch
- 1994 Merkinch Community Council approached Highland Council for the lease of the Old Ferry Ticket Office. Opened to public on 28<sup>th</sup> August.  
Environmental Award from Inverness District Council for contribution to National Spring Clean Week. Small scale survey of visitors to turning area
- 1995 South Kessock Community Project. 3.5ha planted with native trees  
Further phases – extending the boardwalk to provide circular walks, extending the tidal pond, improving riverside views, improving coastal path for disabled access  
SK Project won 1<sup>st</sup> place in OCS/Keep Scotland Beautiful “Clean Up Scotland Challenge”  
Funding obtained for LIFE project proposal “Exhibition and feasibility plan at South Kessock ticket office”  
Beaully Firth Study group “The Future of the Beaully Firth – A public consultation and review.”  
Compartments and site survey by SWT
- 1996 Management Plan prepared by W Vickers for SWT
- 1999 Included in School's Out! Site Guide for educational visits
- 2007 Bid for developing replacement for Old Ticket Office fails
- 2007 January – Merkinch Greenspace approach Highland Council re LNR  
November – Council endorse designation of LNR

## **Current usage**

At the time of the preparation of this plan and from talking to and observing visitors the main reasons for visiting the Reserve area are currently:

Walking, dog walking, relaxing and exercising.

Dog owners appear to either let their dogs run around the short grass area and shoreline at the turning circle, accompany their dogs along the sea wall or through the trees. Those accessing from Carnac Crescent appear to allow their dogs to run about unaccompanied in the mowed areas and the trees. There is one dog bin at the turning circle.

Those visitors arriving in a vehicle mainly remain in or close to their vehicle at the turning circle and enjoy the view. It is a popular lunch spot with local workers. Most people arrive on foot from Merkinch with fewer accessing from the Canal and the majority staying on the seawall. The boardwalk and paths through the woods are used to a lesser degree due to a lack of confidence it is safe to do so and lack of a clear route. The seawall forms part of longer walking routes from Scorguie, Muirtown and Clachnaharry. There is some use of the seawall by cyclists.

The football pitches are popular being used daily during late spring – early autumn - the use of the two pitches is switched every two years to avoid over-use. Local children play informally in the open and treed areas.

At the time of writing there was a problem with illegal use of the site by motor bikes. Up to 6 bikes appear to use the site, with some of the riders being local, but others come from outwith the area. This use has caused significant tracking through areas of amenity and conservation value. Access to the site is from the Carse Industrial Estate up the side of the Canal towpath and onto the seawall, or through the various access routes from Merkinch

#### Existing Management Arrangements

The Highland Council currently maintains a large part of the Westfield area adjacent to the housing, as amenity grassland. The following management is undertaken

- 1 Main area of grass is mown to General Amenity standard - fortnightly cut with rotary mower.
- 2 Perimeter grass is mown to Low Amenity standard - monthly cut with flail mower.
- 3 There is no scheduled grass cutting among the trees planted on the site.
- 4 Two kick-about pitches are occasionally marked out.
- 5 The fence line is periodically strimmed / sprayed.

#### **Turning Area**

- 1 Main area of grass is mown to General Amenity standard - fortnightly cut with cylinder mower.
- 2 The sloping area is Low Amenity standard - monthly cut with a strimmer.
- 3 An area of shrub planting is visited monthly to carry out tasks according to season.
- 4 The dog bin is emptied weekly.

Litter collection is part of each task on site.

## **Interpretational, educational and other facilities**

Signage - There have been a series of panels/boards near the turning circle none of which remain today. The Paths in Inverness finger posts are in place as is one small “welcome” sign to the Westfield. (See Appendix 7)

The main source of information is the information centre at the Old Ticket Office run by local volunteers lead by Dell McClurg. This is open on Sundays in the summer months and provides a valuable social setting for the community to meet informally and provide information on the wildlife of the area for children and adults alike. Local schools are able to make visits to the information centre by prior arrangement.

At present, Merkinch LNR area does not appear in any other literature promoting areas of wildlife interest. An annual litter pick has been run from the information centre since it opened in 1994. The Highland Council Countryside Rangers have on occasion put on walks here and accompanied groups (such as guide groups) doing some practical activities. Other groups visit the Reserve independently, however there are no records of the level of use.

## **Surrounding communities and relationship to other greenspaces**

The LNR can be a key means of helping to deliver the Inverness Greenspace Strategy 2007-09. The Strategy’s primary focus is to maintain, restore and manage urban greenspace to ensure that people can access greenspaces to meet their physical, social and psychological needs. This will be achieved by protecting, enhancing and creating important landscape, recreation and wildlife features.

The main objectives of the strategy and action plan are.

- Identifying the value that greenspaces have to communities and biodiversity.
- Improving existing and new greenspaces that are valued by communities.
- Sustaining these spaces through long term management plans.
- Making greenspaces more accessible to a wider group of users and maintains and develops connectivity.
- Promoting and publicising the value of greenspaces.
- Developing guidelines for planning and development of existing and new greenspaces that are relevant to the area.
- Influencing the policy, agenda and work of partners.

Critically there are three overarching outcomes identified in the action plan, these are;

**Outcome 1** – greenspace in Inverness will be fit for purpose.

**Outcome 2** – The value of greenspace to the success of Inverness will be recognised by all key partners.

**Outcome 3** – Partnership action on greenspace is sustained.

The Strategy identifies South Kessock/Muirtown Basin as important sites for habitat. It also contains within the Action Plan the need to *Develop or improve existing and new greenspaces that are valued by communities and of benefit to Biodiversity* and that Greenspace Inverness would *Work with Merkinch Greenspace to establish Westfield as a Local Nature Reserve with The Highland Council, SNH, British Waterways, greeninverness, RSPB, BTCV, and Merkinch Enterprise as partners.*

Additionally the Strategy specifically identifies the potential to carry out biological recording within the area and the creation of a biodiversity record. Finally the Strategy also supports the creation of a Green Gym in the area and an increase in visitors to the canal network. A comprehensive summary of all other policy links is provided in the Strategy on p50-54

The Reserve is well placed to assist in delivering these outcomes as it is located next to communities that demonstrate some of the most persistent challenges in terms of standard measures of socio-economic activity. Merkinch North, South Kessock and Merkinch East are all in the 5% most deprived data zones in Scotland. Merkinch South is in the 5-10% most deprived. In terms of income all Merkinch data zones are in the worst 5% in Scotland.

The communities surrounding the Reserve have to deal with a range of issues associated with social need. The figures for the Merkinch, South Kessock and Clachnaharry areas reveal that the population shows above average Scottish levels of teenage pregnancies, smoking during pregnancy, lone parent households, hospital admissions through stroke, diabetes, alcohol and self harm and death through cancer. On the plus side the communities do have lower than average infant mortality, overcrowding and drug related deaths. The area also has below average numbers of retired people and ethnic minorities.

The communities have made considerable efforts to address these issues and a huge effort has gone into engaging the community and resolving many of these problems.

The Reserve, and associate amenity area, provides one of the few outlets for outdoor activity for the population. The only other outdoor access opportunities are provided by the Canal towpath.

For the wider population of Inverness the Reserve provides one of the few opportunities to access a relatively unaltered shoreline, with outstanding views to the west, north and east. The lagoons themselves are a unique feature for Inverness.

## **Key Issues for the Management Plan to Address**

The following issues have been identified through the consultations undertaken in the preparation of this plan and through assessment of the current situation on the Reserve.

### **Main issues:**

- People appear to like the area and would like to spend more time there. Words used to describe the area – invigorating, unsafe, pleasure, freedom – open space.
- Lack of knowledge of what the Reserve area has to offer is limiting people's use of it
- Improvements to paths requested by many – better surface, vegetation cut back, low-key signing/information of opportunities.
- Lack of seating
- The noise and disturbance by the trails bikers is a major concern.
- Dog fouling and stray dogs
- Litter is considered a problem to a lesser degree, but it does impact upon the perception of care that the Reserve should demonstrate

### **Main improvements (out of c30)**

- More/better paths – walking and cycling 60%
- More seating 63%
- Visitor/information centre 60%
- Events to take part in 60%
- Warden/ranger service 57%
- Better signage 50%

### **Other important issues relating to the management of the Reserve are as follows:**

- The level of knowledge of the biological assets of the Reserve is limited and does not allow for detailed management prescriptions to be determined at the moment
- The Reserve is subject to various anti-social behaviours which have to date proved difficult to resolve
- The Reserve is little known outside the Merkinch community and its status locally is not adequately recognised
- The provision of the old ticket office as a focus for environmental and heritage education is under threat

## **4. Assessment - Criteria for Designation:**

### **Natural heritage**

Merkinch Local Nature Reserve is a unique area for Inverness city. It provides a range of coastal and intertidal areas that are more accessible than elsewhere. It has a wide range of habitats from woodland, through scrub, to wet grassland, fen, open water and even small areas of salt marsh. As a site it represents a very wide spectrum of habitat types available in the Inverness area.

The site is an important element of the Beaully Firth estuary system, which is of national importance for its birds and it also is on the southern edge of the range for the Moray Firth dolphins.

The area provides wide expansive views to the north and west but also provides access to more intimate connections with wildlife. The site has been heavily altered during many periods of large scale development, but it has been relatively undisturbed for many decades now allowing more natural processes to become established.

The dynamics of the site are yet to be revealed, but it is to be expected that the lagoons will be displaying gradual encroachment of more terrestrial habitats and that some areas of marshy grassland and wet modified bog may be becoming more wooded, although there have been past efforts to limit this.

### **Biodiversity**

The Reserve contributes to the delivery of the Inverness and Nairn LBAP, which is currently under review. The following represent some of these significant contributions as identified in the existing LBAP or suggested for the review:

#### Urban Actions

1. Use existing HEN – “Schools out – fieldwork made easy” publication to identify the best biodiversity sites that are suitable for access by members of the public for informal education and fun!  
Responsibility Highland Biodiversity Officer
2. Update and reprint the Inverness – City Wildlife leaflet – including reference to the Reserve  
Responsibility Inverness and Nairn Countryside Rangers
3. Develop a wildflower meadow on the Westfield in Merkinch LNR.  
Responsibility Merkinch Greenspace
4. Development of the Merkinch Local Nature Reserve and the drafting and delivery of its management plan.  
Responsibility Merkinch Greenspace

#### Marine and Coastal Actions

1. Merkinch LNR Beach Clean and survey  
Responsibility Merkinch Greenspace

2. Potential to develop a new viewing facility in the Inner Moray Firth  
Responsibility RSPB/RSPB Members Group

#### Farm and Croft Land

1. Encourage maintenance or enhancement of semi-natural, damp or open grassland areas that have significant local biodiversity interest. Eg avoid planting with trees or short rotation coppice.  
Responsibility to be determined

The site has insufficient data to determine whether there are any species of significance but the following should be taken account of in future management:

Winter waders, migrant birds, kingfisher, otter and possibly water vole

The close proximity to the bottle-nosed dolphin population is also of note

#### **Local distinctiveness**

The Reserve is unique in its range of habitats, its proximity to 25% of the population of Inverness and its relationship to the marine and intertidal zone.

#### **Benefits to people and communities**

The area that makes up the Reserve is already a popular area with the local community and its benefits can be seen in the words used to express how the area makes people feel (Ref: Merkinch LNR survey 2008) By far the majority chose words such as “Relaxed” “Happy” “Invigorated” “Safe” “Energetic” “Comfortable” and to a less degree “Sad” “Cautious” “Unsafe”

Activities identified as providing health and social benefits include:

walking, dog walking, cycling, Relaxing, exercising, kids playing, playing football/rugby, socialising

There is a lack of social facility in this part of Merkinch and the role of the information centre, which is open on Sundays during the summer, provides many members of this community with an opportunity for socialising outside their homes.

During recent years there has been considerable national research and promotion of the value of “Greenspace” for both physical and mental well-being.

Refs:

1. 2005 Scottish Government Sustainable Development Strategy – the well-being of Scotland’s people.
2. “Making the links – Greenspace, health and well-being” quality of life and greenspace research commissioned by Communities Scotland, Greenspace Scotland, NHS Health Scotland and Scottish Natural Heritage. 2006
3. Forestry Commission Scotland “Woods for Health Strategy 2007”

Key points from these studies are:

- Access to appropriate, good quality greenspace can have a positive impact on both mental and physical health.
- A lack of access to appropriate, good quality greenspace can have a negative impact on mental and physical health and well-being.
- Differential access to greenspace may be a contributory factor to the inequalities in health and life expectancy which are a current feature of life in Scotland.
- Views of the natural environment can improve recovery from illness.
- Effects on mental health and well-being may be linked, through stress biology, to the risk of heart disease.
- Level of access to appropriate greenspace can influence how much physical activity is undertaken by people living in an area, which will, in turn, affect levels of cardiovascular disease.

### **Involving people and building stronger and safer communities**

The Reserve is an area well used and enjoyed by the community, with a great deal of scope for formal and informal environmental education. It is identified as an important area of greenspace within Inverness, with the only area of easily accessible foreshore in the city.

Merkinch Greenspace are keen to maximise the positive management of the Reserve, so that the area can give maximum benefit to the local community and Inverness as a whole.

There is great scope for involving the community in monitoring and managing the biodiversity of the site, building their skills and knowledge. There is also considerable scope for raising the profile of the site to the citizens of Inverness and also to the many tourists who visit and who will be unaware of this excellent site so close to the city centre.

Developing the Reserve as a place that is valued by the local community and the residents of Inverness will go some way to helping the self esteem of the community and help develop a sense of local pride in their local environment

There is potential for BTCV to set up a Green Gym based around the Reserve. This provides a weekly opportunity for local volunteers to be active outside and benefit physically and mentally from this activity

### **Environmental education, lifelong learning/understanding and awareness of the natural heritage**

The diversity of habitats on site and easy access from the local school, and also schools in central Inverness, mean that the Reserve provides substantial opportunities for formal environmental education. The Curriculum For Excellence, along with Sustainable Development Education, provides a strong basis for teachers to look for opportunities in all subject areas for taking classes out-of-doors. A vehicle for this is

the work schools are being required to do towards attaining one of the Eco Schools awards – Bronze, Silver, Green Flag. Schools are also looking for a wide range of activities geared to good health – both physical and mental. There are also opportunities to take part in initiatives such as the John Muir Award

The work of Merkinch Greenspace has already begun engagement with the community and the work of the Highland Council Countryside Rangers with schools and community groups such as Guides and walking groups. To celebrate the opening of the reserve a series of events over 2 weeks are planned for late May/early June 2008. This should be reviewed and consideration given to having an annual event. These events would foster a sense of ownership amongst the young people in the area and encourage exploration and investigation of the Reserve through events.

Other formal education opportunities exist for colleges/universities – course work and research projects linked to Environmental Studies, tourism and land management. UHI Millennium Institute and Inverness College are on the doorstep of the reserve and can provide a lot of formal and informal links with the local community in relation to activities on the Reserve. This can include involvement in certificated courses and provision of specialist training. e.g. the College is keen to develop Horticultural courses which may link in with some of the community initiatives associated with the reserve - wildlife friendly gardening etc. as well as more practical conservation training days. The College delivers the Highers course in Managing Environmental Resources, and also Higher Biology, and the Reserve is a great resource for local field visits and survey work. Links with the wider UHI can be through the local point contact of Inverness College and this has the potential to deliver a range of research and survey through involvement of students and through dissertation projects at undergraduate and postgraduate level.

Within Inverness there are several groups concerned with the natural environment and health that might well be interested and benefit from visits to the Reserve. There is also scope through this local connection with the site for innovative interpretation, both temporary and permanent, on the site.

### **Access**

The Reserve is very accessible to the local population and is well served with bus access and car parking. The site contains 2 candidate Core Paths, as identified by the Highland Council. These are:

- Ref 319.031 South Kessock Pier to Caledonian Canal (Muirtown Basin)  
length 0.9km
- Ref 319.067 Westfield Paths, boardwalk, path (earth)  
length 0.8km

The identification of these paths places duties on the Council to ensure they are signposted, put on the OS Map and listed. As the land is currently owned by the Council there is potential that some of the annual budget for core path management could be spent in this area. The Council have the power to keep the path clear and to manage the path.

## 5. Aims and Objectives

The following outlines what is wanted out of the site, and what roles the site can fulfil.

### Reserve Aims

These are overarching aims which the reserve must deliver on if it is to achieve its vision of being the best Local Nature Reserve in Scotland: a place where people and biodiversity co-exist to each other's mutual benefit

1. To increase the benefits to individuals and communities through active involvement with the reserve.
2. To celebrate the biodiversity value of the reserve through the conservation and sustainable management of its habitats and species
3. To maximise the learning opportunities afforded by the reserve, and to communicate the importance of biodiversity to the local community, Inverness residents and visitors to the area
4. To improve and upgrade access provision to and within the reserve.
5. To establish governance for the reserve that will sustain its management through innovative access to funding sources
6. To deliver best practice management for a Reserve that will be an exemplar for other reserves

### Reserve Objectives

The following are the objectives that will allow the delivery of the aims above:

Aim 1 To increase the benefits to individuals and communities through active involvement with the reserve.

#### Objectives

- a) Provide seating on seawall and near entrance to Westfield.
- b) Set up local walking group
- c) Encourage existing groups to use the Reserve for physical activity.
- d) Promote Reserve facilities to all local GP practices
- e) Local community to produce leaflet describing length and times of walking routes available
- f) Maintain football pitches for all-year use
- g) Train local people to act as volunteer Reserve rangers, guided walk leaders, providers of information, basic interpretive techniques, biological recording

Aim 2 To celebrate the biodiversity value of the reserve through the conservation and sustainable management of its habitats and species

Objectives

- a) The Reserve maintains a detailed inventory of habitats and species
- b) The Reserve is identified within the LBAP as an important site for delivering biodiversity objectives for the area
- c) The Reserve is a place where practical conservation work is promoted
- d) The Reserve is a place where students and researchers provide valuable management support information

Aim 3 To maximise the learning opportunities afforded by the Reserve, and to communicate the importance of biodiversity to the local community, Inverness residents and visitors to the area

Objectives

- a) All interpretation delivered through up-to-date interpretive plan
- b) Provide programme of 10 events/year open to all
- c) Produce low-cost leaflet outlining what Reserve has to offer in terms of biodiversity, paths, and “facilities”
- d) Establish a clear Welcome/entry point at the roundabout/entrance to Westfield.
- e) Construct bird-blinds
- f) Include in any wider publicity about Inverness
- g) Work in partnership with the information centre in the ticket office
- h) Look into the feasibility of developing a visitor centre/learning resource for the Reserve and surrounding area

Aim 4 To improve and upgrade access provision to and within the Reserve.

Objectives

- a) Improve existing routes to provide dry, firm surface, clear of vegetation and accessible to all
- b) Provide 300m all-ability path from turning area
- c) Provide ramp off seawall onto boardwalk
- d) Promote routes suited to cycles
- e) Access points for motorbikes closed off where possible

Aim 5 To establish governance for the reserve that will sustain its management through innovative access to funding sources

Objectives

- a) The Reserve has its own management group which is responsible for the Reserve to funders and partners
- b) The majority of the Reserve is leased/owned by a formally constituted group
- c) The Reserve extends to include Carnac Point to ensure its long term management for local access and amenity

Aim 6 To deliver best practice management for the Reserve that will be an exemplar for other reserves

Objectives

- a) To maintain an up to date Health and Safety policy following risk assessment for visitors to the Reserve
- b) The Reserve employs a range of locally based people, and utilises a range of local groups, who are central to delivering the management plan
- c) To undertake an annual visitor survey
- d) The management group regularly report back to the community on progress on the Reserve
- e) The Reserve produces an Annual Report for the community, funders and partners
- f) The Management Plan is reported on every year and is reviewed every 3 years
- g) The management group undertake 'Learning Visits' to other LNRs and host similar groups

## 6. Methods

This section identifies the action to be taken, and the resources that will be needed to achieve each of the objectives listed above. Appendix 8 lists a range of funding opportunities that present themselves at the time of writing.

### **Aim 1 To increase the benefits to individuals and communities through active involvement with the Reserve.**

#### **Objective 1a Provide seating made from stone/wood on seawall and near entrance to Westfield.**

Opportunities should be created for visitors to sit and enjoy the views and for relaxing and socialising. It is proposed that seating be provided at 2 locations on the seawall within 100m of the start for the path from the roundabout and 100m north of the railway crossing. These should be simple stone or wood benches and should, if possible incorporate inset footprints of relevant wildlife eg otter, roe deer, redshank, heron, mallard.

Additionally it is proposed that communal seating be installed within the sheltered grassy area to the east of the northern start of the seawall. This is a pleasant area where families should be encouraged to picnic.

Costs for such installations vary dependant upon choice and budget as examples, rustic benches carved from green oak can cost up to £1000 each , whilst ‘off-the-peg’ softwood benches will be £250+

Measure 1: 2 benches on the seawall and communal seating in place by end 2008

Methods: Decide on location, budget and design

Resources Merkinch Greenspace

#### **Objective 1b Set up local walking group**

**The Reserve can act as a focus for encouraging the establishment of a local walking group. This will contribute to the Merkinch Sports Plan currently being delivered by Merkinch Enterprise. (Mar 2008)**

Measure 1: A programme of opportunities for walking as part of a lead-group be established by 04/09

Methods: Assess interest, walks assessed and programme promoted, leaders trained, programme promoted.

Resources Step it Up Highland/Paths To Health; Escape group members

#### **Objective 1c Encourage existing groups to use Reserve for physical activity.**

Every opportunity should be taken to promote the Reserve as a place for informal countryside access with outstanding views and interesting wildlife

- Measure 1: More groups from both within and outwith Merkinch are using the Reserve area for their activities.
- Methods: Promote reserve to local groups in Inverness with an interest in both wildlife and health and well-being.
- Resources: Health centre staff, promotional materials

#### **Objective 1d Promote Reserve facilities to all local GP practices**

The Reserve can act as a focus for encouraging short walks for those within the community who need encouragement to take more exercise. This should be promoted to all GP practices.

- Measure 1: all GPs are aware of the recreational opportunities of the Reserve
- Methods: Contact all GP practices within 2 kms of Reserve
- Resources: Merkinch Greenspace/NHS Highland

#### **Objective 1e Local community to produce leaflet describing length and times of walking routes available**

The opportunities available within the Reserve, for access and enjoyment are little known outside the immediate community. The community should develop a promotional leaflet that provides essential information about what walking can be done on the Reserve.

- Measure 1: Leaflet produced by September 2008
- Methods: Reserve Steering group to approach Merkinch Enterprise to identify local expertise/interest
- Resources: Merkinch Enterprise

#### **Objective 1f Maintain football pitches for all-year use**

The football pitches are a vital local recreational asset and they should be protected and maintained to their current standard. The level of useage should be recorded and if this appears to be limited in the future, then efforts should be made to promote greater use. If this fails then other uses should be considered beyond the time scope of this plan

- Measure 1: Establish level of use, set up maintenance regime as required,
- Methods: Grass cutting, line marking etc within current maintenance schedule
- Resources: TEC

**Objective 1g Train local people to act as volunteer Reserve rangers, guided walk leaders, providers of information, basic interpretive techniques, biological recording**

Personal contact with local people can be an important promotional tool for the Reserve. The active involvement of local volunteers to provide this service for, local visitors, groups and outside visitors should be encouraged. This should ensure quality in terms of information, knowledge and delivery and this should be developed through accessing appropriate short courses for interested local volunteers

- Measure 1: Six members of local community are trained to operate as voluntary Reserve rangers, assist within the information centre and are able to carry out biological recording as necessary by 04/09
- Methods: Volunteers shadow Dell or other EE providers, attend training courses run by Merkinch Enterprise
- Resources: Merkinch Enterprise, Training providers, Countryside Rangers,

**Aim 2 To celebrate the biodiversity value of the Reserve through the conservation and sustainable management of its habitats and species**

**Objective 2a The LNR maintains a detailed inventory of habitats and species**

Re-survey the whole Reserve during season 2008/09 using both Phase 1 and NVC to arrive at sensible short, medium and long-term management goals. A survey of alien invasive species should be carried out simultaneously.

Survey work will involve compiling species (lower and vascular plant) lists for mapped compartments, which will need to be drawn based on NVC where possible and Phase 1 elsewhere. Likely identifiable habitats include marshy grassland, broadleaved woodland, scrub, saltmarsh, swamp and wet modified bog.

Due to the complexity of the site and restricted access to some parts (dense undergrowth and very soft ground), ample time should be allowed. It is estimated that at least four days should be allowed for fieldwork, with some doubling up for health and safety reasons. Allowing for a daily rate of around £250 this should attract interest from suitably experienced surveyors. Advice can be sought from SNH on appropriate surveyors.

With the availability of information on the habitats and species it will be possible to determine management objectives for biodiversity. This will have to take account of increased knowledge about the hydrology of the Reserve.

- Measure 1: Detailed species and habitat mapping available to at least Phase 2 and identifying NVC communities and guidance on initial management needs

|                   |                                                                                                                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Methods:          | Undertake commissioned survey work to provide baseline species and habitat details                                                                                                                                                                                                                             |
| Resources:        | Highland Council funding, SNH                                                                                                                                                                                                                                                                                  |
| <u>Measure 2:</u> | Database of all species and habitats maintained.                                                                                                                                                                                                                                                               |
| Methods:          | Identify and promote recorder for Reserve<br>Establish links with HBRG, RSPB, County Recorder and Inverness Bird Group and Field Club<br>Ensure suitable facilities are available for storage and retrieval of records                                                                                         |
| Resources:        | Contract staff and development of data storage facilities<br>Potential (Esmee Fairbairn Foundation, SNH, Highland Council)                                                                                                                                                                                     |
| <u>Measure 3:</u> | Draw together all data gathered on species, habitats and hydrology and formulate a sensible scheme of management to preserve and enhance the Reserve's biodiversity.                                                                                                                                           |
| Methods:          | Initial survey work provides guidance on appropriate management and on priorities for maintenance of biodiversity. When hydrological understanding is available (see 2d2 below) then contract specialist to provide long term objectives for management to maximise biodiversity of the Reserve. Review Year 3 |
| Resources:        | Probably 4 days consultancy at £300/day. Highland Council, SNH, external funders                                                                                                                                                                                                                               |

**Objective 2b The Reserve is identified within the LBAP as an important site for delivering biodiversity objectives for the area**

There is a need to raise the profile of the Reserve and what it can deliver for biodiversity on behalf of the people of Inverness and the wider Highlands

|                   |                                                                                                                 |
|-------------------|-----------------------------------------------------------------------------------------------------------------|
| <u>Measure 1:</u> | Reserve recognised in LBAP as important site for biodiversity                                                   |
| Methods:          | Inclusion in review of LBAP<br>Recognition of species and habitats of importance                                |
| Resources:        | None except raised awareness<br>Highland Biodiversity Officer, SNH, RSPB, Highland Council<br>Planning Services |

**Objective 2c The Reserve is a place where practical conservation work is promoted**

The Reserve is well placed to become a location for promoting practical conservation work and the involvement of local volunteers. It is important that this work is done with clear conservation justifications.

Much of the current open area of marshy grassland and wet modified bog will slowly succeed to scrub or woodland without intervention. A decision on how to handle this

(possible treatments range from non-intervention to regular cutting to maintain current open area) should not be taken in the absence of biological survey data and some understanding of the site hydrology.

It is recommended that there should be removal of snowberry from along paths in the southern part of the site, and monitor its regeneration. Other alien shrubs should be identified and decisions made about their future on the Reserve.

- Measure 1: Establishment of group of local volunteers  
Methods: Formation of a Green Gym  
Resources: £14,000 pa with support through BTCV  
Funding to be identified – potential for Landfill Community Fund (subject to title on land)
- Measure 2: Establishment of wildflower meadow on agreed section of amenity ground  
Methods: Liaison with TEC Services and Brown Earth Landscapes and following establishment of similar meadows on roundabouts. Agree best locations and consult community.  
Sow a perennial wildflower meadow using Scottish provenance native species, including spraying, cultivating and sowing  
Resources: Dependant of size costs are 100m<sup>2</sup> @ £10/sqm; 500m<sup>2</sup> @ £6.50/sqm; 1000m<sup>2</sup>@ £4.00-5.00/sqm  
Biodiversity Officer, Ranger Service, TEC Services
- Measure 3: Survey of alien shrub species  
Methods: Local volunteers to map, or contractor for 2 days @£200/day  
Resources: Baseline maps and volunteer time, Possible co-ordination by Ranger Service
- Measure 4: Snowberry removal  
Methods: Assess extent of cover and seek advice on best practice, then undertake removal  
Resources: Green Gym, TEC Services

### **Objective 2d The Reserve is a place where students and researchers provide valuable management support information**

The Reserve provides a range of opportunities to support field work and research by students associated with Inverness College and UHI Millennium Institute. This work will raise the profile of the Reserve and will greatly assist in the future management of the conservation interests.

- Measure 1: Develop formal link with Inverness College, agree and maintain list of potential student projects at HE and FE levels  
Methods: Biodiversity Officer/Merkinch Greenspace liaison  
Dr. Melanie Smith  
Resources: Partners time, Reserve provide T&S support for students to encourage use of site

Measure 2: Initiate hydrology studies to assist the understanding of the water-based systems of the reserve  
Methods: Inverness College to identify suitable projects and students  
Resources: College support and staff supervision. Reserve support work with assistance with equipment supply

**Aim 3 To maximise the learning opportunities afforded by the Reserve, and to communicate the importance of biodiversity to the local community, Inverness residents and visitors to the area**

**Objective 3a To deliver all interpretation of the Reserve through an up-to-date interpretive plan that maximises the potential to connect with visitors**

Measure 1: All interpretation on or about the Reserve uses the themes identified within the Reserve Interpretive Plan  
Methods: Maintain up to date Plan (see Appendix 10) that takes account of increased understanding of the Reserve developed during the implementation of this management plan  
Resources: Merkinch Greenspace, Highland Council,

**Objective 3b Provide programme of 10 events/year open to all**

The Reserve has to work to raise its profile within the local community and the wider Inverness area. This can be achieved and local interest generated by the development of a programme of events that can celebrate the richness of the biodiversity of the Reserve and the access opportunities it provides. An annual sum of £3000 should be set aside to support this programme.

Measure 1: The Reserve delivers at least 10 events each year  
Methods: Existing agencies agree a programme of events of indoor/outdoor activities focussing on biodiversity, health, discovery and increased understanding of the LNR  
Resources: HC Countryside Rangers, FCS Red Squirrel Officer, Community warden BW staff, volunteers from local community, other art/environmental workers

**Objective 3c Produce low-cost leaflet outlining what LNR has to offer in terms of biodiversity, paths, and “facilities”**

At the beginning of the promotion of the Reserve it will be useful to provide an introductory leaflet outlining what the Reserve is all about and what it can provide the visitor. This can be done for about £1000 for 3000 copies, with additional copies being possible at a modest amount extra. These should be available within the local community centre, schools, doctors surgeries and post offices. Wider distribution around Inverness should be considered.

- Measure 1: Leaflet available to visitors from 04/09  
Methods: Communicate messages – “remarkable diversity” “place of change and natural wealth” “place for people and wildlife to thrive”  
Resources: Merkinch Enterprise, mp33, schools, Community Warden £1000

**Objective 3d Establish a clear Welcome/entry point at the roundabout/entrance to Westfield.**

The current sense of arrival at the Reserve is very low key. This will be enhanced by the installation of the Reserve markers, but a greater sense of arrival is required. It is proposed that a new entrance is created at the north end of the Reserve, to the right of the existing gate and away from the houses. This would lead into the north end of the Westfield. This should incorporate signage, seating and improved access. The potential to locate an art feature in the round about that would be representative of the Reserve should be explored. This could be delivered through a competition. This should be considered in detail in Year one and delivered by the end of Year 2. Costs in the Action Plan are notional.

Before any action is taken on new installations ALL redundant old features should be removed. These offer a sense of dereliction and indicate past problems.

- Measure 1: Welcome point established by 03/09  
Methods: Group seating immediately inside Westfield, sign on roundabout? Remove/replace litter bin, remove old signs, retain benches until new style agreed?  
Resources: Depends on what is acceptable and budget  
 dog/litter bins can cost £250-500 from suppliers such as Wybone and No Butts.

**Objective 3e Construct bird-blinds**

Opportunities should be created to allow visitors to bird-watch. To encourage this 2 bird-blinds should be installed to the north and south of the railway line on the seawall. These would give an overview of the lagoons. These will be simple screens with viewing slots and single bar benches to rest on. Slots should be provided at different heights to encourage children to use them. There should be no roofing to discourage other inappropriate uses. It is proposed that these could be constructed with railway sleepers and Network Rail should be approached as a sponsorship opportunity

- Measure 1: Two blinds constructed by 04/09  
Methods: Consult with users/ Rangers as to best location. BTCV or other group to manage/build structures  
Resources: Network Rail, BTCV, volunteers, materials, promotion

### **Objective 3f Include in any wider publicity about Inverness**

The Reserve can be an asset for the City of Inverness if it is better known. All relevant Council staff should ensure that the Reserve is incorporated into any new promotional material about the City

- Measure 1: The Reserve is included in general information about Inverness City
- Methods: Work with Council and tourism businesses to include the Reserve in any relevant publicity
- Resources: Promotion and increased awareness through relevant THC staff

### **Objective 3g Work in partnership with the information centre in the ticket office**

The old Ferry Ticket Office has been a much loved and well recognised asset for the communities of South Kessock and Merkinch. A huge amount of volunteer effort has gone into providing this facility and opening it over the last 12 years. It has provided an essential environmental and heritage focus for the area over this period. The Reserve Management Group should work in partnership with the ticket office to deliver environmental information about the Reserve

- Measure 1: Reserve works with Information Centre within the old ticket office
- Methods: Volunteers, resources from supporting agencies
- Resources: Volunteers

### **Objective 3h Look into the feasibility of developing a visitor centre/learning resource for the Reserve and surrounding area**

There is local support for the creation of a new Centre to act as a community focus for the environmental and heritage values of the area. This has been assessed against the existing Local Plan (March 2006) and in light of Flood Risk Assessments. This reveals that the ground immediately south of the north entrance to the Reserve is both free of major flood risk constraints and is also within an area where appropriate development is possible (see Appendix 9)

A feasibility study should be undertaken of the potential to develop an environmental and heritage facility within this location. It is proposed that this is a multi-use facility, incorporating a visitor centre, a café, possible offices and workshops for appropriate businesses (BTCV has been suggested) and a viewing platform facing west. Such a facility would not compete with existing local businesses and would prove attractive to locals and visitors; it would undoubtedly enhance the Reserve and act as a draw to those visiting Inverness, with its access to the seafront and outstanding views to the west and north to Ben Wyvis.

If such a development were to go forward it must respect the location and be designed

to the highest environmental standards. Estimated expenditure of £3000 in Year 1 and then £10,000 Year 2

Measure 1: Feasibility study by end 2011  
Methods: Consultants to carry out study in conjunction  
Resources: Potential funding from HIE, SNH, Highland Council

#### **Aim 4 To improve and upgrade access provision to and within the reserve.**

##### **Objective 4a Improve existing routes to provide dry, firm surface, clear of vegetation and accessible to all**

Key to the success of the Reserve is the upgrading of access provision for all non-motorised users. As a minimum standard all provision should be provided to meet the BT Countryside For All “Urban fringe and managed landscape” standard. There is a need to clear vegetation along parts of the seawall and this work can be undertaken by volunteers or through the Green Gym

The following estimates (from the Inverness and Nairn Access Officer) are for the path along the sea wall (830m) to bring it up to the specification of the least restrictive option as determined by the Fieldfare Trust’s category of urban and formal landscape:

Hard firm path with no loose stones over 5mm.; 1.2m wide; 50m between passing places and or resting places; No steps, stiles or fences; No more than 1:12; Maximum cross-slope of 1:50; Clear walking tunnel of 1.2m wide by 2.1m high.

Clearing a walking tunnel to 2m wide by 3m high at £2.50/m to waste (habitat piles of no more than 1m high by 2m long tightly packed) or £3.00 to chipped.

**Cost £2075 to £2490.**

Widening path to 1.5m by cutting turves from existing path edge to form path tray, disturbing existing path surface, laying of type 1 [40mm to dust aggregate], to width of 1.5m compacted to failure, finishing with 3mm dust to form either a central camber or crossfall compacted to failure meeting path shoulder at a cost of £15 - £20/m<sup>2</sup>.

**Cost £18675 to £24900.**

Revenue costs would extend to ½ day/annum @ £200/day = **£100** which should include cutting back vegetation. Assuming quality construction and drainage where required one could anticipate resurfacing with dust in 5 years’ time at around £2/m<sup>2</sup> [2 x 1.5 x 830] = **£2490**. This could be seen as optional if the path surface is well enough bound or blinded by the fine aggregate surfacing.

The boardwalk is an estimated 120 metres long. It requires some maintenance now and will require more in future. All costs include using recycled plastic and are estimates. There is some maintenance to be undertaken and it is expected that the boardwalk would need replaced within 5-10 years. The revenue costs of maintenance are difficult to estimate and depend on the existing construction and the level of

vandalism to the boardwalk. A figure for this could be; 4 work days per annum at £200/day = **£800/annum**. After 5-10 years the maintenance figure will rise until a complete rebuild becomes the most cost effective solution.

Measure 1: All paths to above standard by 04/09  
Methods: BTCV, volunteers  
Resources: Highland Council, SNH, other external partners

#### **Objective 4b: Provide 300m all-ability path from turning area**

Linking in with the improved Welcome to the Reserve; the desire to allow access for all users and the wish to encourage access for health reasons it is proposed that an all abilities trail is installed at the northern end of Westfield. This would follow the seawall until the existing path down to the east and then would return to turning circle.

Measure 1: 300m path constructed by 04/10  
Methods: agree location, design and funding package  
Resources: Merkinch Greenspace, BTVC, contractors, volunteers  
cost £25-40 per metre

#### **Objective 4c Provide ramp off seawall onto boardwalk**

The current access to the Boardwalk around the Westfield lagoon is by steps. It is proposed to replace these with a ramp to allow all abilities access to this attractive part of the Reserve.

Measure 1: Ramp built by 04/10  
Methods: BTCV, contractors  
Resources: Finance, contractors  
Cost subject to survey

#### **Objective 4d Promote routes suited to cycles**

The Reserve is part of a wider circular route for cyclists and should also encourage access by cycle from the wider Inverness area. Provision should be made for this and agreement reached on those paths that should be promoted for cycle use

Measure 1: Provide information in existing publicity and any produced for the Reserve  
Methods: Paths upgraded to required standard and circular routes promoted. Visitors encouraged to visit on bicycle. Survey users to see if increased use/awareness  
Resources: Take account of bike use in upgrading of paths. Install secure bike rack at turning circle

#### **Objective 4e Access points for motorbikes closed off where possible**

Motorbike use of the site disturbs legitimate public use, causes physical damage and

is illegal. Some of this access is from Merkinch and this will have to be dealt with locally by negotiation and the provision of other positive options for local bikers.

Other bikers from outwith the area often access the Reserve from the Carse Industrial Estate onto the towpath of the canal and along the seawall. Measures should be taken to close off the access from the Industrial Estate and to make it harder to pass through the gates on the railway line. Fencing will be required on the edge of the towpath and on the north side of the Carse Lagoon and the installation of springs on the railway gates, but avoiding a slamming effect, would help to deter biker use without denying access by pedestrians and other legitimate users.

To deter local use a couple of chicanes should be considered for the seawall to reduce the clear run that bikers have. This should be carefully considered and account taken of the amenity of the path and the quality of the unbroken views, but if need be this should be a temporary solution

- Measure 1: Bikers can only access the Reserve from Merkinch and use is greatly reduced
- Methods: Fence off access from Carse Industrial Estate, install springs on railway fence gates and install 2 chicanes on seawall
- Resources: British Waterways and Network Rail to be approached to make in-kind contribution

## **Aim 5 To establish governance for the reserve that will sustain its management through innovative access to funding sources**

### **Objective 5a The Reserve has its own management group which is responsible for the Reserve to funders and partners**

It is vital that the management of the Reserve is seen to be controlled by an effective, responsible body. This should be fully representative of the local interests, partners and key funders and should have its own constitution, or be part of a body that has an appropriate constitution for this type of work. This will be essential for the future accessing of funding, so that the management of the Reserve can take advantage of the full range of funding opportunities available. See Appendix 8 for examples of the range of funding opportunities available at the time of this Plan's preparation.

- Measure 1 : Formalise and constitute management group containing representatives from community, funders and partners. Agree regular programme of meetings
- Methods: Memorandum of Understanding between existing management group, site owners and key funders
- Resources: Administrative support  
Highland Council, Merkinch Enterprise

**Objective 5b The majority of the Reserve is leased/owned by a formally constituted group**

With the establishment of a formal Reserve Management Group consideration should be given to entering into a long-term lease or purchase of the bulk of the Reserve that is owned by the Highland Council. It is understood that British Waterways need to retain control of the embankments for essential maintenance into the future.

Ownership, or a long term lease, will provide the widest range of opportunities for positive management of the Reserve to achieve its aims. It is accepted that this will require considerable thought and discussion, and should not be entered into lightly. Advice may be available through the Community Land Unit of Highlands and Islands Enterprise.

Access to the Landfill Community Fund may be denied to the Reserve as it is owned by the Council. This has to be confirmed.

|                   |                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <u>Measure 1:</u> | The management of the Reserve is secured through lease or ownership                                                                |
| Methods:          | Negotiation and agreement with Highland Council and British Waterways                                                              |
| Resources:        | Administrative and technical support and some legal advice<br>Highland Council, British Waterways, potentially Community Land Unit |

**Objective 5c The Reserve extends to include Carnac Point to ensure its long term management for local access and amenity**

The Reserve Management Group will investigate the inclusion of the remainder of the foreshore from the current eastern edge of the Reserve to Carnac Point. This is a well used local amenity area and would make a logical and attractive addition to the Reserve.

|                   |                                                                                                             |
|-------------------|-------------------------------------------------------------------------------------------------------------|
| <u>Measure 1:</u> | Establish principle of Carnac Point and associated foreshore being incorporated into LNR                    |
| Methods:          | Clarify development options and review against flood hazard assessments<br>Seek community views and support |
| Resources:        | Administrative and technical support<br>Highland Council Planning Services                                  |

**Aim 6 To deliver best practice management for the Reserve that will be an exemplar for other reserves**

**Objective 6a To maintain an up to date Health and Safety policy following risk assessment for visitors to the Reserve**

The Reserve contains many features that present a risk to the visitor. As the area is now being specifically promoted for public access and enjoyment it is essential that

the Management Group initiate work that will address the Health and Safety needs of visitors. They must develop and implement a Health and Safety policy appropriate for the Reserve

Measure 1: Health and Safety Policy in place and implemented  
Methods: External consultant  
Resources: Advice from Highland Council and British Waterways

**Objective 6b The Reserve employs locally based people, and utilises a range of local groups and volunteers (see 1g), who are central to delivering the management plan**

To allow for the delivery of the Management Plan it will be necessary to employ staff to ensure appropriate use is made of the Reserve; to liaise with visitors, contractors and students and to record progress towards meeting the objectives of this Plan.

These individuals, volunteers and members of the Management Group will require training in how to deal with incidents of anti-social behaviour that can impact on legitimate uses of the Reserve, as well as other issues addressed above

Measure 1: Staff delivering management plan objectives  
Methods: Agree work programme over 3 years and seek funding  
Seek work base location  
Coordinate and stimulate local group activity  
Resources: c £30,000 pa  
Esmee Fairbairn Foundation, SNH, Highland Council and other potential funders

Measure 2: Staff and volunteers provide ranger service on Reserve to minimise anti-social behaviours  
Methods: All Reserve staff, volunteers and Management Group fully briefed and advised on how to deal with issues of anti-social behaviour. Liaison with Community Warden, Police and Social Services as required  
Resources: Supported and delivered through other measures

**Objective 6c To undertake an annual visitor survey**

Existing knowledge about use of the Reserve is largely anecdotal and is unsuitable as a base-line to measure progress towards delivering this Plan. It is essential to undertake some informal, but replicable surveys in Summer 2008. A small sum (£500) should be identified to provide a structured approach to this survey to ensure that it can be replicated in the future.

Measure 1: Visitor Survey Initiated  
Methods: External advice to Management Group  
Resources: Highland Council, SNH, HIE

**Objective 6d The management group regularly report back to the community on progress on the Reserve**

It is critical that the local community is kept up to date with progress on the Reserve and are advised of any interesting developments. To do this it is recommended that a 6 monthly newsletter is produced for circulation within the community and that the website for Merkinch Greenspace is updated with additional information about the Reserve – particularly wildlife sightings

Measure 1: Community feel informed and engaged with work on Reserve  
Methods: Maintain website and newsletter  
Resources: Management group initially, Biodiversity Officer, Ranger Service then part time staff. £1000 per year

**Objective 6e The Reserve produces an Annual Report for the community, funders and partners**

An Annual Report should be produced each year to record the past year on the Reserve. This should record all significant activity on the Reserve and should be published on the website as well as being provided for all interested parties

Measure 1: Annual Report produced and limited circulation but published on website  
Methods: Overseen by management group, but contracted out  
Resources: £1000 pa potential sponsorship

**Objective 6f The Management Plan is reported on every year and is reviewed every 3 years**

Progress towards meeting the objectives of this Plan should be recorded and reported back on annually within the Annual Report. The Management Plan should be subject to a critical review in Year 3 and should be updated for the next 3 year cycle

Measure 1: Plan evaluated/updated annually major review Year 3  
Methods: Management group assess progress against targets and action plan and amend forward plan accordingly  
Agree approach to review with key funders and partners  
Resources: Evaluation ongoing  
Review costs £8000 Highland Council, SNH, BW

**Objective 6g The management group undertake ‘Learning Visits’ to other Reserves and host similar groups**

As the Reserve is the only LNR in the Highlands it is to be expected that there is little local experience in managing such areas. It is recommended that the key members of the Management Group undertake a visit to a range of Reserves in Central Scotland to learn from others about the management of such an important community asset.

Measure 1: Management group visit 3-4 other LNRs on Learning Visit  
Methods: Select examples of good practice and organise group visit to grow capacity within management group  
Resources: 4 people for 3 days £3000 seek support from HIE, SNH Highland Council

## 7. Action Plan

The work plan contains costed and time-related proposals for each measure. These are provisionally prioritised to allow future actions over the next 3 years to be delivered through a **clear plan of action**.

| Merkinch Local Nature Reserve - Action Plan 2008-2011 |                                                                                               |    |                                                                            |                                |                                                                                                                                                               | FINANCIAL YEAR |                  |                      |         |       |      |      |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|----------------------|---------|-------|------|------|
| Aim                                                   | Objective                                                                                     |    | Measure                                                                    | Priority                       | Potential delivery organisation                                                                                                                               | Timing         | 2008/09          | 2009/10              | 2010/11 | Total |      |      |
|                                                       |                                                                                               |    |                                                                            | <b>High Priority Measure</b>   | Abbreviations: MG – Merkinch Greenspace; ME – Merkinch Enterprise; THC – Highland Council; BW – British Waterways; HBRG – Highland Biological Recording Group |                |                  |                      |         |       |      |      |
|                                                       |                                                                                               |    |                                                                            | <b>Medium Priority Measure</b> |                                                                                                                                                               |                |                  |                      |         |       |      |      |
|                                                       |                                                                                               |    |                                                                            | <b>Low Priority Measure</b>    |                                                                                                                                                               |                |                  |                      |         |       |      |      |
| 1                                                     | Increase the benefits to individuals/ communities through active involvement with the Reserve | 1a | Provide seating                                                            | 1a1                            | Seating on seawall and Westfield installed                                                                                                                    | H              | MG               | 3000                 |         |       | 3000 |      |
|                                                       |                                                                                               | 1b | Set up local walking group                                                 | 1b1                            | Programme of led walks established                                                                                                                            | M              | Paths to Health  | annual               |         |       |      |      |
|                                                       |                                                                                               | 1c | Encourage existing groups to use the Reserve for physical activity         | 1c1                            | More groups use the Reserve for physical activity                                                                                                             | M              | MG, Health Board | annual               |         |       |      |      |
|                                                       |                                                                                               | 1d | Reserve promoted to all Local GP practices                                 | 1d1                            | All GP practices promote the Reserve for physical activity                                                                                                    | M              | MG, Health Board | annual               |         |       |      |      |
|                                                       |                                                                                               | 1e | Community produce information on opportunities for activity on the Reserve | 1e1                            | Leaflet produced and distributed around Inverness                                                                                                             | H              | MG, ME           | annual with reprints | 1000    | 300   | 300  | 1600 |
|                                                       |                                                                                               | 1f | Maintain football pitches for all year use                                 | 1f1                            | Maintenance regime continued and level of use recorded                                                                                                        | L              | THC, MG          | annual               |         |       |      |      |

|            |                                                                                                                                 |                  |                                                                                                                                                            |                |                                                             |                 |                                        |                        |                |                |                |              |
|------------|---------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------|-----------------|----------------------------------------|------------------------|----------------|----------------|----------------|--------------|
|            |                                                                                                                                 | 1g               | Train local people to act as volunteer Reserve rangers, guided walk leaders, providers of information, basic interpretive techniques, biological recording | 1g1            | 6 members of local community trained                        | H               | Countryside Rangers, ME                | annual                 | 3000           | 1500           | 1500           | 6000         |
| <b>Aim</b> |                                                                                                                                 | <b>Objective</b> |                                                                                                                                                            | <b>Measure</b> |                                                             | <b>Priority</b> | <b>Potential delivery organisation</b> | <b>Timing</b>          | <b>2008/09</b> | <b>2009/10</b> | <b>2010/11</b> | <b>Total</b> |
| 2          | Celebrate the biodiversity value of the Reserve through the conservation and sustainable management of its habitats and species | 2a               | Reserve maintains a detailed inventory of habitats and species                                                                                             | 2a1            | Species and Habitat Mapping                                 | H               | THC, SNH                               | once                   | 1500           |                |                | 1500         |
|            |                                                                                                                                 |                  |                                                                                                                                                            | 2a2            | Database established and maintained                         | M               | HBRG, THC, SNH                         | annual                 | 400            | 200            | 200            | 800          |
|            |                                                                                                                                 |                  |                                                                                                                                                            | 2a3            | Management agreed for preserving and enhancing biodiversity | M               | THC, SNH                               | once, with review Yr 3 | 1200           |                | 600            | 1800         |
|            |                                                                                                                                 | 2b               | Reserve is identified within the LBAP as an important site for delivering biodiversity objectives for the area                                             | 2b1            | LNR recognised in LBAP                                      | L               | THC                                    | ongoing                |                |                |                |              |
|            |                                                                                                                                 | 2c               | Reserve is a place where practical conservation work is promoted                                                                                           | 2c1            | Establish Green Gym and local volunteers                    | H               | MG, BTCV                               | annual                 | 14,000         | 14,000         | 14,000         | 42,000       |
|            |                                                                                                                                 |                  |                                                                                                                                                            | 2c2            | Wildflower Meadow                                           | L               | MG, THC                                |                        |                |                | 3500           | 3500         |
|            |                                                                                                                                 |                  |                                                                                                                                                            | 2c3            | Survey of alien shrub species                               | L               | MG                                     |                        |                |                | 400            | 400          |
|            |                                                                                                                                 |                  |                                                                                                                                                            | 2c4            | Snowberry removal                                           | M               | BTCV, THC                              | ongoing                |                |                |                |              |
|            |                                                                                                                                 | 2d               | Reserve is a place where students and researchers provide valuable management support information                                                          | 2d1            | Link with Inverness College and maintain project list       | M               | MG, UHI/Inverness College              | ongoing                | 100            | 100            | 100            | 300          |
|            |                                                                                                                                 |                  |                                                                                                                                                            | 2d2            | Hydrology Studies                                           | M               | UHI/Inverness College                  | ongoing                | 500            | 200            | 100            | 800          |

| Aim |                                                                                                                                                                                        | Objective |                                                                   | Measure |                                                   | Priority | Potential delivery organisation  | Timing                        | 2008/09          | 2009/10            | 2010/11 | Total              |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------|---------|---------------------------------------------------|----------|----------------------------------|-------------------------------|------------------|--------------------|---------|--------------------|
| 3   | To maximise the learning opportunities afforded by the Reserve, and to communicate the importance of biodiversity to the local community, Inverness residents and visitors to the area | 3a        | All interpretation delivered through up-to-date interpretive plan | 3a1     | Interpretation uses themes from interpretive plan | M        | MG, THC                          | ongoing                       |                  |                    |         |                    |
|     |                                                                                                                                                                                        | 3b        | Programme of 10 events per year open to all                       | 3b1     | Programme agreed and delivered                    | H        | MG, THC, Countryside Rangers, BW | annual                        | 3000             | 3000               | 3000    | 9000               |
|     |                                                                                                                                                                                        | 3c        | Low cost leaflet produced (see 1e1)                               | 3c1     | Leaflet produced and distributed around Inverness | M        | MG, ME, THC                      | once, with reprint Yr 3       | 1000             |                    | 500     | 1500               |
|     |                                                                                                                                                                                        | 3d        | Establish welcome/arrival area at South Kessock                   | 3d1     | Welcome point established                         | M        | MG, THC, SNH                     | design Yr 1<br>implement Yr 2 | 1000             | <i>Est. 15,000</i> |         | <i>Est. 16,000</i> |
|     |                                                                                                                                                                                        | 3e        | Construct 2 bird blinds                                           | 3e1     | Bird blinds constructed                           | M        | MG, Network Rail, BTCV           | once                          |                  | 2000               |         | 2000               |
|     |                                                                                                                                                                                        | 3f        | Reserve promoted in wider information about Inverness             | 3f1     | Reserve promoted in information about Inverness   | M        | MG, THC                          | annual                        |                  |                    |         |                    |
|     |                                                                                                                                                                                        | 3g        | Work in partnership with old ticket office                        | 3g1     | Environmental information in old ticket office    | M        | MG, Ticket Office staff          | annual                        |                  |                    |         |                    |
|     |                                                                                                                                                                                        | 3h        | Undertake feasibility for new multi-use centre for Reserve        | 3f1     | Feasibility study undertaken                      | M        | MG, ME, THC, SNH, HIE            | once                          | <i>Est. 3000</i> | <i>Est. 10,000</i> |         | <i>Est. 13,000</i> |

| Aim |                                                                                                                       | Objective |                                                                                                         | Measure |                                                                                                                                                | Priority | Potential delivery organisation | Timing                | 2008/09 | 2009/10 | 2010/11 | Total  |
|-----|-----------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------|-----------------------|---------|---------|---------|--------|
| 4   | To improve and upgrade access provision to and within the Reserve.                                                    | 4a        | Existing routes upgraded and accessible to all                                                          | 4a1     | Paths accessible to all                                                                                                                        | H        | MG, THC, SNH, BTCV              | once then annual work | 25,000  | 3,500   | 3,500   | 32,000 |
|     |                                                                                                                       | 4b        | All ability trail provided                                                                              | 4b1     | 300m of trail for all abilities installed                                                                                                      | M        | MG, THC, SNH, BTCV              | once                  |         | 10,000  |         | 10,000 |
|     |                                                                                                                       | 4c        | New ramp provided to boardwalk from seawall                                                             | 4c1     | Boardwalk accessible for all abilities                                                                                                         | M        | MG, THC, SNH, BTCV              | once                  |         | 2000    |         | 2000   |
|     |                                                                                                                       | 4d        | Promote routes used by cycles                                                                           | 4d1     | Cycle use increased                                                                                                                            | L        | MG, THC                         | ongoing               |         |         |         |        |
|     |                                                                                                                       | 4e        | Access points for motorbikes closed off where possible                                                  | 4e1     | Motor bikes can only access site from Merkinch and illegal use greatly reduced                                                                 | H        | MG, BW, Network Rail            | annual                | 1000    |         |         |        |
| 5   | To establish governance for the reserve that will sustain its management through innovative access to funding sources | 5a        | Reserve has its own management group which is responsible for the Reserve to funders and partners       | 5a1     | Formalise and constitute management group containing representatives from community, funders and partners. Agree regular programme of meetings | H        | MG                              | ongoing               |         |         |         |        |
|     |                                                                                                                       | 5b        | Majority of the Reserve is leased/owned by a formally constituted management group                      | 5b1     | Management of the Reserve is secured through lease or ownership                                                                                | M        | MG, THC                         | ongoing               |         |         |         |        |
|     |                                                                                                                       | 5c        | Reserve extends to include Carnac Point to ensure its long term management for local access and amenity | 5c1     | Establish principle of Carnac Point and associated foreshore being incorporated into Reserve                                                   | M        | MG, THC, Harbour Trust          | ongoing               |         |         |         |        |

| Aim |                                                                                               | Objective |                                                                                                                                                        | Measure |                                                                                       | Priority | Potential delivery organisation        | Timing             | 2008/09               | 2009/10               | 2010/11               | Total                 |
|-----|-----------------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------|----------|----------------------------------------|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 6   | To deliver best practice management for a Reserve that will be an exemplar for other reserves | 6a        | To maintain an up to date Health and Safety policy following risk assessment for visitors to the Reserve                                               | 6a1     | Health and Safety Policy regularly updated and safety checks undertaken quarterly     | H        | MG, THC, BW                            | Year 1             |                       |                       |                       |                       |
|     |                                                                                               | 6b        | Reserve employs locally based people, and utilises a range of local groups and volunteers (see 1g1), who are central to delivering the management plan | 6a1     | Staff delivering management plan objectives                                           | M        | MG, THC, SNH, HIE and external funding | annual             | <i>Est.</i><br>30,000 | <i>Est.</i><br>31,000 | <i>Est.</i><br>32,000 | <i>Est.</i><br>93,000 |
|     |                                                                                               |           |                                                                                                                                                        | 6a2     | Ranger service by staff and volunteers to assess and deal with anti-social behaviours | M        | MG, THC, Police                        | ongoing            |                       |                       |                       |                       |
|     |                                                                                               | 6c        | To undertake an annual visitor survey                                                                                                                  | 6c1     | Annual visitor survey undertaken                                                      | H        | MG, THC, SNH, BW                       | annual             | 500                   |                       |                       | 500                   |
|     |                                                                                               | 6c        | Management group regularly report back to the community on progress on the Reserve                                                                     | 6b1     | Maintain website and newsletter                                                       | M        | MG, THC, Countryside Rangers           | ongoing            | 1000                  | 1000                  | 1000                  | 3000                  |
|     |                                                                                               | 6d        | Reserve produces an Annual Report for the community, funders and partners                                                                              | 6c1     | Annual Report produced                                                                | M        | MG                                     | annual             | 1000                  | 1000                  | 1000                  | 3000                  |
|     |                                                                                               | 6e        | Management Plan is reported on every year and is reviewed every 3 years                                                                                | 6d1     | Management plan evaluated and updated annually with major review in year 3            | M        | MG, THC, BW, SNH                       | ongoing and Year 3 |                       |                       | 8000                  | 8000                  |
|     |                                                                                               | 6f        | Management group undertake 'Learning Visits' to other LNRs and host similar groups                                                                     | 6e1     | Management group visit 3-4 other LNRs on Learning Visit                               | H        | MG, THC, SNH, BW, HIE                  | Year 1             | 3000                  |                       |                       | 3000                  |

## 8. Reporting and Evaluation

The Management Plan recommends that the management group for the Reserve review the plan on an annual basis and ensure that the plan is updated in Year 3 for the next 3 year management period.

A failing within many conservation sites is that management plans recommend complex monitoring procedures that are overly onerous on the management group. To avoid this it is recommended that a simple series of measures are adopted that can be used to assess progress towards meeting the management objectives.

Each objective should have a measure associated with it so that progress over the 3 years of this plan can be assessed. Some of these will be simple such as the presence or absence of an activity, but others will be quantifiable.

The following are given as examples, for each of the 6 aims for the Reserve, of what should be attempted. It will be for the management group to determine the baseline for year one.

1. To increase the benefits to individuals and communities through active involvement with the reserve.

Measure: Number of groups recorded visiting the Reserve each year

Measure: Number of community volunteers trained

2. To celebrate the biodiversity value of the reserve through the conservation and sustainable management of its habitats and species

Measure: Number of species records added to database

Measure: Numbers attending Green Gym

Measure: Number of student projects undertaken

3. To maximise the learning opportunities afforded by the reserve, and to communicate the importance of biodiversity to the local community, Inverness residents and visitors to the area

Measure: Number of events held

Measure: Number of positive column inches in Courier

Measure: Number of school groups visiting the Reserve

4. To improve and upgrade access provision to and within the reserve.

Measure: Metres of path upgraded

Measure: Number of recorded incidents of illegal motor bike use

5. To establish governance for the reserve that will sustain its management through innovative access to funding sources

Measure: Management Group meetings recorded and minutes put on website.

6. To deliver best practice management for a Reserve that will be an exemplar for other reserves

Measure: Hits on website

Measure: Biological records submitted by community

Measure: Number of reported accidents

## **Appendix 10**

### **An Interpretive Plan for Merkinch Local Nature Reserve**

#### **1. The Role of Interpretation for Merkinch Local Nature Reserve**

The central purpose of interpretation is to influence the visitor: either to change their understanding, increase their appreciation or alter their behaviour (and on occasions all three) when they visit the Reserve. Achieving this will add value to their visit through making the visitor experience more satisfying, and will make management easier. Interpretation can be a strong tool to assist the Reserve to meet many of the key objectives of management outlined in the draft management plan. It should be recognised that interpretation will not solve all the problems identified by managers. It is not a substitute for regulations and law enforcement.

#### **2. Audiences**

The current Reserve audience can be segmented into the categories below:

|                   |                        |
|-------------------|------------------------|
| Dog walkers,      | Wildlife watchers,     |
| Couples,          | Those passing through, |
| Groups of youths, | Family groups,         |
| Education groups, | Wildlife groups,       |
| Occasional bikers |                        |

These primary audiences should be the main focus for developing interpretation over the next 3 years, but there is a wider communication process that should be undertaken in parallel with this. This should be to target the wide array of additional secondary audiences, consisting of those people who do not currently visit the Reserve. It is the ambition of the Reserve to attract more people from the local community and from Inverness generally and this will only be done through a planned approach to communicating about the Reserve to others.

#### **3. Issues**

Information about the primary audience is very limited and anecdotal. Due to time constraints only a modest community consultation could be undertaken as part of the management plan development. This revealed the following issues that are of relevance to this interpretive plan:

Main issues:

- People appear to like the area and would like to spend more time there. Words used to describe the area were invigorating, unsafe, pleasure, freedom – open space;
- Lack of knowledge of what the Reserve area has to offer limits people's use;
- Improvements to paths requested by many – better surface, vegetation cut back, low-key signing/information of opportunities;
- Lack of seating;
- Noise and disturbance by the trails bikers;
- Dog fouling and stray dogs;
- Litter is considered a problem to a lesser degree, but it does impact upon the perception of care that the Reserve should demonstrate.

Other important issues relating to the management of the Reserve were identified during the planning process and these are as follows:

- The Reserve is little known outside the Merkinch community and its status locally is not adequately recognised;
- The provision of the old ticket office as a focus for environmental and heritage education is under threat.

### **1. Communicating with the Audience**

There is a need to communicate with visitors at 3 levels.

1. to encourage people to behave in a way that demonstrates care and pride in the Reserve
2. to increase awareness about the existence and status of the Reserve
3. to increase understanding and awareness about the biodiversity and recreational potential of the Reserve.

For the primary audiences there is a need to engender a feeling of care and pride in the Reserve. With the establishment of this positive relationship there should be promotion of greater and more diverse use of the Reserve. Ultimately the provision of interpretation can raise the understanding and awareness of the values of the Reserve to existing audiences and to those who currently do not visit.

For the secondary audiences the first step is to raise the understanding of the existence of the reserve and then to encourage appropriate use of its resources.

There are already some existing users of the Reserve who will benefit from increased information and this will be provided through the proposals outlined below. For most other users (and non users) the issues are more basic in relation to behaviour; about awareness of the Reserve's existence or about what is currently available on the site.

#### Developing the audience

The Reserve needs a higher profile within the local community. Its existence needs to be constantly re-enforced, so that local people recognise its value to the community. Additionally, the Reserve needs to be better promoted outwith the area, recognising that in the context of Inverness, it is a unique asset. The Reserve should be included in wider promotion of the Inverness area, so that residents and visitors to the City will be aware of what the Reserve has to offer.

#### Where to engage the audience

There are critical places where communication has a better chance of success, for example through pre-visit information; at the carpark; in the information centre, or on the trail.

In all situations, management should ask how the central purpose of interpretation, listed above, is being met, if it is intended to implement any communication installation or process. It is always good practice to set clear objectives for any interpretation and this has to strike a balance between the aspirations of the provider

and the likelihood that the receiver is interested.

Trying to impose too strong an educational emphasis on informal interpretation at this stage in the Reserve's development is considered premature. This can be delivered more successfully through more overt environmental education provision through the School Curriculum. By a large majority, the casual visitor does not come to the Reserve to be educated and all future provision should recognise this reality.

The use of on-site interpretation is commonplace on many reserves and has been considered for Merkinch. The installation of any additional interpretive material, on site, apart from the new boundary markers or monoliths is considered inappropriate until the sense of care and pride is increased in the general community. It is recognised that there are existing users who will target any installations and undo any good work that is delivered by others. This should be seen as a short term problem and Reserve managers should devise approaches to communication that are appropriate to the audience and the place.

This should be seen in the light of experience that shows that visitors will, at most, display short term alterations to attitudes and behaviours through on-site communication. These may well be strengthened with reinforcement and become longer lasting following subsequent visits. Generally for the recreational visitor the provision of on site interpretation will have a limited effect and this potential expenditure has to be balanced against the challenges of maintenance.

## 5. Core Values

For developments over the next 3 years, but also beyond that time frame, the following are provided as fundamental principles for interpretive provision. All interpretive objectives should be underpinned by a series of **core values** applicable to all interpretation delivered by the Reserve. These are that interpretation:

- consciously sets out to be pro-active in seeking to **involve the local resident population** particularly in identifying ways which will encourage 'ownership' and commitment. It should also seek to involve those whose local knowledge may be extensive and who may be able to contribute constructively.
- is **customer-friendly** recognising the specific characteristics of the Reserve audience
- will be respectful of the '**sense-of-place**' of the site
- will be delivered primarily through a '**light foot-print**'
- the potential of both **traditional and new media** should be considered.
- It should be **accessible to all**, both physically and intellectually.
- materials used should be **sympathetic** to the integrity of the site, establishing a careful balance between the necessities of good cost effective communication design, and environmental and contextual sensitivities.

## 6. Key Interpretive Objectives

Any interpretation has to have purpose otherwise it will appear meaningless and confusing to the visitor. To aid this it is important to establish some objectives for interpretation relating to the Reserve. The following key interpretive objectives have been identified, and all interpretation within the Reserve should seek to:

- Foster respect for the conservation and preservation of special and fragile habitats and species as appropriate;
- encourage compliance by all visitors with the spirit of the Scottish Outdoor Access Code;
- harness a sense of ownership and ethos of care within the Merkinch community;
- contribute to the perception of the Reserve as a standard bearer for countryside recreation and amenity provision in general and the management of the Highland's only Local Nature Reserve in particular;
- encourage and facilitate use by the local community for sustainable economic benefit and the creation of local enterprise and employment opportunities.

## **7. Messages**

Managers of the Reserve should strive to engage primary and secondary audiences with messages that will encourage thinking. Communication that is delivered without a strong message or theme that is poorly organised, is not relevant to the audience and is not enjoyable has been shown not to work. Communication possessing these characteristics has been shown to have a good chance of succeeding if it is delivered in a purposeful way.

The following are suggested key messages for interpretation within the Reserve.

1. "The *natural* heart of Merkinch"
2. A great place to walk, relax and enjoy the coastal and mountain views
3. A place for nature, shaped by people

These should be refined in the light of the management group's perspective, but the 3 key messages about biodiversity, access opportunities and the role of people in the Reserve management (past and present) should provide the core for future communication

Any interpretation should be driven by one of the messages above. Attempting to convey several themes at once should also be avoided as a complex series of messages will significantly reduce the potential for success. Short, well written messages, often engaging journalistic techniques, will work particularly for existing visitors to the Reserve.

## **8. Implementation**

Meeting interpretive objectives requires a purposeful communication process. Issues about where the communication is delivered; what language is used and at what stage in the visitors connection with the place this is to be done, have all to be recognised and addressed when interpretation is being considered.

It is clear that the users of the Reserve are a very variable group. The characteristics of the existing audience have to be taken into account and consequently traditional approaches to communication, as employed on other nature reserves may not work at

the moment.

The following provides some basic guidance on implementation in this current situation:

- Much initial communication will be off-site and will be focussing on raising the profile of the existence of the Reserve
- Communication should focus on the positives of the Reserve and should seek ways to encourage appropriate behaviour by all visitors
- If a problem occurs with behaviour in a particular place then the use of signage should locate the signs as close to the place as possible.
- Remove any old and damaged signs that were intended to address the same problem. If they weren't working before, there is no reason to leave them.
- Consider the use of more temporary looking signs that relate to inappropriate behavioural practice.
- Don't let the strategic messages above get lost in the general communication process.

## **9 Proposals**

At this stage, these proposals are very general in nature as the Reserve is such a new concept that is little understood locally. The emphasis in the early years has to be on building a positive profile as the other aspects of management are taken forward. The need to develop a sense of care and pride is critical to the success of the Reserve and this requires significant effort that is outlined further within the draft management plan.

The following are proposed as ways to begin to deliver the interpretive objectives for the Reserve over the next 3 years.

- 1 Produce a leaflet about the Reserve that uses the above messages to give structure to the content. This will be a key tool for raising awareness locally;
- 2 The installation of any interpretation on-site (monoliths excepted) is not recommended within the period of this plan
- 3 Produce a regular community Reserve newsletter which uses the key messages as a focus for content. This should include information on sightings of wildlife and should encourage community involvement;
- 4 Promote a series of events on or associated with the Reserve to raise the profile of the site for the local community
- 5 Promote the Reserve more widely around Inverness using the key messages as a guiding structure;
- 6 Baseline survey of users and non-users. This could be undertaken by volunteers on the Reserve and within the community. At this stage it should just try to collect information on the level of community knowledge about the Reserve, what it has to offer and about current usage. This survey should be undertaken annually in a way that will allow comparison of one year with the previous;
- 7 Regular positive news-stories that reflect different aspects of the Reserve, again using the 3 key messages as a guide to subject matter;
- 8 All volunteers should be given guidance on the use of the key messages so that there is a consistent, but still individual, approach to the communication message

- given to all visitors;
- 9 With any review of interpretive material within the old ticket office all material should be structured using the above key messages;
  - 10 If a feasibility study is taken forward for a new Centre then the interpretive content should be guided by the above key messages.

## **10. Evaluation**

Without baseline information any evaluation will be meaningless. It is only with the establishment of this baseline that any progress can be measured. Through a baseline survey the progress towards awareness, understanding and ultimately care and pride can be measured over the next 3 years.