RIVER ALMOND WALKWAY

MANAGEMENT PLAN
2011 – 2020

City of Edinburgh Council
Countryside Ranger Service
Hermitage of Braid
69a Braid Road
Edinburgh
EH10 6JF

Contents

1.0 Overview

This management plan will guide the enhancement of the River Almond Walkway for the benefit of people and wildlife over its ten year period. It sets out certain policies and legislation that have to be taken into account when administering management prescriptions. Some of the key aspects of the plan are: improving accessibility; interpreting the area's natural and cultural character; improving biodiversity; woodland management; and instigating local community involvement.

The plan contains all the information necessary to initiate works. It highlights mechanisms aimed at monitoring improvements over the proposed time period with a strategic point for review half way through the lifetime of this plan. Many supporting documents are also contained within the plan where reference to specific information is required.

The plan covers the areas under public ownership from the start of the Walkway at the link with Cramond Foreshore to Cammo Estate.

2.0 Purpose of the plan

This management plan is intended to guide management of the walkway and immediate surrounding area for the benefits of recreational users and wildlife. This is the first ever specific management plan for the walkway and will complement the 5 year management plan written by the Cramond Angling Club (CAC) on behalf of the River Forth Fisheries Trust, the River Almond Catchment: A Plan for Integrated Management prepared by the River Almond Catchment Partnership Group (1997), an Integrated Management of the Almond – Preliminary Technical Report prepared by the Scottish Wildlife Trust (SWT) (1995) and other documents produced mostly as part of academic studies.

This plan is intended to cover the period 2011 – 2020. The plan is a site-specific document produced by the City of Edinburgh Council Countryside Ranger Service, and is intended to offer guidance on all aspects of the management of the River Almond Walkway.

3.0 City of Edinburgh Council Countryside Ranger Service

The City of Edinburgh Council Countryside Ranger Service (CECCRS) manages 11 natural heritage sites across Edinburgh with emphasis on conservation of the natural, cultural and historical interests. CECCRS also seeks to increase public understanding, appreciation and care for the countryside in and around Edinburgh. This is done through the provision of environmental education in the form of guided walks, illustrated talks and interpretation. CECCRS support local community groups with an interest in the river and surrounding area; various volunteering opportunities are also available through the CECCRS Volunteer Ranger Scheme, Conservation Volunteering and Biodiversity Volunteering.

4.0 General Information

4.1 Location

Site Name: River Almond Walkway.
Site Status: Conservation Area, Area of Outstanding Landscape Quality, Local Biodiversity Site, Green Belt, Site Important for Nature Conservation. Also bounds the Firth of Forth Special Protection Area and Site of Special Scientific Interest.
Planning Authority: City of Edinburgh Council, Scotland.
Grid Reference: NT 181 760 site centriod
Length: approx 2.2 km
Area: 36.45 ha
Access: From Cramond Foreshore, School Brae (Caddell's Row), Peggy's Mill Lane, Dowie's Mill Lane – Brae Park Road.

4.2 Description of Site

The River Almond Walkway is a nature trail and historical ramble; it passes along cliff top, through a mixture of woodlands, marsh, gorge, beside ponds and meadowland, all of which support a large diversity of wildlife. It is rich in birdlife, there is a wealth of plants and trees; the River Almond Walkway is a delight for all.

The area surrounding the River Almond has a rich and varied history. In the 2nd century AD, the Romans established their important settlement of Alaterva at the Almond's estuary, part of the Antonine's Wall network of forts. The same safe anchorage at the mouth of a constricted river attracted industrialists in later centuries. Like the Water of Leith, with similar conditions, the River Almond became a centre for milling, with workers' cottages, and by the end of the 18th century Cockle Mill, Fairafar, Peggy's Mill, Dowie's Mill and Craigie Mill were thriving. But the changes forced by the industrial revolution saw a variety of industries come and go - iron, the manufacture of spades and iron hoops at Dowie's Mill, sawmilling, nails, furniture and even a paper mill and gelatine processing at Peggy's Mill (Peggy's Mill does not have the expected romantic derivation of being named after some long-forgotten mill owner's wife - it more likely comes from Peggie's or Piga's mill, probably after the "pickierman" or mill servant with responsibility for machinery).

Only traces are left of those earlier activities that once contributed to making the River Almond one of the most polluted rivers in Scotland. When the works vanished, the quality of water improved and nature - with the help of the local authority and partner agencies - has begun to reclaim the Almond as her own. Salmon and trout have returned in good numbers and with the return of a healthy water life also come the birds that feed off it.

Cramond Brig, in the same location as the original 15th-century bridge, is also part of the route. Immortality was bestowed upon it by Sir Walter Scott with his description of how Jock Howieson rescued the disguised King James V from a fight and received lands around Braehead for service to his monarch. Braehead House, where Scott's charming young poetic friend "Pet Marjorie" spent her holidays, is still standing along with the alleged remains of Jock Howieson's cottage. It must be said that this is one of

Sir Walter Scott's stories and in some people's eyes bears little relationship to actual historical fact.

The walkway itself begins marginally upstream of the Cramond Boat Club Clubhouse which is directly accessed from Cramond Foreshore with a rugged but appropriately designed footpath constructed from compacted aggregate, the walkway leads to the site of the former Cockle Mill just before School Brae and Caddells Row cottages. Incidentally, the walkway between the boathouse slipway and Cockle Mill was constructed by the iron company at the end of the 18th century to serve as a tow path to enable boats to be pulled up to the mill. Prior to that there was no ready access between the river mouth and the mills. Because it was a tow path, no vegetation existed on the river side of the footpath. Early photographs available through the Cramond Heritage Trust show the walkway to be clear of vegetation.

Continuing upstream you encounter the Fair a Far Mill building with its weir sitting proudly above. Further upstream you encounter the high section with concrete steps leading up and timber steps (known as the Salvesen Steps) leading back down. Located further upstream is the site of the former Peggy's Mill and just beyond this is where Dowies Mill once stood – the Mill workers cottages still in habitation today. Beyond Dowies Mill Lane you come to Brae Park Road with Haugh Park paddock, and the Old Cramond Brig is situated a short distance to the North West. A small path between a private dwelling and Haugh Park leads to a children's play area with mature woodland curtaining it from behind. The formal path then leads under the A90 Queensferry Road flyover and eventually upstream to Cammo Estate. There are also other accessible routes on the western bank leading from the rear of the Cramond Brig Inn to Grotto Bridge and beyond. The path network on this side of the river (the western side or 'true left bank' is not publicly owned but is accessible under the Scottish Outdoor Access Code).

4.3 Land Tenure

The River Almond Walkway is owned by the City of Edinburgh Council and managed by the Countryside Ranger Service (see Maps 8a and 8b for detailed land ownership maps).

4.4 Designation

Conservation Area, Area of Outstanding Landscape Quality, Local Biodiversity Site, Green Belt. Also bounds the Firth of Forth Special Protection Area and Site of Special Scientific Interest (see aerial photographs A, B and C detailing where designations begin and end).

5.0 The Management Plan in Relation to Legislation, Policy and Relevant Strategies

5.1 Local Strategies and Policy

The City of Edinburgh Access Strategy will set out a framework to develop inclusive access for everyone who lives in, works in, and visits Edinburgh. The River

Almond Walkway management plan will take into account the relevant management for this strategy. The document will be available in the very near future most probably after the time this management plan has been formally adopted.

The Access Strategy also sets out the City of Edinburgh Council's Core Paths Plan: the Land Reform (Scotland) Act 2003 and associated Outdoor Access Code imply a condition upon local authorities in Scotland to produce a Core Paths Plan. The Plan highlights sustainable links between green spaces throughout the local authority area enabling greener, healthier choices to be made in terms of travelling to and from work and other recreational pursuits.

Edinburgh's Core Path Plan was formally adopted in Spring 2008. In the document, the River Almond Path (CEC11) is,

"*a path which starts as a proposed West Lothian Core Path at Almondell and Calderwood Country Park and runs along the River Almond into Edinburgh and on to its outfall into the sea at Cramond. The route is not complete at this time. Sections in Edinburgh's area which are currently usable are designated as Core Paths. Development of the 'missing' sections is a longer term proposition which will be dependent on detailed negotiation, site investigation and funding. These sections are not suitable for Core Path status at this stage but have been identified as a longer term opportunity*".

The purpose of the **Edinburgh Parks and Gardens Strategy** is to provide the City of Edinburgh with a strategy for its parks and gardens systems that sets realistic aspirations and shows the way forward to achieving them. The strategy is a means of matching the availability, function and role of parks and gardens with the changing requirements as identified by user surveys. The study has focused on parks and gardens within the urban area including the River Almond Walkway. Under the parks classification system outlined in the Strategy, the River Almond Walkway is classified as a Natural Heritage Park.

Natural Heritage Parks are described by the Strategy as follows:

These are generally large areas, the functions of which are determined by topography and ecology. In the main, these parks will tend to be dominated by woodland but also include coastal areas with topographical features such as hills and river valleys. The semi-natural character of these parks means that management for biodiversity is of fundamental importance, many of which are designated or proposed Local Nature Reserves, Urban Wildlife Sites or Sites of Interest for Nature Conservation as defined in the Edinburgh Urban Nature Conservation Strategy and Local Plans. Therefore, these areas are well suited to informal environmental education. Access is likely to be via car hence they will generally include designated car parking areas within the boundaries.

The River Almond Walkway is a well used linear route, the most common users are walkers, dog walkers, joggers, wildlife spotters and cyclists due to the link with one of the main cycling routes (75). The river and walkway are considered a haven for wildlife. The route connects Edinburgh's coastal walk and promenade and an

internationally recognised waterfowl and seabird habitat to other green spaces known for their historical and cultural significance such as Cammo Estate.

Community Plan for Edinburgh 2004 – 2010 – The City of Edinburgh Council (up to date plan not available at time of writing). The Community Plan sets out a number of agreed key challenges that all agencies in Edinburgh are now committed to tackling through their own activities. It identifies a number of actions for partner organisations to pursue and provides a summary of selected actions that partners are currently taking to address the core objectives through individual services and by working together. There are six 'Strategic Aims' and ten key challenges which are relevant to all partner activities and services. The Key Challenges relating to the River Almond Walkway are: *"Ensuring clean, safe and green neighbourhoods", "Improving Health for All" and "Improving educational achievement and lifelong learning".*

The **West Edinburgh Local Plan** ensures no development takes place without careful consideration of key factors. The main objectives set out in the Plan which relate to the River Almond Walkway Management Plan are as follows:

- Ensuring development or use of land is sustainable and meets present needs without reducing opportunities or resources available to future generations;
- Protecting and enhancing the quality and character of the built and natural environment while ensuring that new development is of a high standard;
- Fostering a sense of place, identity and community for local areas;
- To protect and enhance the Green Belt and establish long term defensible boundaries that meet Green Belt objectives;
- To protect and enhance the landscape, natural habitats, biodiversity and open spaces of West Edinburgh;
- To encourage the expansion of recreational opportunities, including the continued expansion of footways and cycleways throughout the Local Plan area;
- To maintain an adequate range of social and community services in easily accessible locations to meet the needs of local residents, and;
- To minimise the incentive to use the car, particularly in areas where the direct adverse impacts of this are most severe.

The Plan also states that,

"*the Council will prepare management plans for the Urban Wildlife Sites in its ownership and will be prepared to enter into management agreements with the owners of other identified sites in order to achieve nature conservation objectives*".

The River Almond Walkway Management Plan will compliment the West Edinburgh Local Plan in achieving its set objectives.

The Edinburgh Local Biodiversity Action Plan 2010 – 2015. The City of Edinburgh Council

Aim: The third Edinburgh Local Biodiversity Action Plan (LBAP) was launched in March 2010. This new plan supersedes the second Edinburgh Biodiversity Action Plan 2005-2009. Implementation of the Edinburgh LBAP through the first and second phases has progressed well. Experience gained during these first two phases has been used to help formulate actions for the six habitat groupings in the new LBAP, and to focus action on a smaller range of species with special requirements, for example, swifts, bats, bees and juniper.

Relevance: The River Almond and Walkway performs an important function within the city, along with other freshwater courses, by providing semi-natural habitat and commuting corridors for wildlife as well as recreation and amenity benefits. It is therefore important that habitat and water quality is maintained and enhanced. The River Basin Management Planning (RBMP) process, a partnership process being taken forward in Scotland by the Scottish Environment Protection Agency (SEPA) and driven by the requirements of the Water Framework Directive (WFD), will cover much of the ecological monitoring and improvement work required for the River Almond. The Freshwater and Wetland Habitat Action Plan contained within Edinburgh's LBAP will seek to integrate with the RBMP process and provide a mechanism for delivery at local level. Some aims and objectives stemming from this are habitat features which, if maintained or created, will maximise freshwater habitats for biodiversity, for example; maintaining uncut bank side vegetation, leaving a buffer of at least 2m each side of the watercourse where possible, continuity of bank side vegetation, riparian woodland strips, maintaining and enhancing aquatic vegetation and variation in types of flow. (See Appendix 4 for extract in relation to Freshwater and Wetland areas).

Play in Partnership – A Play Strategy for the City of Edinburgh – The City of Edinburgh Council, 2001. The strategic vision for the Play Strategy is that: "Edinburgh will be a child friendly city where all children and young people have access to play opportunities which offer variety, adventure and stimulus. They will be able to play freely and safely and make choices about where, how and when they play".

There are two objectives which will have an obvious impact on the management of the site. The first is that "*Every child and young person in Edinburgh will have access to good quality playgrounds and play areas which meet their needs for variety, accessibility, choice, open space, adventure and play aspirations.*" And "*To provide safe outdoor play areas in city parks, open spaces, woodlands, shorelines and other areas used for play."*

5.2 National Legislation, Strategies and Policy

Land Reform (Scotland) Act 2003

Aim: Part 1 of the Act establishes a right to be on land for recreational, educational and certain other purposes and a right to cross land. The rights exist only if they are exercised responsibly. Some of the provisions for that purpose are also extended in relation to rights of way and other rights. Part 1 imposes certain duties on local

authorities in relation to access on and over land in their areas and, in particular, requires them to draw up and adopt a plan of core paths in their areas.
Relevance: The River Almond Walkway is open to all visitors that use the site in a responsible way.

Nature Conservation (Scotland) Act 2004
Aim: The Act sets out a series of measures which are designed to conserve biodiversity and to protect and enhance the biological and geological natural heritage of Scotland.
Relevance: The River Almond Walkway is a site with a good range of biodiversity, natural and cultural heritage.

Dog Fouling (Scotland) Act 2003
Aim: The Act has two principal aims. The first of these is to amend the offence of dog fouling so that the offence consists of failing to clear up after a dog rather than of allowing a dog to foul. The second aim is to establish new enforcement provisions in connection with the offence by enabling local authorities and police constables to issue fixed penalty notices to persons committing the offence.
Relevance: This Act is very relevant to the River Almond Walkway, as with the majority of sites managed by the Countryside Ranger Servic, one of the largest visitor groups is dog walkers.

The Disability Discrimination Act (DDA) 1995
Aim: The Act aims to end the discrimination that many disabled people face. This Act has been significantly extended, including by the Disability Discrimination Act 2005. It now gives disabled people rights in the areas of: employment, education, access to goods, facilities and services. The Act now requires public bodies to promote equality of opportunity for disabled people.
Relevance: The River Almond Walkway is a linear route with constrictions due to topography, therefore only certain routes can be used safely for public passage. With rocky intrusions and steep gradients common throughout, becoming compliant with DDA legislation throughout the length of the walkway would be challenging and costly. This is not to say that this could never be achieved. One of the main problems on the route is the Salvesen Steps structure, which even for some able bodied people is a challenge to overcome. One of the priorities in this Management Plan will be to commission a feasibility study into the options available to overcome this major barrier and make the walkway as freely accessible to as many as possible.

6.0 Monitoring and Reviewing

The River Almond Walkway is patrolled regularly by CECCRS, with all major entrances and features being checked. Observations made during the patrol are entered onto a patrol sheet and anything needing attention is reported to the appropriate member of staff and acted on according to health and safety priorities. Patrol logs are kept at the CECCRS Headquarters at the Hermitage of Braid and can be referred to as required.

The Parks and Greenspace Asset Audit is another way to monitor the features of the park. The aim of the audit is to produce a detailed inventory record of assets contained in each of the city's parks and countryside sites, including a basic condition

survey for resource analysis and control. Each site has been given a four digit numerical reference and each asset a unique reference number, a photographic record is taken of the assets and grid references noted.
The information is imported to a Microsoft Access database which is linked to a Geographical Information System (ArcView) enabling users to locate precisely where each asset is. Updates are done in Microsoft Access and a point is automatically added to the GIS asset field. There is a facility to run condition reports etc, this will help to identify and prioritise areas most in need of attention and costs to be ascertained.

In addition, all parks and gardens in Edinburgh including the River Almond Walkway are assessed internally once per year by trained members of Parks and Greenspace staff using the Green Flag criteria. This assessment seeks to evaluate the park based on the main categories of the Green Flag award and is referred to as the Parks Quality Score (PQS).

The CEC Parks and Greenspace Service has developed a standard framework of monitoring and reviewing for the city's parks and gardens. The River Almond Walkway is included within this city-wide initiative.

6.1 Grounds Maintenance and Taskforce Duties

Throughout Edinburgh, the majority of grass cutting, hedge and verge trimming and strimming is carried out by ground maintenance mobile squads, managed centrally by Specialist Ground Maintenance Services (SGMS) or by the Neighbourhood Taskforce.

In relation to the River Almond Walkway, the only areas which have a formal maintenance standard are the amenity grass areas around School Brae/Caddells Row which receive a schedule of 15 cuts per year April to October.

Edges and Hard/Fence Boundaries round formal roads and pavements maintained by West Taskforce Mobile 2 - spot treat of herbicide to control fence lines etc. - scheduled for monthly spot treats during the growing season. No chemical applications are made beside the watercourse and legislative buffer zones are adhered to stringently.

Channel maintenance - maintained by West Taskforce Mobile 2 - spot treat of herbicide along channels - scheduled for monthly spot treats during growing season, winter period - clear channels of litter & debris. No chemical applications are made by the watercourse and legislative buffer zones are adhered to stringently.

The CECCRS advocates responsible access to the countryside. Litter bins are located at major access points and where vehicular parking is available. All litter bins are emptied twice during a four day period by the West Neighbourhood Taskforce Team. Litter sweeps of the Walkway are organised and undertaken by the CECCRS in conjunction with local community members, groups and volunteers.

6.2 Parks and Greenspace Survey

The Parks and Greenspace Survey is designed to capture people's views on a range of issues relating to parks and greenspaces in Edinburgh, in general and the park they visit most frequently. The survey is available online at www.edinburgh.gov.uk/parksurvey.

The survey data is collated and analysed annually in June. The results are distributed to staff and stakeholders, including Friends of Park groups. They are also posted on the Council website and in parks notice boards. The results are used to help prioritise work carried out. Where appropriate they are used to develop Park Improvement Plans and feed into the creation of Park Management Plans.

Another method of monitoring the improvement and success of the River Almond Walkway is through analysing the positive press interest and publicity the site, or local community receive, this positive press can generate more interest and knowledge of the area. Community group and volunteer involvement numbers are tracked and tallied by CECCRS for inclusion in their annual report.

6.3 Ezytreev

Ezytreev is a tree management package that enables the user to record and monitor data relevant to single and/or groups of trees. The basic type of data which can be captured includes; age, girth, height, condition, location and targets. The system can be used in many ways, from simply mapping trees to setting up timed management processes on a continual basis and creating works orders. Ezytreev is also reasonably customisable so the user can tailor it for specific needs. The City of Edinburgh Council purchased the system in 2006, and a large scale tree survey was commissioned to capture data relating to the trees in the streets, parks and woodlands that fall under the Parks and Greenspace remit; some 35,000 trees have been recorded to date. This system has been applied to trees along the River Almond Walkway, the majority of which are located within 20m of a main path, bounding properties, roads, pavements or other infrastructure.

7.0 Evaluation

7.1 Statement of Significance

The River Almond and Walkway; lies in a Conservation Area, is an Area of Outstanding Landscape Quality, is a Local Biodiversity Site, falls within Edinburgh's Green Belt and is a Site Important for Nature Conservation. It also bounds the Firth of Forth Special Protection Area and Site of Special Scientific Interest.

The **Cramond Conservation Area Character Appraisal 2001** lists essential characters of the Natural Environment specific to the immediate walkway area: a deeply incised and heavily wooded river valley with sandstone rock structure; general views out are contained by the topography leading to a sense of enclosure, seclusion and natural beauty despite the intrusion of some built development; changing

appearance of the river ranging from still water, to rapids and to the impressive waterfalls over the weirs; trees and woodlands as a key feature within the valley; and a natural landscape containing a rich biodiversity.

The 2001 document also lists an essential character being the Townscape and Architectural character encompassing the surviving buildings and remnants of the mills with the historical and physical relationship between the properties still evident; cottages and terraces of a domestic scale in simple architectural styles; the picturesque and romantic mill ruins; and the predominance of traditional building materials and detailing.

An **Area of Outstanding Landscape Quality** will soon be referred to as a **Special Landscape Area** affording protection from inappropriate development to conserve their valued characteristics and qualities.

A **Local Biodiversity Site** is identified through Local Biodiversity Action Plans of which Edinburgh's current Biodiversity Action Plan was launched in March 2010. Species and Habitat Action Plans were developed, as a result where an area holds such important species or habitats or both it can be classified as a Local Biodiversity Site. The educational aspects of these areas also play an important role in raising awareness in terms of species present or management techniques employed. (See Appendix 1 and 2 for report and full species list that were used as the basis of its designation as a Local Biodiversity Site).

Edinburgh's **Green Belt** is an important area of countryside around the edge of the city where new building is not normally allowed and planning is strictly controlled. The aims are to stop the City expanding too much, allow easy access to the countryside and protect the attractive landscapes around the City, the River Almond corridor is one of these areas.

A **Site Important for Nature Conservation** is a designation used in many parts of the UK to protect areas of importance, for wildlife, at a regional scale. In other parts of the country the same designation is known by various other names such as County Wildlife Site and Site of Metropolitan Importance for Nature Conservation. This designation is referred to as a "non-statutory wildlife site", or a "Local Site" and protects the area from most development.

A new Firth of Forth **Site of Special Scientific Interest** (SSSI) was notified by Scottish Natural Heritage on 15 August 2000. This includes all of Edinburgh's shoreline with the exception of small areas to the west of Port Edgar (South Queensferry) and in the harbours of Granton, Newhaven and Leith. On 20 September 2001, Scottish Ministers announced the classification of the Firth of Forth as a **Special Protection Area** under the EC Wild Birds Directive and as a **Wetland of International Importance** under the Ramsar Convention. These areas include most of the Firth of Forth SSSI, and all of that part lying within the City of Edinburgh. These designations are important in connection with the River Almond and Walkway due to the Almond emptying into the Forth at Cramond. Some of the internationally renowned birds on the Forth occasionally forage upstream on the Almond, therefore any incidents of pollution in the greater catchment of the River Almond would not

only impact upon the river's biodiversity but also on this internationally recognised area.

8.0 Recreation

Several formal and informal recreational activities occur on site, including:
walking, picnicing, dog exercising, running, fishing, orienteering, natural history studies, drawing, cycling, swimming and boating.

Prior to 2003, CEC's park management rules restricted cycling in parks, and cycling on the River Almond Walkway was not allowed by anyone over the age of 14.

With the Land Reform (Scotland) Act 2003 and the Scottish Outdoor Access Code, cycling is now allowed where access rights apply, provided it is done responsibly. Cycling has proven to be very popular, although occasional conflicts occur with other users, particularly walkers.
The Walkway is heavily used by dog walkers. Despite the creation of signage, and the provision of litter bins at access points, there is an excessive degree of dog fouling. The thoughtlessness of some dog owners presents a very real health hazard, and inhibits other users from visiting the site. This issue is monitored by the CECCRS and specific issues can be reported to the Environmental Wardens if necessary.

Erosion of some areas of riverbank is also a result of dog activity. There are certain areas showing large areas of scouring earth and mud in some locations. An examination of how this can be countered or repaired should be undertaken and actioned as resources permit.

There are issues with professional dog walkers who use many CECCRS managed sites. Their ability to control large groups of dogs varies and there have been conflicts between professional dog walkers and other site users. Discussions regarding how to proceed/initiate control measures are ongoing.

8.1 Recreational Facilities

The site contains a range of seating in the form of benches and seats. They vary in materials, age and construction. Some wooden 'commemorative benches' have been installed and do not fall under the responsibility of the CECCRS to maintain. Most other seats are those of an informal wooden bench design. There are no picnic benches on the route at present however there are appropriate areas to site such features in the future. Seating is checked during patrols and any faults are repaired or reported.

Litter bins are located at the main entrances to the walkway as previously mentioned. The bins are of an open top variety and problems occur with crows and dogs pulling out items in search of food, scattering rubbish in the process. In general little litter is found on site, with the bins being used for both rubbish and dog waste. No specific dog waste bins are located on site and signage informs visitors that dog waste should be deposited in the waste bins provided.

Public toilets are available at Cramond Foreshore and in the visitor centre at Cammo Estate. The visitor centre there is open on Tuesday 14:00-16:00, Thursday 10:00-16:00 and Sunday 14:00-16:00.

9.0 Partnerships

With the CECCRS operating for over 20 years, several long established partnerships and working relationships have developed. Firstly, internally, although the CECCRS manage the site, several other departments within the CEC are involved – Forestry, Natural and Built Heritage arm of Planning, other members within the Parks and Greenspace unit and with the division of local neighbourhoods, the West Neighbourhood Team.

The Cramond Heritage Trust and Cramond Association have been in existence for many years and a strong relationship exists with the sharing of information and expertise along with ideas and guidance on how best to carry forward certain aspects of managing the site.

Cramond and Barnton Community Council have, for a number of years, been pursuing an all-encompassing management document for the River Almond Walkway and have themselves undertaken funding initiatives aimed at sympathetic improvements along the route.

Cramond Angling Club, who hold the fishing rights on this particular stretch of the river, have undertaken numerous improvement works over the years both in and out of the water including keeping pathways open, removing non-native invasive species and clearing debris from important fish passes.

The Friends of Cammo Estate are a long established local community group who have the conservation and development of Cammo Estate at the heart of what they do. Due to the link between the sites, strong relationships should be maintained.

The British Trust for Conservation Volunteers have worked on the River Almond Walkway for many years, Stevenson College students from their Access to Work and Employment courses, work voluntarily on Friday mornings throughout the academic year. A sustained week in June has become a regular voluntary exercise for S4 and S5 students from George Heriot's School undertaking conservation activities some of which occur on the site. Many corporate groups see practical conservation activities as vital in showing commitment to the local environment and they also provide good team building exercises.

CECCRS has its own network of volunteers regularly undertaking tasks on the River Almond Walkway**.**

The increasing involvement of local community groups and individuals with an interest in the River Almond Walkway will be important in continuing the positive development of the site.

A member of staff will continue to attend the West Neighbourhood Partnership Meetings, representing the CECCRS, in order to ensure all proposed grounds

maintenance tasks are undertaken, litter collection and fly tipping arrangements are followed up, any antisocial behaviour or similar incidents are addressed through Community Safety and Environmental Warden teams, marketing opportunities are kept up to date and most importantly that the already established links to the community can be maintained and strengthened and any new links exploited.

10.0 Marketing and Events

CECCRS has a website (www.edinburgh.gov/countrysiderangers), accessible through the City of Edinburgh Council's website, which informs the public about the parks managed by the CECCRS, how to get there, what activities or events are scheduled, and how to contact CECCRS to report any issues.

In addition, CECCRS advertises its yearly programme of events in a published leaflet available at the Visitor Centres at Cammo Estate and the Hermitage of Braid, in the Outdoor Diary, and websites including The List, the Outdoor Diary, What's On and on the West Neighbourhood Partnership website.

CEC's Parks and Greenspace department promotes parks through the website, but also through a number of other ways, such as Park Surveys which allow the Council to actively recruit the public's opinions about the parks they visit regularly. Other things such as a parks photo competition also increase the visibility and recognition of the parks in Edinburgh.

For important events, or to advertise information about local community group activities and projects, CECCRS makes use of press releases, both in smaller local newspapers as well as the Edinburgh Evening News. These press releases are important to reach out to different groups and promote knowledge of the site and activities.

11.0 Interpreting the River Almond Walkway

The River Almond Walkway is popular with locals, who use it regularly, and visitors to Cramond taking a walk upstream. Currently the only information available is through the Cramond Heritage Trust museum (open April to Sept on weekends and daily throughout the Edinburgh Festival) which gives a thorough look at the area however, there is nothing on the walkway to tell of its past industries or how it is used today.

As you walk alongside the river you can see the remains of mills and cottage, these are all that are left from an industrial heritage which spanned 300 years. Since milling stopped the river has become clean again so is home to a wide variety of fish, birds and mammals. The industrial past and erosion from the steep slopes has left behind compacted soil which means natural regeneration of native plants is difficult but planted laurels and garden escapees introduce an exotic feel. The variety of surfaces including stone walls, bridges and cliff faces encourages plants you may not see in other similar areas. The woodland and path edges also offer a wide range of plant life.

The message to be conveyed in any interpretation should be that "In the past the river was an important source of energy for industries like milling; today it provides a home for many animals and plants."

The objectives of interpretation along the walkway would be to:

1. Explain the industrial heritage of the area – what the buildings you see today were used for.
2. Describe and explain the range of flora and fauna and why they live here.
3. Involve local people in deciding what and how the area is interpreted.
4. Ensure the walkway interpretation is as accessible to as wide a range of people as possible, both physically and intellectually.
5. Incorporate the corporate look of boards at other Countryside Ranger Service sites.

The main visitors to the area are a mix of people, who live in the local area and visit it regularly, plus visitors and tourists who only visit occasionally. This means the interpretation should include both the basic 'what you can see' as well as an element of changeable or updateable information about what is currently happening in the area.

The Countryside Ranger Service manages 11 sites throughout the city and therefore wishes to keep interpretation on these sites within recognisable style guidelines.
These would be:

- The interpretation should match the style and colouring of previous Interpretation produced on Countryside Ranger managed sites.
- Made from sustainable hard wearing material, vandal proof, can either be easily replaced or cleaned.
- Must include CEC Countryside Ranger Service logo, CEC logo, and the logo of any grant providers.
- Fonts must be easy to read and distinguish letters in good contrasting colours.
- Must be physically accessible to all complying with government legislation.

The content and final media which would be used will, within the aforementioned guidelines, be decided in conjunction with local people. This may include a variety of media or keep to only one; the decision will be made once the local community have been consulted. The content will include information about the history of the area as well as the wildlife that use it today; the past and present will be explained through interpretation – either by an interactive trail, art or other media. These could involve new technology accessible through web sites and mobile phones and/or be supported by leaflets and literature available in local shops and buildings.

There will be display cabinets, the same as at access points to all Countryside Ranger managed sites, at either end of the walkway. These provide space for the Countryside Rangers and local groups to display what is happening on the walkway at any one time. The design of these will match other Countryside Ranger display cases with the local community having a say in the design of the topmost bar.

12.0 Safety and Security

CECCRS informs the police of certain types of anti-social behaviour occurring on or around the River Almond Walkway, particularly the use of motorised vehicles and underage drinking. CECCRS has also developed a good working relationship with the Wildlife Crime Officers in Lothian and Borders Police in order to monitor any suspicious activities regarding wild animals such as badgers, foxes or raptors.

In 2009 CECCRS began to regularly report all anti-social activity including observations of any drinking dens, vandalism or other crimes to a special liaison officer in order to monitor trends and ensure the police are made aware of all issues within the parks managed by the CECCRS.

The West Neighbourhood team houses the Community Safety Officers and Environmental Wardens. There is instant contact and dialogue established between the Council and Police through the Tasking and Coordinating Group. The Environmental Wardens assist the CECCRS by providing a high visibility presence on the River Almond Walkway in the aim to reduce dog fouling and littering offences. The Environmental Wardens take enforcement against anyone found to be contravening the Dog fouling (Scotland) Act 2003. Any person found failing to pick up, immediately after their dog, is issued a Fixed Penalty Notice of £60, reduced to £40 if paid within 28 days. They also take the issue of littering very seriously, leaving or depositing litter is a criminal offence, therefore anyone seen to be contravening the Environmental Protection Act 1990, will be issued a Fixed Penalty Notice of £50. Regular patrolling is carried out and resources are targeted to areas that receive a large amount of complaints or if it is identified as being a hot spot.

13.0 Sustainability

As the River Almond Walkway is a Natural Heritage Park, it does not involve the type of formal plantings that may use less sustainable items such as peat. Leaf litter, tree branches and fallen wood are left in situ when safe to do so, or moved to areas away from paths if necessary, they are not taken away as waste. Any large items of rubbish removed from the site, particularly any fly-tipping, are taken to the local recycling centre where they can be separated rather than deposited in landfill.

The Cramond and Barnton area is served by the number 41, 43, 55 and64 bus routes. There is only a small amount of car parking available at particular points on the route, to encourage people to walk or cycle to the area if they live locally, or use the bus. The site is one of Edinburgh's Core Paths, further encouraging sustainable travel to the site and into and out of the city.

A draft Pesticide Reduction Policy (2009) has just been produced for the Parks and Greenspace unit within the City of Edinburgh Council. Herbicide application is only used when cultural practises will not provide adequate control. The Policy states;

It is the City Of Edinburgh Councils policy, where appropriate, all non chemical alternative methods of weed control will be investigated and implemented depending on the requirements of the site, local environment and its users. This will also take

into consideration, all available resources and any cost implications, which could impact on the local service delivery.

When non chemical alternatives are not suitable and chemical applications will be required, the Council will ensure;

- *Chemical amounts are reduced by using alternative, low active ingredient products.*
- *Application methods will be used to reduce the amount of chemicals applied.*
- *Application methods will be used to reduce chemical drift and any risk to the operator and the public.*
- *Chemical types and application methods will ensure that any risk to the environment is reduced or eliminated.*
- *Use well trained and certificated staff.*
- *Use well maintained and correctly calibrated application equipment.*
- *Continually monitor and review all chemical usage.*

Only affected areas are treated and only then using strategies that are sensitive to the needs of the public and the environment. The applications of herbicides are scheduled during off-peak times of park use and signs are posted to indicate the re-entry time period if appropriate.

14.0 Significant Key Features

14.1 Physical Features

14.1.1 Hydrology

The River Almond runs in a predominantly southwest-northeasterly direction over a length of 48km from its origins in the Kirk of Shotts in the Cant Hills, Lanarkshire, through West Lothian and the City of Edinburgh to its outfall into the River Forth at Cramond. The river has a catchment of 375km^2 the majority of which falls into West Lothian and has 5 major tributaries: Breich Water above Livingston, the Broxburn, the Gogar Burn, the Muiriston and Linhouse Waters.

The river was dredged under the terms of a statutory drainage scheme, until this statutory obligation was removed by the Flood Prevention and Land Drainage Act 1997. Both the River Almond and Gogar Burn are prone to flooding. As dredging was undertaken in line with flood prevention protocol, unless this requirement is needed in the future, there is no requirement for such activities to be carried out.

The River Almond has been long identified as being one of the most polluted rivers in Scotland. This is mainly due to the urban nature of the run-off associated with the catchment area, sewage treatment works at Whitburn, Blackburn, Mid Calder and Newbridge, historic industry pollution relating to Milling activities in the 18th century, oil shale and coal mining in the 19th and 20th centuries, effluents arising from related abandoned mine workings and intensive agricultural practices in its lower reaches.

Initiatives developed and introduced over the last few years have worked to improve water quality and remediate effects of historic and current pollution sources. The first main initiative, an integrated management plan launched in 1998, was the first comprehensive river catchment management plan to be launched in Scotland.

Data from the Scottish Environment Protection Agency (SEPA) indicate overall river water quality in the Almond to be C (poor) upstream from its confluence with the Gogar Burn and B (fair) downstream to its outfall in the Firth of Forth. SEPA continue to monitor such activities and when instances are noticed or CECCRS are notified, SEPA are immediately made aware.

14.1.2 Geology

Sea-levels have risen and fallen several times since the end of the ice age. This was due to two factors; ice taking water from the oceans, and the weight of ice pressing down the land which later rebounded. At the end of the ice age the sea along the Forth estuary stood around 40m higher than present where waves lapped against Calton Hill at London Road and on the doorsteps of the Scottish Parliament at Holyrood. Land below this was an estuarine mudflat blanketed with marine sands, silts and clays. Fall of the sea to its present level occurred in fits and starts, sudden drops being followed by long standstills. The most significant standstill occurred about 6500 years ago producing a flat beach at about 8m above sea-level with an old sea-cliff behind; this can be seen today all along the coast from Bo'ness to Musselburgh. Sudden drops in sea-levels caused the rivers to cut the gorges found along much of the River Almond, the Water of Leith and both the North Esk and South Esk. Debris eroded by rivers is laid down as alluvium, a flat plain of gravel, sand, silt and clay, bordering all the rivers and streams in the area.

The geology of the River Almond catchment has to a large extent directed its urban and industrial development. These developments, along with the catchments natural geology largely determine the river's hydrological, hyrdrogeological and hydro-chemical regimes.
The catchment lies in the Midland Valley, an ancient rift valley bounded by the Highland Boundary Fault to the north and the Southern Uplands Fault to the south (Cameron and Stephenson, 1985). The Midland Valley is floored mainly by rocks of the Devonian and Carboniferous age. The overlying beds of rock are folded up and down forming a series of ridges and troughs (synclines and anti-clines) trending north-south through the catchment. The carboniferous rocks underlie the major part of the Midland Valley, and have been influential in the industrial development of the region by providing sources of coal, ironstone and limestone.

The sandstones, shales and fireclays of the upper reaches of the River Almond, which are Carboniferous in origin, form very productive coal measures. Progressing eastwards, the geology comprises rocks of the Carboniferous Limestone Series and Passage Group millstone grit. The river then gradually moves over rocks of the Calciferous Sandstone Series (oil shales). There are also a number of outcrops of igneous rocks such as those found in the Bathgate Hills, and intrusions of quartz-dolerite sills occur throughout the immediate area.

Two of the main trbutatries , the Muiriston Water and Linhouse Water, have their sources in the south-western end of the Pentland Hills. The geology of this area is mostly sandstones and marls of the Upper Old Red Sandstone Series (Reid, 1985).

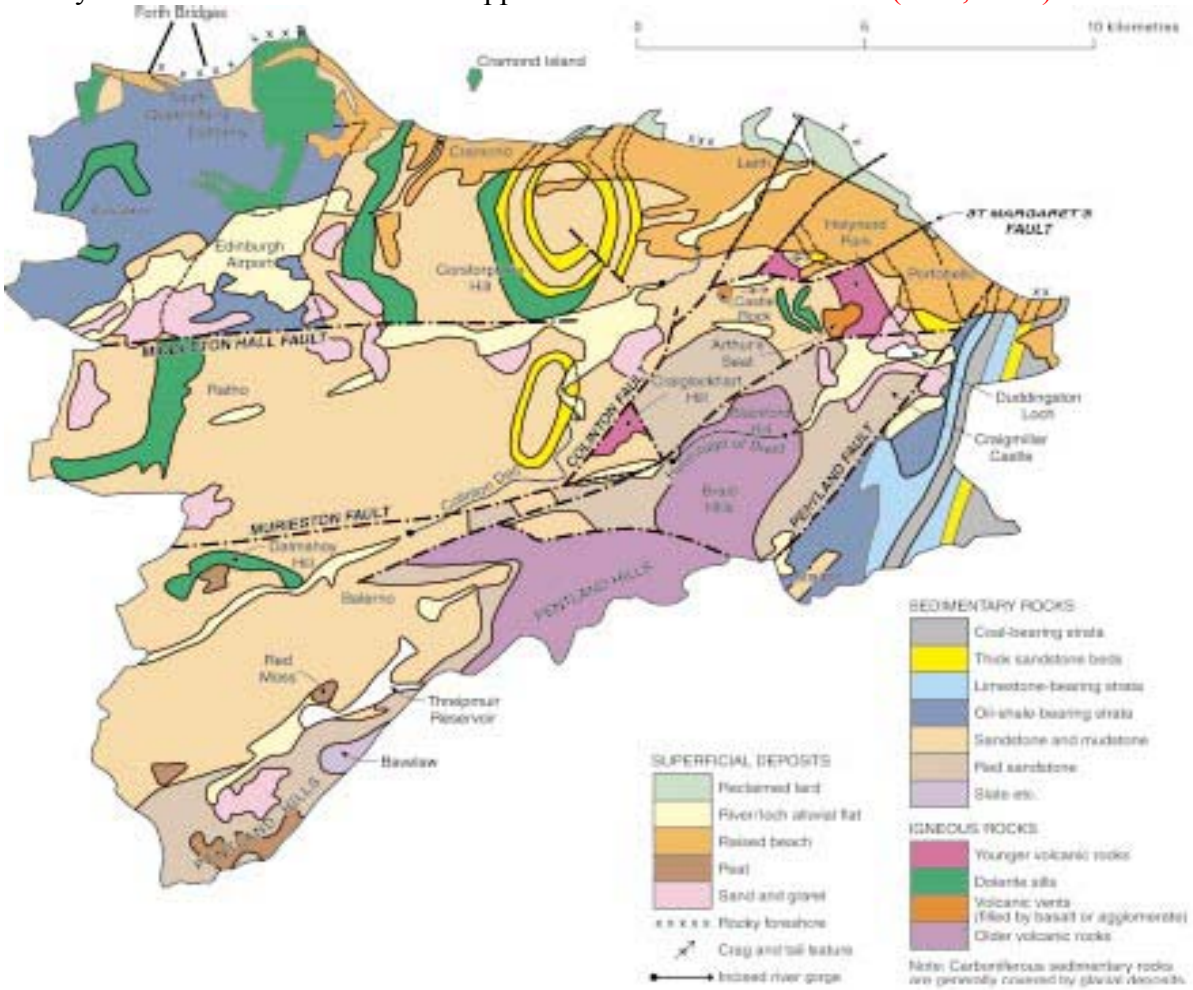


Figure 1 – Illustration of Underlying Strata in Edinburgh Area (RIGS)

Solid geology in the immediate lower River Almond area is predominantly interbedded sandstone and argillaceous rocks, with siltstone, mudstone, some coal seams, ironstones and limestones. Till is spread throughout the area, with some sands and gravels and alluvium deposits associated with the river.

Superficial deposits vary along the river course comprising mostly Glacial Till. The A8
Glasgow Road, in its run up to the Gogar Roundabout has been constructed on an embankment, which lies upon glacial Sands and Gravel. These glacial deposits fall away steeply to the south and the Glacial Till is overlain by Lacustrine deposits.

More superficial deposits rest upon rock strata belonging to the Lower Oil Shale Group of the Carboniferous System. These strata are recorded to comprise an interbedded sequence of Sandstone, Siltstone and Mudstone. Although seams of Oil Shale are present within the Lower Oil Shale Group they are not expected within this area. The Middleton Hall Fault is recorded to the north of the Gogar Roundabout, running from west to east; the fault downthrows the strata to the north. An intrusion of

Quartz dolerite is recorded to outcrop at Maybury, north of the fault line. The Ravelston Sandstone is recorded to outcrop at Hermiston Gait and extends to Broomhouse Drive where it rests upon an un-named fault, which runs from north to south. The Ravelston Sandstone comprises a fine-grained, hard rock, which has been worked extensively in other areas as a building stone.

With an assumption that the course of the Gogar Burn has been altered over time and as such weak alluvial soils may overlie the glacial deposits within the vicinity of the burn. At Edinburgh Airport, lacustrine deposits, thought to be associated with the River Almond, are recorded. The area around Edinburgh Airport has been extensively landscaped to form the airport terminal areas and aprons and is recorded as being 'flat' on the geological sheet. Superficial deposits may be overlain by pockets of made ground due to previous developments within the area. The thickness of the superficial deposits in this area is not known, however, they are likely to vary and are generally expected to be greater than 10 metres thick.

14.1.3 Soils

The soils of Edinburgh are mainly formed on the glacial deposits of a wide variety of parent materials. Others formed on sand, dolerite and shale, with a tendency to acidify in certain climatic conditions. Given this variability, it is difficult to generalise about soil properties in Edinburgh. There is variety in chemical status, moisture, pH, texture and organic content, determined in part by the overlying vegetation.

The hard rock geology in the vicinity of the lower River Almond is covered in most places by glacial drift deposits, chiefly boulder clay. Soil type influences how rainfall runs off the surface. Clayey soils allow little water to infiltrate through the ground and so water tends to run off into ditches and streams. This means that water levels within the area naturally rise and fall quickly in response to rainfall. This is noticeable throughout the year in terms of the fluctuation in water level contained within the River Almond itself and the fact that after heavy deluges, some parts of the Walkway can be under water. This response is further exacerbated by the large areas of impermeable paved surfacing (roads, roofs) in more urban parts of the immediate area. There are also morainic deposits, and lake alluvium is locally important in the flat reaches of the catchment area between Newbridge and Craigiehall. In the headwaters the river flows over poorly drained soils, mainly peaty gleys, some peat and non-calcareous gleys giving rise to the water colouration present most of the year.

Soils are eroded and deposited by rivers as part of the natural geomorphological processes. However, this movement of sediment by rivers can cause problems of destabilised banks and the undermining of adjacent buildings and road bridges. Works have been undertaken in a number of reaches to stabilise banks namely further upstream in the Livingstone area and a main section of the river which flows along the boundary of the airport.

14.2 Natural Features

14.2.1 Habitat

The River Almond is a Local Biodiversity Site, reflecting its importance in terms of the habitat it provides. The lower reaches consist of deeply incised gorges clad by a myriad of tree species, scrubby vegetation and water edge species. The river itself now has a water quality rating of fair which is reflected in the diverse range of fish species present coupled with invertebrate species expected in fair to good quality water.

14.2.2 Flora

The majority of the vegetation along the River Almond is tall ruderal and dense scrub. The east and west banks are similar with dominant creeping thistle (*Cirsium arvense*) and rosebay willowherb (*Chamerion angustifolium*). The invasive species Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Fallopia japonica*) are present along the banks of the river and actions are contained within the table in section 18.0 aimed at controlling these. As is few flowered leek (*Allium paradoxum*) where although not considered a real problem at present, requires monitoring. The scrub comprises hawthorn (*Crataegus monogyna*), willows (*Salix* spp) and planted conifers further upstream towards the airport.

There are a few patches of poor semi-improved grassland along the River Almond. This comprises abundant red fescue (*Festuca Rubra*), common bent (*Agrostis capillaries*), Yorkshire fog (*Holcus lanatus*) and creeping buttercup (*Ranunculus repens*).

There are also small areas of semi improved neutral grassland dominated by false oat-grass (*Arrhenatherum elatius*), with abundant Yorkshire fog (*Holcus lanatus*), common bent (*Agrostis capillaries*) and ribwort plantain (*Plantago lanceolata*).

Some other plants of interest are Alexanders (*Smyyrnium olustrum*) and, probably most importantly, yellow star of Bethlehem *(Gagea lutea*). Saracen's woundwort/ragwort *(Senecio fluviatilis)* is abundant over the site of the Roman Bath-house. Giant bell-flower *(Campanula latifolia)* is present on the west bank of the river so it would not be surprising if it were to occur on the east side of the river as well. It has also occurred (or been planted) in the grounds of Lauriston Castle and in the outer parts of Cammo Estate.

14.2.2.1 Woodland Management

The River Almond Walkway is essentially a woodland corridor and has historically suffered from neglect in terms of woodland management with the exception of felling of diseased and unsafe trees. The River Almond Group, a formalised local community group no longer in existence, undertook some tree planting during the mid to late 1990's however, some of the trees planted are in good condition and some have deteriorated due to lack of protection and adequate aftercare. Historically the tree stock is of good value; associated with some of the grandeur and elegance of the larger Estate houses, which owned the lands running down to the riverbank. Through

the process of succession and evolution, the non-native more vigorous tree species now tend to dominate; sycamore is a prime example of this process. There is a need, over the longer term, to promote diversity within the tree composition within the scope of this management plan. In the first instance, low key small scale management will occur where self seeded natural regeneration of tree species such as sycamore, the stands of laurel and the over dominance of ash will be addressed. Following this will be the creation of diversity within the age structure. Areas of mature to over mature trees that may present safety issues in the near future can be cleared, allowing establishment of ground and shrub layer flora. Poorly formed trees, usually through the actions of squirrels, can be selectively thinned. Where bank erosion problems are beginning to appear, the use of natural materials and planting of native water tolerant tree species will be employed. Hedgerows provide a multitude of benefits in terms of floral and fauna diversity; where there is a distinct lack of such features on the site, coupled with the linear nature along paths, hedgerows would be a valid and worthwhile addition – careful consideration for siting of such a feature will be employed so as to negate compromising the natural features of the walkway.

The management techniques outlined above will form the basis of a ten year prescriptive action table in relation to the woodland and tree stock onsite, see section 18 of this plan. Any slightly invasive techniques (for example where mature trees are required to be felled) will be undertaken with promotion of biodiversity threaded throughout – leaving monoliths where safe and appropriate to do so and leaving deadwood onsite to rot down naturally rather than removing it.

Any new planting will occur in line with the National Vegetation Classification (NVC) system. Since its publication during 1991-2000, the NVC has been widely welcomed as providing a much-needed common language in which the character and value of the vegetation of Britain can be understood. It has been accepted as a core standard, not only by the nature conservation and countryside organisations, but also by forestry, agriculture and water agencies, local authorities, non-governmental organisations, major industries and universities.

The NVC in itself is not a monitoring tool, but is used to help furnish protocols for particular monitoring programmes and to develop a conceptual basis for understanding the purpose and practice of monitoring. The predictive capacity of the NVC means that it can also serve as a basis for developing management options for sites or landscapes and as a framework for restoration and design guidelines

Contained within a multitude of documents, namely the Historic Cramond Report, Cramond Conservation Character Appraisal and the recent Cramond Tree Report commissioned by Cramond and Barnton Community Council, are several recommended actions aimed at improving the woodland in the corridor of the River Almond Walkway. These recommendations will form the basis for Woodland Management proposals contained within this management plan.

14.2.2.2 Wooded areas along the River Almond Walkway – current condition

The tree cover is essentially mature or approaching full maturity. There is a noticeable dearth of young trees of any quality. To retain continuity of tree cover, efforts need to

be focused on commencing the regeneration process. Future emphasis should be placed on developing greater species and age diversity, and transforming the tree cover into an uneven-aged, dynamic population which can be sustainably managed to meet a wide range of functions and uses, while respecting the historic landscape design. An ongoing program of specimen tree planting using species appropriate to the site should be implemented to provide continuity of tree cover in the long term. The many individual, open-grown specimen trees (mostly outwith the River Almond Walkway corridor) are an attractive and important element of the designed landscape. These should be retained as long as it is safe to do so and managed appropriately to prolong their life span and minimise risk to public safety. Trees should only be felled where they are dead and/or present an unacceptable risk to public safety. Felling should only be considered as a final option.

The self-seeded sycamore and other species within the woodland areas and elsewhere on the site should be felled and the stumps killed by an approved herbicide to restore the original landscape design. The main targets are therefore to:

- Restore the significant elements of the designed landscape as defined in the Conservation Plan.
- . Identify and make safe potentially dangerous trees for safety reasons.
- . Promote continuity of tree cover; consistent with the archaeological remains and designed landscape.
- Retain the existing mature trees as long as possible.
- Instigate an ongoing programme of tree planting consistent with the historic designed landscape, and bearing in mind the constraints of the Scheduled Area (which are out with the scope of this Plan but still worth mentioning given the history of the area).
- Remove the young, self-seeded sycamore and ash.
- . Carry out regular arboricultural inspections and undertake management as appropriate (this will be undertaken by CEC Trees and Woodlands Officers, Forestry Team and through use of Eazytreev system).
- Maintain the predominantly broadleaved character of the tree and woodland cover and retain the present balance between conifers and broadleaves.
- . Introduce a wider range of species native to the area to enhance diversity. However this will take a number of years as sycamore is the dominant landscape species.
- . Remove or control invasive Rhododendron ponticum, laurel and ivy growth and restock with native species in line with NVC system.

(Marta McGlynn Associates Historic Cramond Final Report 21 July 2003 173).

14.2.2.3 Arboricultural Management

Modern arboricultural techniques and practices should be employed as a means of retaining trees which are showing symptoms of decline and dieback. Reductive surgery to reduce the size and spread of the crown and promote re-growth and regeneration should be attempted as a means of retaining poor and declining trees. This approach is likely to prove successful on a number of trees particularly old veterans and trees, in poorly accessible areas in terms of machinery. The removal of

large diameter deadwood where this is a hazard to public safety should be continued to be undertaken.

Remedial tree surgery is carried out where large diameter deadwood overhangs the main footpaths and is a hazard to users. Trees adjacent to the footpath network or areas of high public usage receive priority in this respect.
All arboricultural works are carried out to British Standard 3998 '*Recommendations for Tree Work*' (1989) and in line with City of Edinburgh Council protocol.

14.2.2.4 Specimen Tree Planting

Although relatively few on the River Almond Walkway corridor, the specimen trees contained within the Conservation Area tend to be very mature and often of considerable age. Many now have a relatively limited life span. Numerous large stumps noted throughout the site indicate a history of removal and attrition of the specimen tree resource. There is a noticeable dearth of individual specimen trees to replace and provide succession for the present mature and aging tree population. An ongoing programme of specimen tree planting is desirable to continue this landscape tradition within the Conservation Area and provide continuity of tree cover. This should seek to replace trees which have been lost, as well as provide new, strategically placed specimens for the future. This can be replicated in certain locations along the River Almond Walkway.

14.2.2.5 Nature Conservation in relation to Woodland Management

Set against the legal obligations for safety is the desire to create a diverse and attractive wildlife habitat. The site should not be 'sanitised', a balanced and considered approach, which considers nature conservation, should be adopted. Clearly a higher degree of care will be required in areas of high public usage, whereas more remote and inaccessible areas of the site may be allowed to develop in a more naturalistic way, this has been the case for a number of years.

Dead and decaying timber, both standing and fallen, provides a valuable habitat for a wide range of fungal, invertebrate and animal species. Provision should be made for retaining a high proportion of such material as Council policy already dictates across the Urban Wildlife Sites. Retaining standing dead trees will be most feasible in the less frequented areas of the site, away from the main path network. Where public safety is a consideration, dead or dangerous trees may be made safe by judicious pruning or topping, while retaining the bulk of the standing trunk in a safe form. Deadwood and fallen timber should also be retained on the ground, particularly where this is away from the main footpath network and riverside areas. Potential bat roosts and other vulnerable and protected habitats are identified and safeguarded, arboricultural operations may be modified in these locations.

Maintaining and enhancing the nature conservation value of the site is an important management objective. In general terms, the management regime advocated will improve the conservation value in that it promotes continual tree cover and greater age and structural diversity. The removal and control of *Rhododendron ponticum* will be beneficial in encouraging the development of a more natural ground flora. Aiming

for long term stability and a matrix of different age classes will ensure that the ecological value of the site is protected and enhanced.

14.2.2.6 Rhododendron/Laurel Removal

Rhododendron and laurel cover has increased over the last 40 – 50 years. This is particularly noticeable at the start of the walkway slightly upstream of Cramond Boat Club. This has caused paths to become overgrown and the woodland character degraded by excessive shading.

While rhododendron and laurel may or may not have formed part of the original landscape design, selective removal and control would be beneficial from throughout the affected areas. This will be achieved by cutting back to ground level, removing or chipping all arisings and spraying any re-growth from the stumps using Glyphosate, where necessary. A prerequisite to these works will be cutting small chunks or "gubbs" from main stems with an application of neat Glyphosate directly initiating the plant species to die back. This method makes future management and removal works much easier to do and has been successfully undertaken in other areas of the country. As these species formed part of the designed landscape, a proportion should be retained to provide historical continuity but actively managed so as to never achieve current levels of dominance.

Control of these species will greatly improve the amenity and wildlife value of the wooded areas and create conditions for much needed regeneration. The woodland areas and associated paths will be 'opened up', thus improving security and visibility for users.

A programme of operations is provided for the ten year period that this plan covers and is included within the management prescription table below. The most urgent tasks have been prioritised and the work spread out through time in order to minimise disruption to the site. The work programme will be reviewed at the 5 year point and brought forward on a rolling cycle if necessary.

14.2.3 Fauna

Otters breed on the River Almond and a survey undertaken in 2005 found signs of otter breeding in the vicinity of a proposed river diversion scheme. Water Vole have been known to breed on the River Almond, however, a survey undertaken in 2005 as part of an Environmental Impact Assessment associated with Edinburgh's tram works did not record any signs of water vole activity in the immediate vicinity of the Gogar – Airport tram link. It is unlikely that the species is present given the presence of mink and brown rat and the fact that the species has been removed from Edinburgh's updated Biodiversity Action Plan. Badgers are most certainly present in the area of the River Almond although none seem to be habiting land owned and managed by the City of Edinburgh Council but there is a presumption that they use the river corridor as foraging ground. Bats are present and the addition of bat habitat boxes will bode well in assisting numbers in the Almond corridor.

The river is a known breeding site for both sand martin and kingfisher, the latter is a protected species and both are present in Edinburgh's updated Biodiversity Action

Plan. The following common bird species have been observed on the Almond on site visits in 2004 and during the breeding bird survey undertaken in 2005: blackbird, dunnock, green finch, grey wagtail, magpie, mallard, heron, mute swan, pied wagtail, sedge warbler, wren, willow warbler, goldeneye, moorhen, reed bunting and song thrush (both red list species).

The presence of trout and salmon in the River Almond has led to its designation as a salmonid water. This means that it has been identified as needing protection or improvement in order to support species including salmon and trout. An electro fishing survey for eel was carried out in 2004 by SEPA at Cramond Brig. The survey identified brown trout, stoneloach, bullhead and minnows but noted that eels dominate the fish fauna at the site. Bullheads are alien species and are known to be a threat to salmon and trout populations due to their ingestion of salmonid fry and eggs. SEPA also electro fished the Almond in Sept 2009, where Salmon Parr were found.

14.3 Cultural Features

Cramond gets its name from the celtic compound 'Caeramon'. Caer is celtic for fort (the Romans had a fort at Cramond). Amon signifies a river and was the original name used for the River Almond

The Romans were thought to have used the site as early as 140AD. They built a harbour at the mouth of the river and a fort above it. At this point Cramond was one of the outpost forts of the Antonine wall which ran from the Clyde to the Forth estuary. It was later used as a rearward depot and supply base until the Romans left around 215-6AD.

In the 15th century Cramond is known as Bishops Cramond. The Bishop of Dunkeld received parish teinds and paid and appointed a priest. All this was changed by the Reformation and by the mid 17th century, the kirk was rebuilt as a Presbyterian place of worship. Cramond was the local kirktoun where all the local farmers and people from outlying estates came to worship. This made it a place of great importance as the church governed all that went on including law and order and education. Opinions, attitudes and manners were all shaped by the church at this time.

The river mouth was a good place for oyster fishing around this time, however it was so grossly overfished that by the end of the 1700's, there were hardly any left. That said the main culprit was pollution from the industrial scale peat workings further up the River Forth. Fishermen at the time complained that the Firth of Forth fisheries were being killed off by the volume of finely divided peat which was being carried downriver by the methods used to reclaim farmland on the various mosses upstream.

At the end of the 1700's a lot of information is known about life in and around Cramond due to documentation produced by John P. Wood, a profoundly deaf young man who was immersed in life at Cramond. He documented the way people lived, earnings, rents, deaths, births and marriages. It was also around this time that improved farming methods and improving land owners were developing along with mechanisation.

The old grain mills, 5 of which stood on the lower reaches of the river, some dating as far back as 1178, 2 were sold in 1752 to become iron mills, another 2 in 1780 and one (Craigiemill) was never converted at all. This increased the number of jobs available in the area and brought an influx of newcomers with it. This increased industrial activity also had a negative effect with increased amounts of pollution being released into the river, which coupled with lime running off and leaching from surrounding agricultural land adversely affected the wildlife in the area. Most of the fish populations were killed off which meant food supplies for other animals were affected resulting in dwindling populations of otter, kingfisher and heron. These effects were further enhanced with the oil and shale industries in West Lothian gathering momentum and again through leachate and run-off had severe negative effects on the condition of the river. For these reasons, the River Almond became known as the most polluted river in Scotland at this time. Thankfully, in terms of adverse effects, these industries have all but gone in the catchment area and through international, national and local initiatives, the River Almond once again has an abundance and variety of wildlife.
The River Almond in the Cramond area is much changed today. Long gone are the mills and much of the agricultural land on the true right or south bank has been given over to development. The valley is seen as a place to come and relax, to get some time away from the hustle and bustle of city life. This management plan endeavours to enhance the opportunities to enjoy the history, scenery and wildlife of this important public space.

14.4 Social Significance

After the heavy industries along the River Almond ceased, the social pleasures associated with such a space became much more apparent. With local landowners and larger estates close by struggling economically, much of the land immediate to the river was gifted to the people of Edinburgh to enjoy and behold. As a result the old lade which powered several of the mills was infilled and a walkway created. Mr Salvesen, a local landowner, gifted some of his lands and constructed the “Salvesen Steps” which traversed a rocky outcrop on the true right bank of the river slightly upstream of School Brae/Caddells Row. Through an initiative run by Lothian Regional Council in the 1980’s, formalisation of the walkway path structure from Cramond Brig to Cammo Estate was undertaken and adopted enabling future maintenance and upkeep to be carried out. This section however, for a number of differing reasons, has deteriorated over time and of late has been transferred to the Parks and Greenspace department, whereby through management prescriptions highlighted later in this document, this area will be brought back to an acceptable standard.

Local community involvement with the walkway and river has been rather inconsistent over time. The Cramond Association has led on many initiatives since it was founded some 50 years ago, the River Almond Group came into existence during the 1990’s and undertook a number of projects aimed at enhancing the area for both people and wildlife. Sadly, during the early 2000’s, this group has become inactive due to changing personnel, interests and priorities. Of late the Cramond Angling Club and its membership have been very active in keeping access points down to the river clear and open, cutting back other encroaching vegetation, surveying and reporting wildlife and undertaking freshwater invertebrate sampling.

The River Almond Walkway is used by a number of different types of user groups and although no visitor numbers have been officially recorded specific to the walkway, through initial observations it seems as though no particular user group outweighs the rest. Local people certainly use it for exercise and dog walking, people seem to flock from far and wide to fish with permits obtained from the Cramond Angling Club who currently have a membership of over 230, wildlife enthusiast are often encountered, walking groups using Edinburgh's Coastal Path have no alternative but to use the walkway and with the main cycling route 75 crossing the A90 at the Cramond Brig, cyclists are often encountered as well.

The Countryside Ranger Service offers an exciting range of events across all sites managed, inclusive is the River Almond Walkway with the River Almond Ramble in 2008 achieving 24 participants on a beautiful day in September. Coupled with this is the educational services offered. Local and not so local school, scout and guide groups often approach requesting the services and specialised skills of the Countryside Rangers to deliver outdoor environmental educational and responsible use activities. The River Almond Walkway is often used in this respect due to the diverse range of habitats encountered in a relatively small area.

15.0 Cramond Ferry Boat

A small ferry crossing over the River Almond at Cramond has periodically been operating since the 1600s where it was mentioned in an Act of Parliament dated May 1662. It did not operate during the 'war' years, periods of ill health and recent years. The ferry provided a crossing, taking walkers from the eastern bank of the river Almond at Cramond across the river onto the Dalmeny estate, through which there was a five-mile walk beside the Firth of Forth to the Forth Rail Bridge at South Queensferry and formed a link in Edinburgh's Coastal Walk.

Since the Ferry ceased many different options for a renewed crossing have been discussed with the construction of a footbridge being negated due to opposition. A proposal for a chain-pull ferry is now on the table. A feasibility study has been commissioned by Cramond and Barnton Community Council and the associated report was made available mid 2010. The report produced by Colin Smith of the Glamis Consultancy concludes that the ferry can be viable. This is based on his research of potential passenger numbers, budget capital and maintenance costings received from Briggs Marine and is based on a number of alternative fare structures. It is anticipated that a reasonable profit can be achieved at a crossing charge of £1.50 and it would be marginally profitable at a charge of £1.00.

The engineering report which accompanies the business case study follows largely the concept originally presented and has been refined with input from Colin McPherson of Quattro Consult. The ferry location is just south of the steps and at both banks the access to the floating pontoons will be by a lift platform. (See Appendix 5, 6a and 6b for business plan summary and computer generated images).

Consultations have been undertaken with stakeholders and interested parties and these have been very positive. The report has been presented to the Community Council, the Neighbourhood Partnership and other bodies. It is now necessary to consider how

the project can be realised and to consider who would be the client body / trust, who would be the operating company and how the project would be managed. Capital funding is clearly a major factor, especially in this climate, and alternative routes to achieve funding will need to be considered in detail. For information, the capital cost of the project is estimated at no greater than that estimated for a footbridge (in the region of 250k).

The City of Edinburgh Council Countryside Ranger Service fully supports the revival of an appropriate crossing of the River Almond at Cramond and will endeavour to assist Cramond Community Council in achieving this. Indeed, the CEC Core Paths Plan has identified a crossing in the location of the old ferry as 'future potential'.

16.0 The Salvesen Steps

The Salvesen Steps on the River Almond Walkway were constructed in the mid 1960's. They have been maintained in good order until late 2007 when a major structural fault was discovered.

The Steps were closed for a period of time until remedial repairs were carried out. The Steps were re-opened in April 2008. The remedial works have an estimated life span of 5 years, during this period, members of the Countryside Ranger Service team undertake weekly inspections in order to assess the structure for any noticeable movement or defects; documenting the inspections on forms kept in the CECCRS HQ.

The nature of this section, Salvesen Steps, a path traversing a rocky outcrop on a linear walkway route with 4 flights of concrete steps on the downstream section and the same on the upstream section drastically reduces the accessibility of the route. Cyclists struggle to carry bicycles up, over and then down again, families with pushchairs or buggies are rarely seen attempting the incline and decline and wheelchair users are completely unable to even contemplate taking the route on.

To this effect, an application to the 'Forestry Commission Central Scotland Green Network Development Fund' for a design, specification and costing for a board walk to traverse the rocky outcrop above the River Almond bypassing the Salvesen Steps is currently being put together. The CSGNDF is intended to provide the groundwork (survey, design etc) to initiate projects and not provide funds for actual construction and implementation. Depending on the outcome of the initial investigation, applications will be made for funding to construct such a structure in Year 1/2 of this management document. (See prescriptive actions table below and Map 7).

17.0 Operational Aims and Objectives

17.1 Key Aims

1. To establish and maintain a route accessible to all from Cramond Foreshore to Cammo Road and subsequently Cammo Estate.
2. To maintain and enhance areas of semi-natural woodland along the route.
3. To maintain and enhance the floral and faunal diversity along the route.
4. To maintain and enhance the scrub areas.

5. To control non-native invasive species along the route.
6. To promote study and research.
7. To promote educational and other public use.
8. To promote local community involvement in all aspects of the site.
9. To comply with all legal obligations and maintain a high standard of management.

17.2 Ecological Objectives

17.2.1 Habitat

To maintain and enhance areas of semi-natural woodland along the route.

- Sympathetically remove poorly formed and/or diseased trees to create a balance of open glades and restock areas with native tree species.
- Control invasive, non-native species such as Himalayan balsam, Japanese knotweed, giant hogweed and laurel.
- Determine extent of spread of few flowered leek (*Allium paradoxum*).
- In areas with older, established trees, maintain and encourage growth with variety of tree composition, age and ground, field and shrub layer vegetation.
- Encourage woodland flora by planting appropriate native woodland flower seedlings, and maintain/increase light levels in selected areas.

To maintain and enhance scrub areas.

- Maintain and enhance areas of scrub habitat, by pruning as necessary to control the spread of non-native species.
- Encourage natural succession of native species such as elder or blackthorn.
- Scope to plant hedgerow species to define path edges and add value in terms of habitat provision.

17.2.2 Fauna

Maintain woodland bird interest.

- Survey and monitor populations.
- Maintain diversity of scrub and woodland habitat.
- Find suitable sites and erect various bird boxes to encourage nesting.
- Check and clean the bird boxes on site.

Maintain and enhance non-woodland bird interest.

- Survey and monitor populations.
- Monitor water quality sampling undertaken by both SEPA and CAC for cross referencing with collected bird data.

Maintain and enhance invertebrate interest of the site.

- Survey and monitor invertebrate population in the various compartments.

- Retain old trees, trunks and stumps as much as possible, provided there is no health and safety risks.
- Manage areas of rough grassland for invertebrates on basis of survey.
- Maintain and enhance riverside edge plant and scrub communities.

Monitor non-native fauna species.
- Assess numbers of American mink in area.
- Assess impact of mink on native waterfowl and fish species numbers.
- Depending on outcome from two points above, investigate the implementation of control measures.

17.2.3 Flora

Maintain and increase wildflower species diversity.
- Survey and monitor species in different habitat areas.
- Assess any opportunities to create wildflower meadow areas.
- Control non-native or invasive species.
- Map few flowered leek (*Allium paradoxum*) with a view to controlling spread.
- Introduce seedlings from native stock particularly from areas where Gogar Burn feeds in, landowner permission required.

Maintain and enhance the fungal interest of the site.
- Survey and monitor fungi in the corridor.
- Retain old trees, trunks, and stumps as much as possible, provided there is no health and safety risks.

17.3 Education and research

Promote study and research.
- Encourage the surveying of the site by students for projects.
- Encourage the use of the site as a resource for teaching biological survey techniques for organisations such as SWT, BRISC, etc.

Promote educational use.
- Encourage local schools to use the River Almond Walkway for class visits and environmental studies.
- Encourage after school environment clubs or forest schools to use the River Almond Walkway as one of their sites to visit.
- Monitor path trampling and disturbance to ensure any increase in use does not lead to degradation of the site.

17.4 Community access and involvement

Promote use by the public.
- Improve existing path surfaces where erosion is apparent and where general re-grading deemed necessary.
- Ensure safety of visitors by checking the route weekly for any problems and undertake corrective action in a reasonable timescale.

- Promote responsible access under the Scottish Outdoor Access Code.
- Encourage new visitors to the River Almond Walkway.
- Improve interpretation of the site.
- Investigate continuation of Walkway to link with other Greenspaces and Local Authority areas.

Promote local community involvement in all aspects of the site.

- Keep the local community up-to-date with developments on site through posters on the entrance panels and a annual newsletter.
- Schedule events such as community clean-ups and publicise locally.
- Initiate the reinvention of the River Almond Walkway community group and attend any meetings.

Comply with all legal obligations and maintain a high standard of management.

- Maintain the paths and steps to ensure visitor safety.
- Monitor and patrol the site regularly to check for any health and safety risks.
- Ensure the management of the site follows access and conservation legislation.
- Improve access to all by traversing rocky outcrops and provision of ramps at appropriate gradients, where steps are impassable to wheelchair users.

Removal of litter and hazardous waste from the site and watercourse.

- Litter-pick regularly while patrolling the site.
- Arrange to remove larger objects such as old fencing, redundant signage etc. with other Countryside Ranger staff, volunteer groups and/or CAC work parties.

18.0 Ten Year Prescriptive Table of Actions

The following table is designed to be used in conjunction with the maps provided at the end of this Management Plan. There are 4 compartments that relate to Woodland Management following the linear nature of the site. Likewise, any path works, installation of signage and interpretation or other management prescriptions will follow the linear nature of the site and will be easily cross referenced with the supporting maps provided.

COMPARTMENTS / MAP REFERENCE/AREA	OPERATIONAL OBJECTIVES	ACTIONS TO ACHIEVE / LEAD BODY	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	COMPLETION / REVIEW
WOODLAND MANAGEMENT													
Woodland Compartment 1	• To maintain and enhance areas of semi-natural woodland along the route • To maintain and enhance scrub areas • Maintain woodland bird interest • Sympathetically remove poorly formed and/or diseased trees to create a balance of open glades and areas restocked with native tree species. • In areas with older, established trees, maintain and encourage growth with variety of tree composition, age and ground, filed and shrub layer vegetation. • Encourage woodland flora by planting appropriate woodland flower seedlings, and maintain/increase light levels in selected areas.	Over mature laurel species heavily dominating woodland structure to be controlled and cleared. Selective sycamore and ash regeneration to be controlled. Plant with native tree species in line with NVC system. **Lead** CECCRS, CEC Forestry, Cramond Scout Group, interested local community groups and volunteers, BTCV.	*	*	*						*	*	
Woodland Compartment 2	• To maintain and enhance areas of semi-natural woodland along the route • To maintain and enhance scrub areas • Maintain woodland bird interest	Large sycamore leaning over main walkway: lower limb removal weight reduction. Poorly formed planted trees to be removed with selective sycamore and ash regeneration to			*	*	*				*	*	

		be controlled. Plant with native tree species in line with NVC system. Establish hedgerow along non-riverside path edge from Fairafar Weir to concrete steps structure. **Lead** CECCRS, interested local community groups and volunteers, BTCV.												
Woodland Compartment 3	• To maintain and enhance areas of semi-natural woodland along the route • To maintain and enhance scrub areas • Maintain woodland bird interest	Poorly formed planted trees to be removed with selective sycamore and ash regeneration to be controlled. Valuable scrub/rough grassland habitat to be retained, any encroaching natural regeneration tree species to be removed. **Lead** CECCRS, interested local community groups and volunteers, BTCV.			*			*			*	*		
Woodland Compartment 4	• To maintain and enhance areas of semi-natural woodland along the route • To maintain and enhance scrub areas • Maintain woodland bird interest	Valuable mature wooded area, good ground, field and shrub layer vegetative cover. Promote and enhance natural feeling in woodland through selective ash and sycamore thinning with all felled trees left		*		*		*		*	*	*		

		onsite to rot naturally. **Lead** CECCRS, interested local community groups and volunteers, BTCV.											
PATH STRUCTURE / CONDITION													
Path section A: Fairafar Weir to concrete steps structure	• Maintain the paths and steps to ensure visitor safety. • Improve access to all by traversing rocky outcrops and provision of ramps at appropriate gradients where steps are impassable to wheelchair users. • Improve existing path surfaces where erosion apparent.	Poorly conditioned mud path to be upgraded to type 1 and whindust surface. Create ramp feature alongside wide set of concrete steps at Fairafar Weir. Resolve annual flooding issue at top of said steps by raising path level and creating run-off ditch. **Lead** CECCRS, interested local community groups and volunteers, BTCV.		*	*								
Concrete steps structure to Salvesen steps	• Improve access to all by traversing rocky outcrops and provision of ramps at appropriate gradients where steps are impassable to wheelchair users.	Investigate possibility to transverse rocky outcrop currently routed up and over with steep flights of steps at either end, opening route up to be accessible by all. Initial feasibility to be undertaken through funding from the Central Scotland Green Network Development Fund administered by Forestry Commission	*										

		Scotland. Results from this study will form the basis for carrying project forward in year 3 with funding/grants sourcing undertaken in year 2. **Lead** CECCRS, interested local community groups and volunteers, BTCV.												
Concrete steps structure to Salvesen steps	• Improve access to all by traversing rocky outcrops and provision of ramps at appropriate gradients where steps are impassable to wheelchair users.	- CSGNDF feasibility study outcome to be consulted on with stakeholders, community bodies and interested locals with resultant outcome agreed and financing sought to take project forward. - Once funding secured, begin tendering process for new, open and accessible walkway. **Lead** CECCRS, interested local community groups and volunteers, BTCV.		*	*									
Path section B: foot of Salvesen steps to Dowies Mill	• Maintain the paths and steps to ensure visitor safety. • Improve access to all by traversing rocky outcrops and provision of ramps at appropriate gradients where steps are	General path condition on this section is adequate. The path construction is in keeping with the surroundings and				*	*							

	impassable to wheelchair users. • Improve existing path surfaces where erosion apparent.	aesthetically pleasing. Where depressions and eroded areas of banking are apparent, re-grading and shoring up with backfilled material is required. Project specification to be detailed and funding considerations made. Implement re-grading and erosion infilling. **Lead** CECCRS												
Woodland Compartment 4	• Maintain the paths and steps to ensure visitor safety. • Improve existing path surfaces where erosion apparent and re-grade as deemed necessary.	Upgrade as deemed necessary the condition of paths and associated features contained within this woodland compartment.						*	*					
Path section C: A90 flyover to Cammo Road.	• Maintain the paths and steps to ensure visitor safety. • Improve existing path surfaces where erosion apparent and re-grade as deemed necessary.	This path section was adopted by CEC some 20 years ago and through a special measures programme was formalised. Since then there has been little or no management of the section with the exception of reactive measures where Health and Safety issues arise. It would be appropriate to undertake a phased approach to reinvigorating this section of path with re-		*	*	*								

		grading of path structure, installation of culverts and drainage ditches where water run-off is apparent and complete renovation of the timber retained step structures that are currently usable but in poor condition. -Formalise phased approach for programme of works, produce design specification and seek funding. -Initiate phased programme of works. **Lead** CECCRS, local community groups, BTCV.												
Continuation of River Almond Walkway to Kirkliston and to West Lothian, Almondell and Calderwood Country Park	• Investigate continuation of Walkway to link with other Greenspaces and Local Authority areas.	Edinburgh airport and crossing the Gogar Burn provides obstacles in continuing the Walkway upstream to Kirkliston and eventually West Lothian. Investigate the possibility of continuation of route to aforementioned areas. Huge investment and sourcing of funds would be required to										*	*	

		make this aspect possible. Efforts in the past have never come to fruition however with the invent of this document and success and progress accomplished through to year 9 of this plan, this investigational element would hopefully become more realistic whereas in the past perhaps only an aspiration. **Lead** CECCRS, CEC Access Officer											
INTERPRETATION													
Interpretation strategy implementation	• Promote responsible access under the Scottish Outdoor Access Code. • Encourage new visitors to the River Almond Walkway. • Improve interpretation of the site.	Onsite interpretation is required at strategic locations (see map 6). Improvements to directional signage/waymarking is also required (see map 6). The interpretive leaflet now out of print contains a plethora of information, this requires refinement and a new modern method of displaying the information. Current mechanisms for displaying interchangeable information are poor;			*	*							

		these require to be brought inline with the corporate image displayed on other countryside sites managed by CECCRS. **Lead** CECCRS, Friends Group											
COMMUNITY INVOLVEMENT													
River Almond Walkway		Instigate the revival or reinvention of the River Almond Group or a Friends of group associated with the site. Work towards formal constitution enabling funding applications to be made in the future, practical work days to be undertaken and clean ups to be undertaken. **Lead** CECCRS assisted by Cramond Heritage Trust, Cramond Association, North West Edinburgh Eco Club, Cramond and Barnton Community Council.	*	*	*	*	*						
CONSERVATION													
River Almond Walkway	• Control invasive, non-native species such as Himalayan balsam, Japanese knotweed, giant hogweed and laurel.	Implement regular monitoring and control mechanisms for such species. Previous ad-	*	*	*	*	*	*	*	*	*	*	

		hoc management had minimal success. Adjoining landowners require to be lobbied to adopt a similar approach. Advances in technology and techniques in dealing with such species require to be embraced and adopted. The newly established Invasive Species Action Team within CEC (2010) will make a difference. - Map all invasive non-native species along the route in CEC owned land and provide to CEC Invasive Species Action Team. - Await programme of works to be disseminated and implement control measures. - Monitor abundance of Few Flowered Leek (*Allium paradoxum*) with a view to controlling spread. - Monitor success and re-evaluate approach if deemed necessary.											

		Lead CECCRS, CEC Invasive Species Action Team, CAC											
River Almond	• Assess numbers of American mink in area. • Assess impact of mink on native waterfowl and fish species numbers. • Depending on outcome from two points above, investigate the need to implement control measures.	An assessment of numbers and associated effects is required. Dependant upon the outcome of these initial investigations, a humane programme of control may be implemented. **Lead** CECCRS, CAC, interested local community groups				*	*	*					
River Almond Walkway	• Find suitable sites and erect various bird boxes to encourage nesting. • Check and clean the bird boxes on site.	Source and erect bird boxes. Previous sources have been through community groups and grant funding, educational group constructions and through the Prison Service. Erected boxes require checking in terms of use and subsequently appropriateness of location, review and adapt as seen necessary. Biannual checks and maintenance will occur. **Lead** CECCRS, local community groups, educational groups.		*		*							

MID POINT REVIEW													
River Almond Walkway Management Plan	REVIEW	Undertake a mid point review of all management prescriptions with a view to addressing outcomes not yet achieved with implementation of these in the second half of the plan. **Lead** CECCRS					*						

18.1 Ongoing Actions

To maintain and enhance scrub areas.

- Encourage natural succession of native species such as elder or blackthorn, which can eventually be coppiced.

Woodland management aims to promote diversity in terms of species, age and composition. With selective thinning and removal of natural regeneration of dominant tree species such as ash and sycamore and other poorly formed more mature specimens, these actions in themselves will help in promotion of understorey/more shrubby species such as blackthorn, hazel, elder etc. without actually planting up such scrub areas. This could form future prescriptive actions though.

Maintain and enhance non-woodland bird interest.

- Survey and monitor populations.
- Monitor water quality sampling undertaken by both SEPA and CAC for cross referencing with collected bird data.

With regular patrolling undertaken by CECCRS, wildfowl and other species associated with water are documented and recorded. Other qualified sightings from members of CAC and other interested volunteers compliment this process. All records are then inputted into a Biological Recording database building an Edinburgh wide current status of such species.

Maintain and enhance invertebrate interest of the site.

- Survey and monitor invertebrate population in the various compartments.
- Manage areas of rough grassland for invertebrates on basis of survey.

Actions not contained in prescriptive table due to lack of specialist knowledge in this area. Through time, these actions may develop with interest from volunteers or through formation of site associated group. Will be included for discussion at 5 year review point.

Maintain and increase wildflower species diversity.

- Survey and monitor species in different habitat areas.
- Assess any opportunities to create wildflower meadow areas.
- Introduce seedlings from native stock.

The only possible area for such creation of habitat is between Peggys Mill and Inveralmond where an area of rough grassland (currently unmanaged with signs of succession) is situated. Management of tree stock and recent unmanaged planted trees needs to be addressed before actioning this objective. Will be included for discussion at 5 year review point.

Maintain and enhance to fungal interest of the site

- Survey and monitor fungi in the corridor.

With the exception of fungal infections posing a threat to the structural integrity of mature trees, this objective will not be addressed in the first instance. Through time, these actions may develop with interest from volunteers or through formation of site associated group. Will be included for discussion at 5 year review point.

Promote study and research.

- Encourage the surveying of the site by students for projects.
- Encourage the use of the site as a resource for teaching biological survey techniques for organisations such as SWT, BRISC, etc.

CECCRS often receives requests for locations or sites to undertake surveying or academic projects from students, universities and volunteers. In that respect, this aspect will be held back for such opportunities. Will be reviewed at 5 year mid-point and depending on uptake of such activities in the first period, actions may be factored in for the second half of this plan period.

Promote educational use.

- Encourage local schools to use the River Almond Walkway for class visits and environmental studies.
- Encourage after school environment clubs or forest schools to use the River Almond Walkway as one of their sites to visit.
- Monitor path trampling and disturbance to ensure any increase in use does not lead to degradation of the site.

CECCRS receives requests for both formal and informal educational delivery across all countryside sites on a regular basis. Cramond Primary School are regular users of the Almond Walkway. With the introduction of the Curriculum for Excellence superseding the old 5-14 Curriculum, there is more flexibility in the system and as such CECCRS expects an increase in demand for such educational delivery. With a limit of how many of such activities CECCRS can deliver across the 11 countryside sites managed, an informative, robust education pack specific to each of these sites is in the process of being produced. With safe areas marked out on maps where certain activities would be appropriate to undertake and easily understandable ID guides and activity sheets included, the onus will be placed upon class teachers to use CECCRS managed sites with less or no input from the industry professionals. In this respect, the above objectives will clearly be met and surpassed. Monitoring of pressures placed upon the sites will continue to be undertaken by CECCRS while patrolling or by request.

Promote local community involvement in all aspects of the site.

- Keep the local community up-to-date with developments on site through posters on the entrance panels and a yearly newsletter.

With the reinvention of a site specific community group, information in terms of newsletter delivery will follow on. Regular updates will continue to be displayed on information boards and display cases. The interpretation strategy for the site will better facilitate this process too.

Comply with all obligations and maintain a high standard of management.

- Monitor and patrol the site regularly to check for any health and safety risks.
- Ensure the management of the site follows access and conservation legislation.

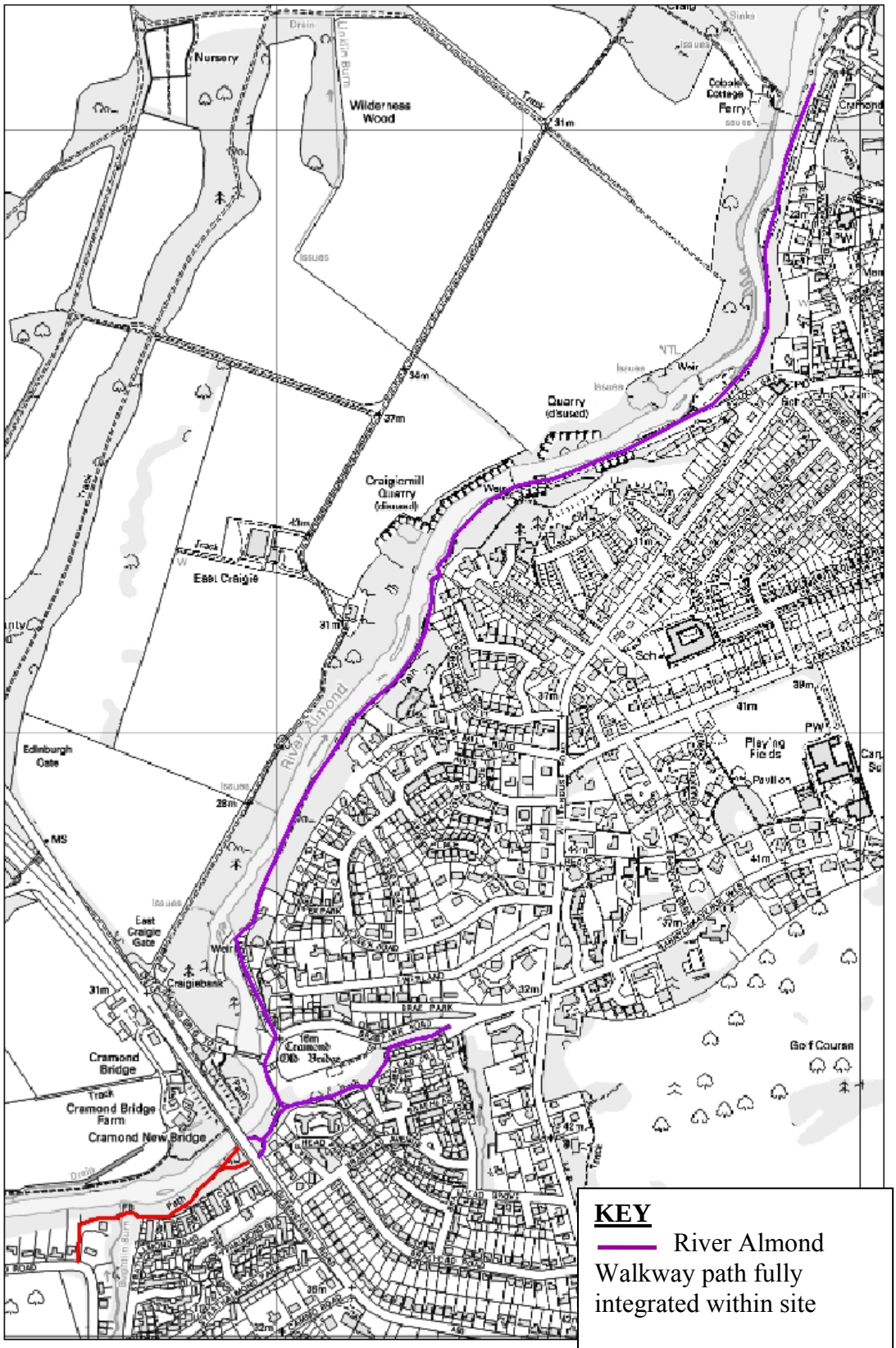
As previously mentioned in section **8.0**, the site is patrolled weekly with all management prescriptions and volunteer activities falling in line with policies outlined in sections **4.0** and **9.1**.

Removal of litter and hazardous waste from the site and watercourse.

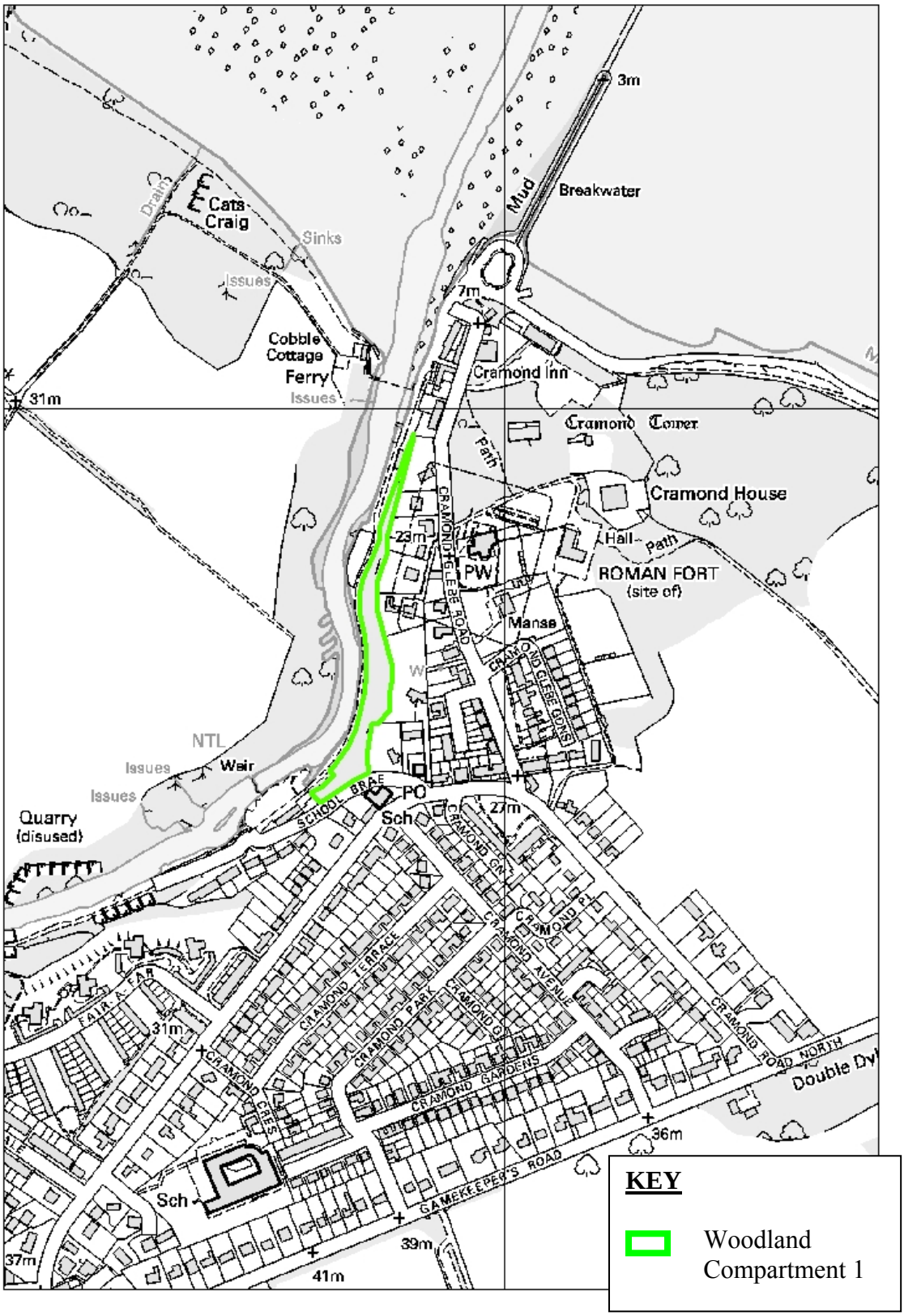
- Litter-pick regularly while patrolling the site.

Arrange to remove larger objects such as old fencing, redundant signage etc. with other Countryside R

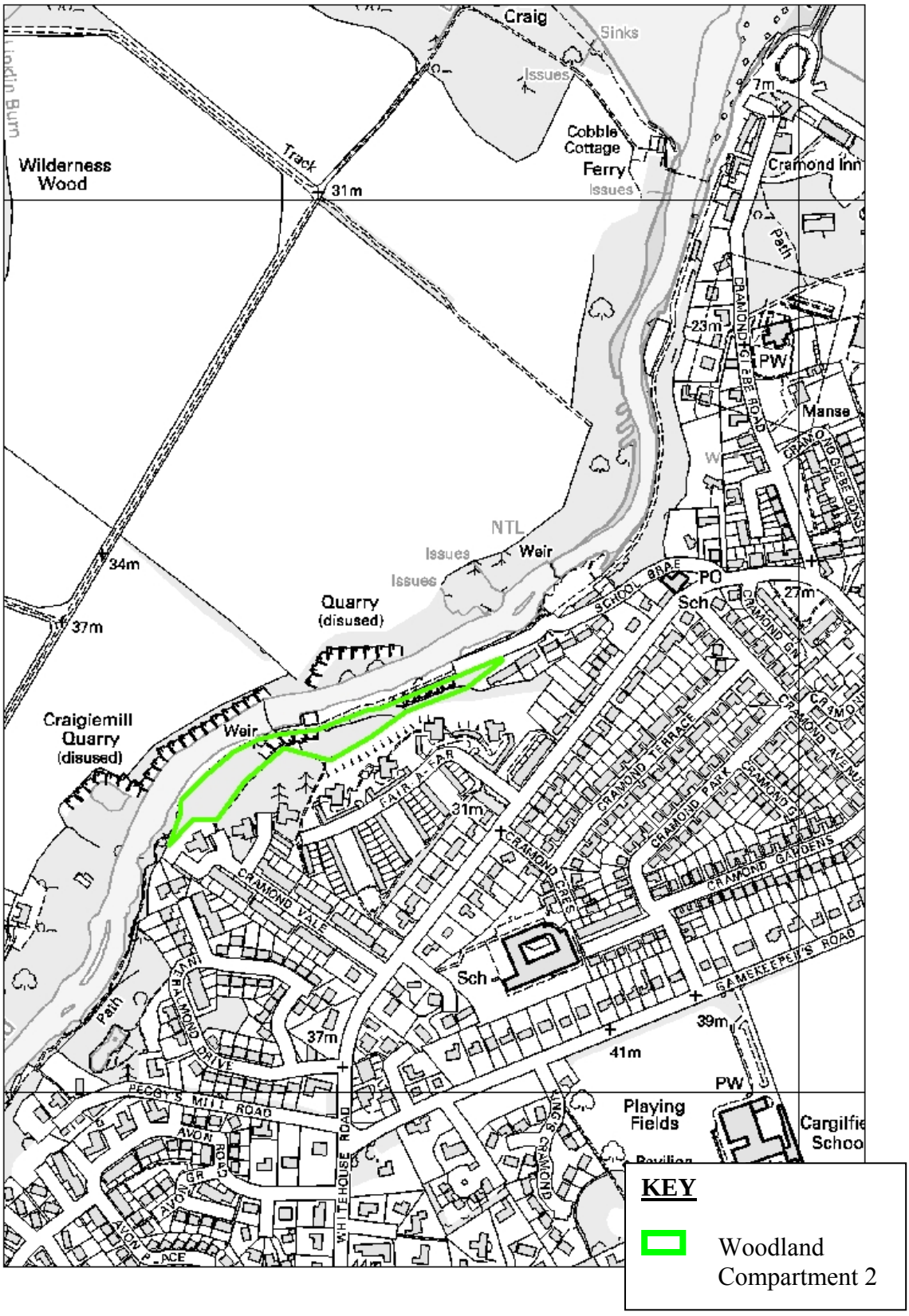
Map 1 – The River Almond Walkway



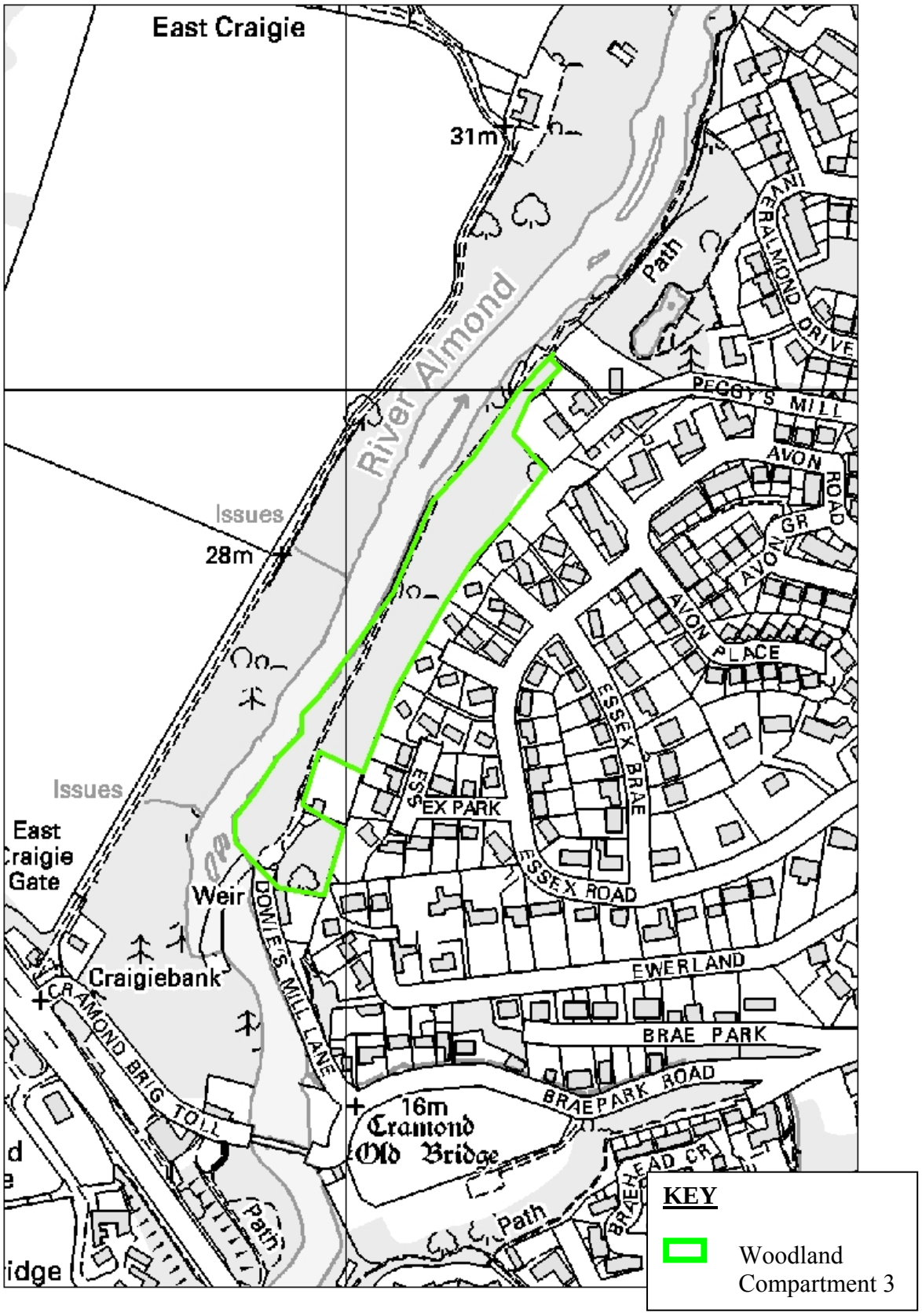
Map 2 – Woodland Compartment 1



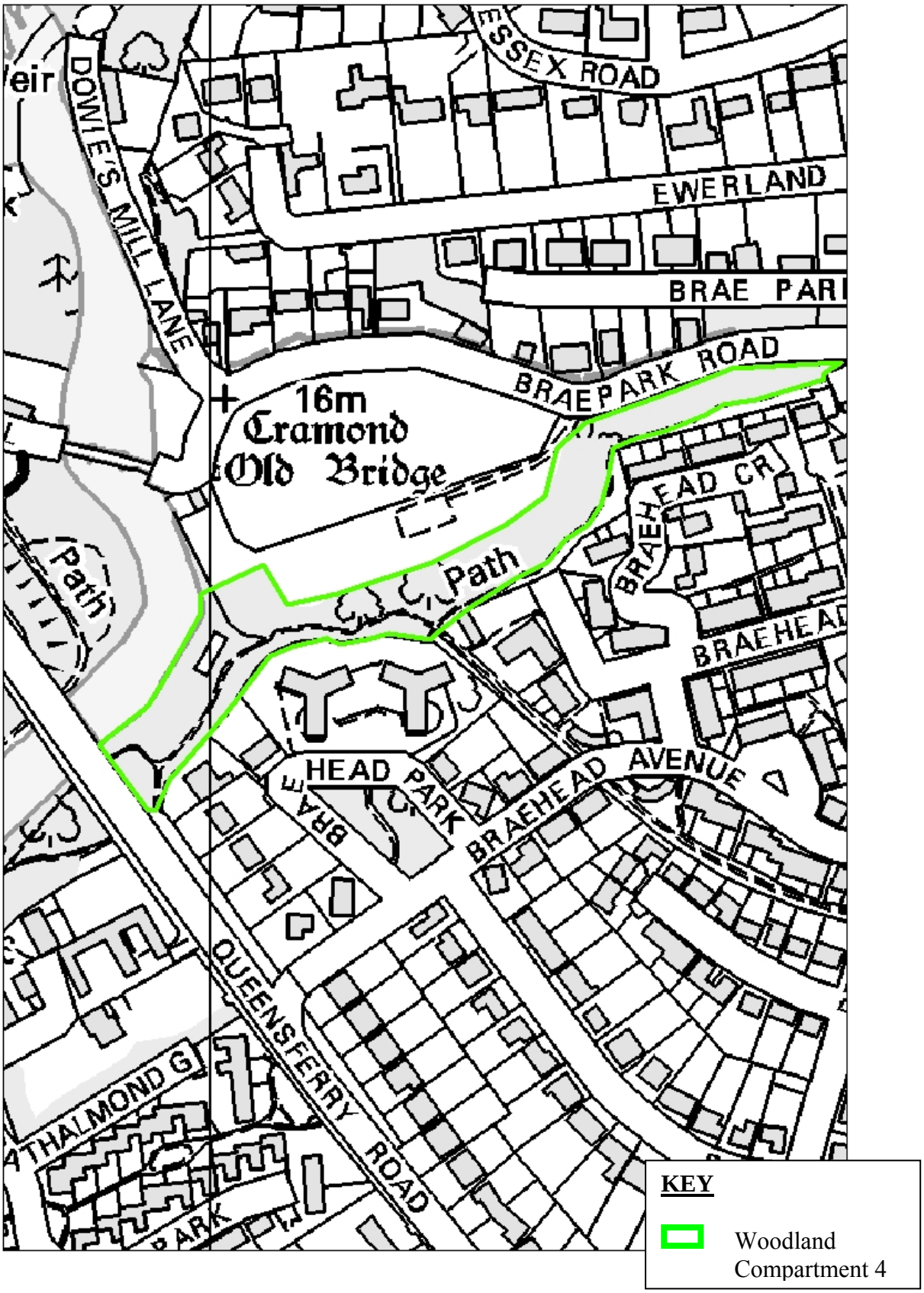
Map 3 – Woodland Compartment 2



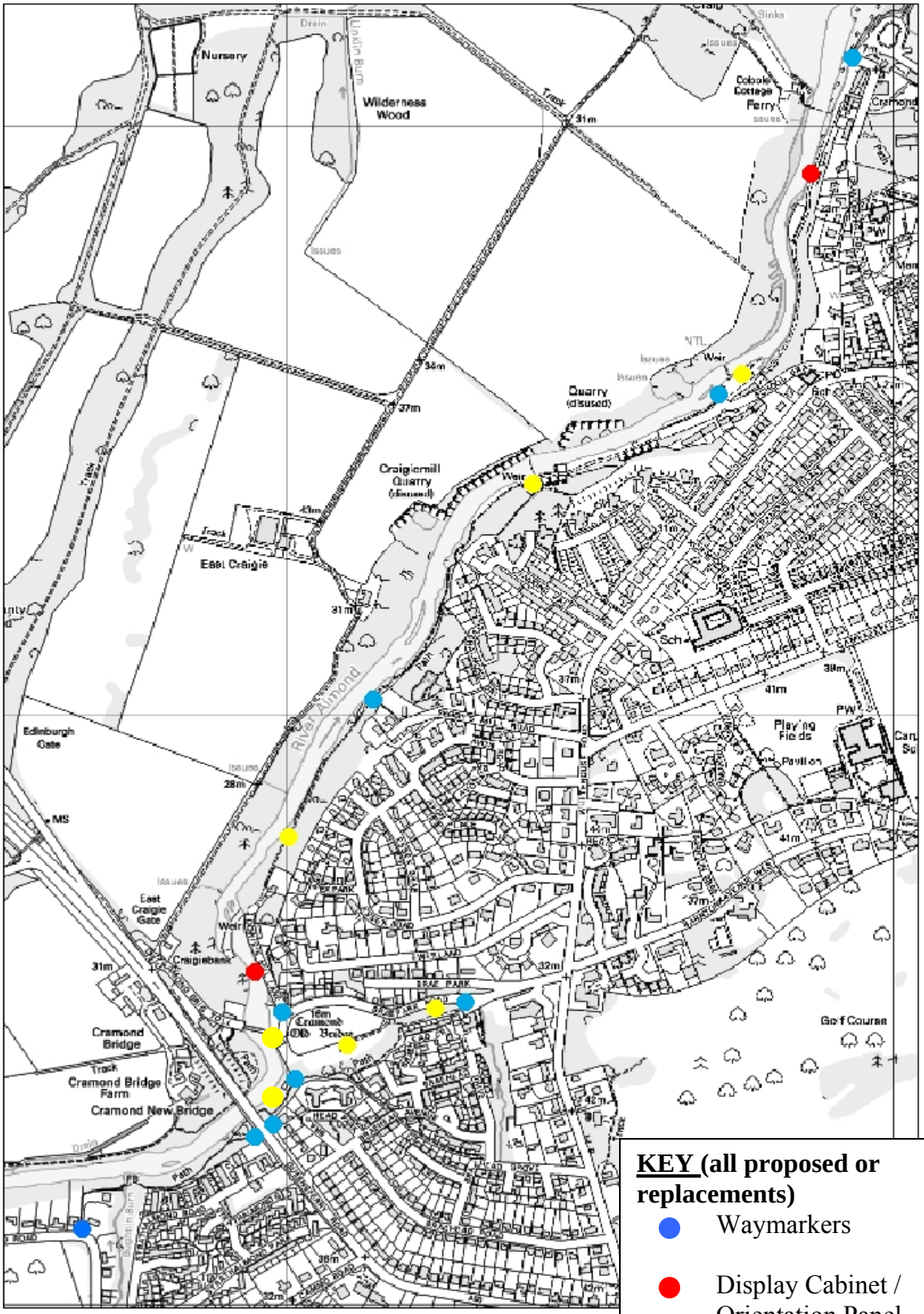
Map 4 – Woodland Compartment 3



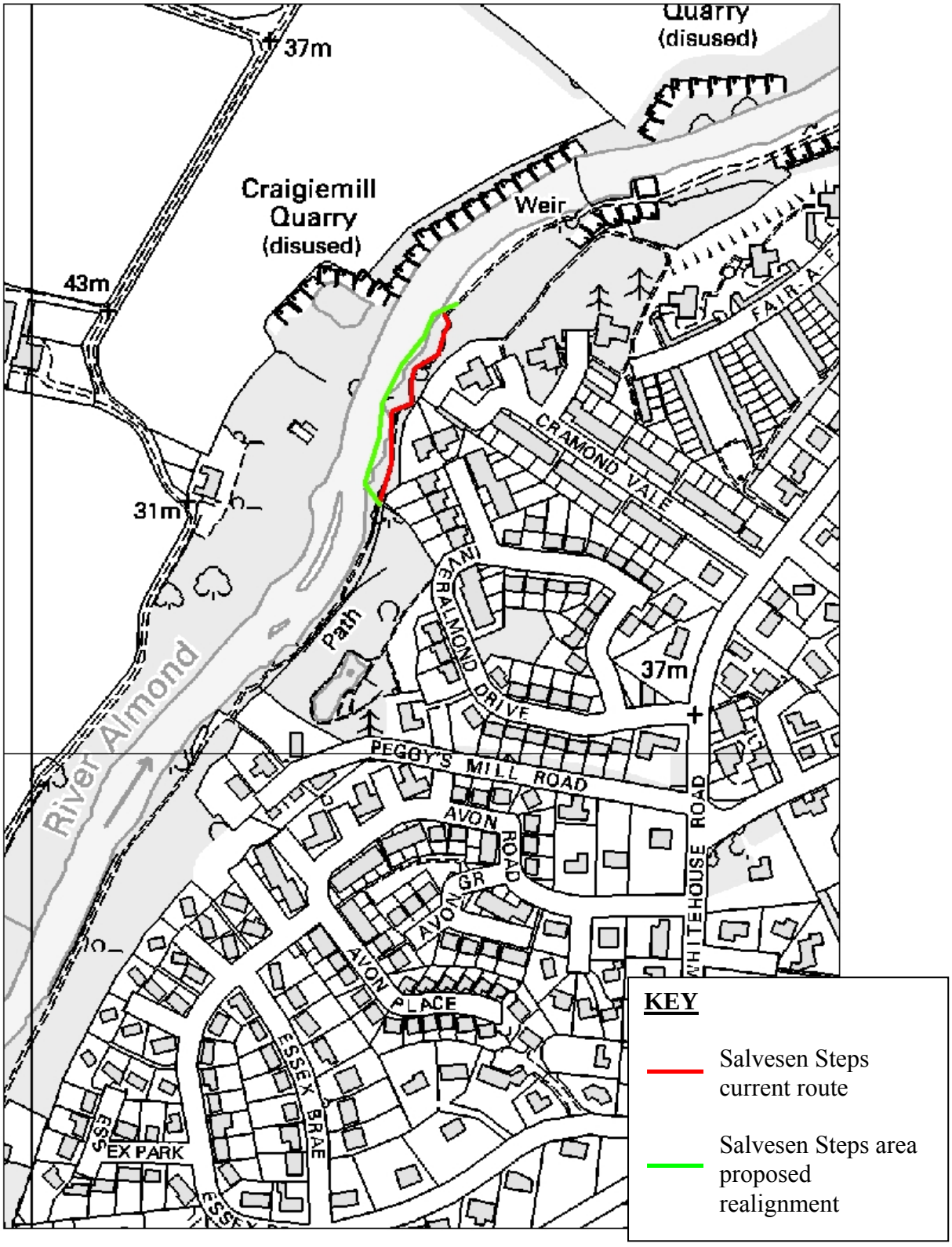
Map 5 – Woodland Compartment 4



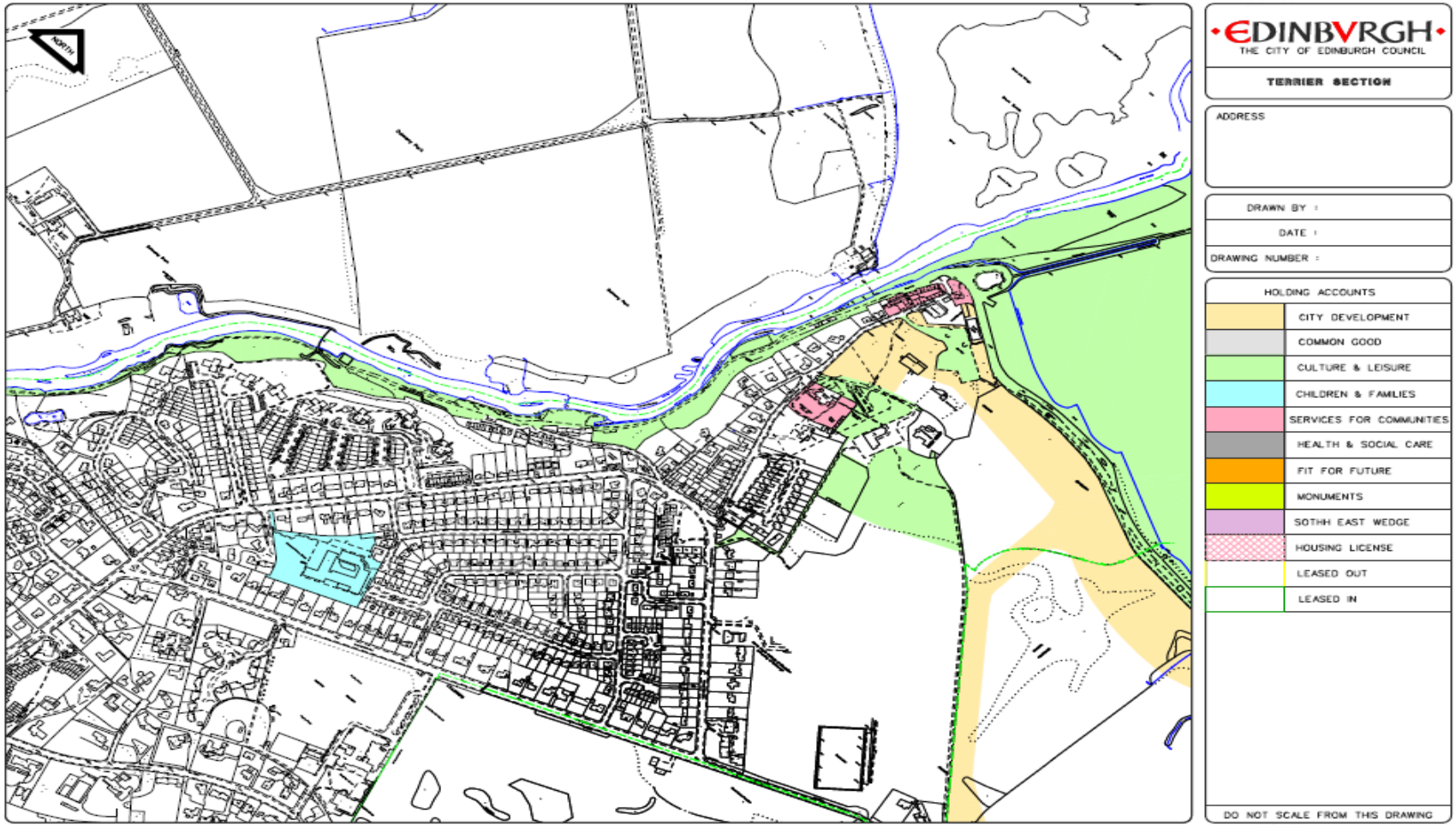
Map 6 – Proposed Locations for Interpretation Panels, Information Display and Waymarking



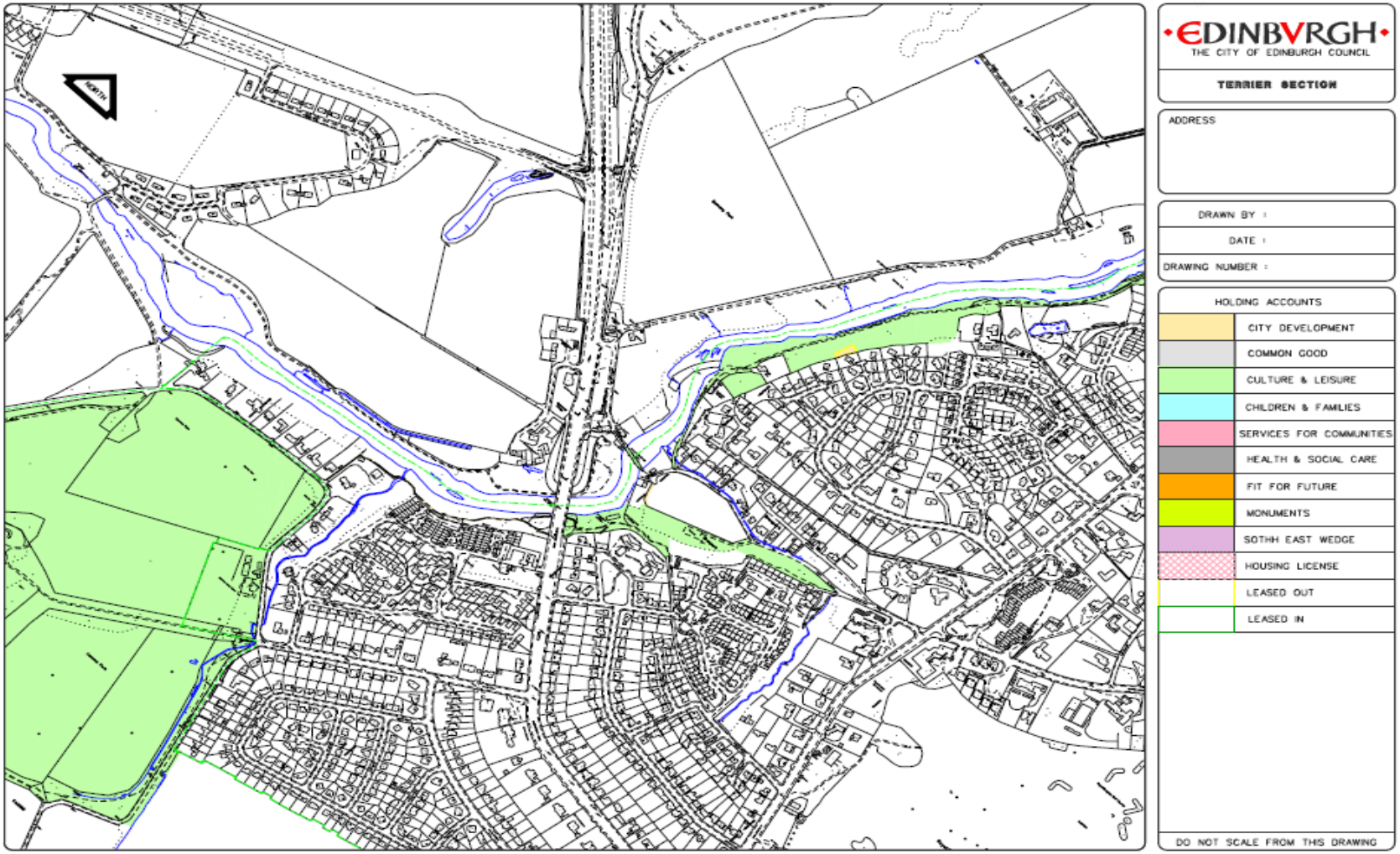
Map 7 – Proposed Walkway Realignment in Salvesen Area



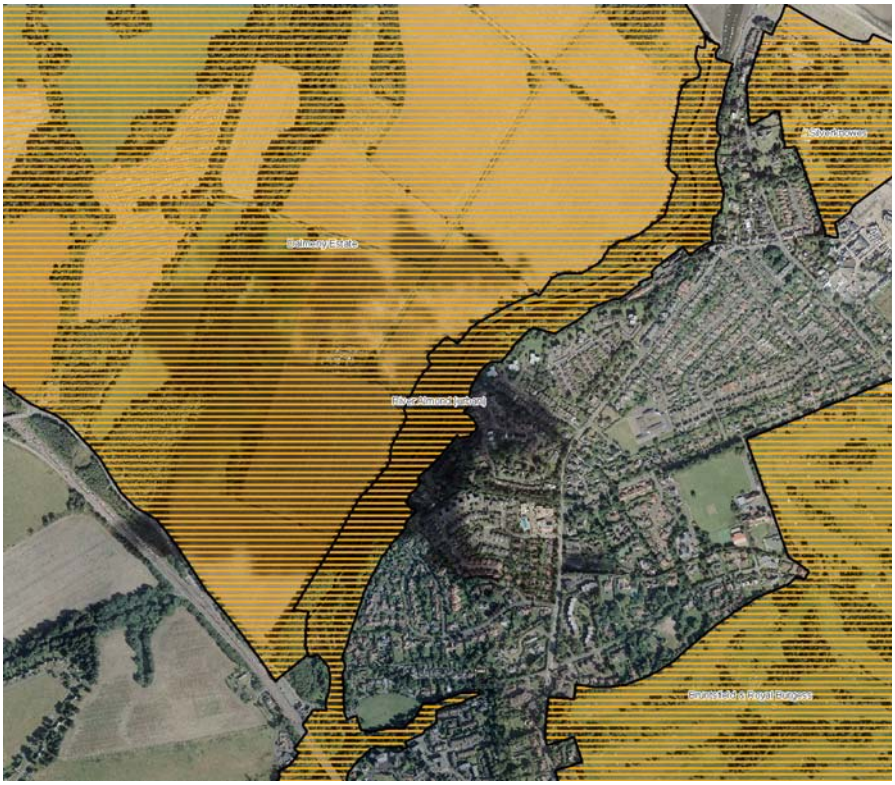
Map 8a – Land Ownership (Cramond Foreshore to Peggy's Mill)



Map 8b – Land Ownership (Peggy's Mill to Cammo Estate)



Aerial A photograph showing boundary of river Almond with river Forth Special Protection Area and Site of Special Scientific Interest



Aerial photograph B overlaid with illustration depicting Local Biodiversity Site boundaries in the general vicinity of the River Almond Walkway

Aerial photograph C with green overlay depicting Green Belt designation in the general vicinity of the River Almond Walkway

Appendix 1 - LBS Site Assessment for River Almond

Urban Edinburgh Local Biodiversity Site assessment report

Site: River Almond (urban Edinburgh)

Site centroid: NT181760

Total area of site (ha):

Report date: 26 October 2005 Report author: Bob Saville

Habitats

Main data used in assessment:

- CEC Phase 1 habitat survey (2001/2)

Habitat summary table:

Phase 1 code	Phase 1 habitats	Broad habitat	Total Of Area	Extent Score	Rarity/naturalness score	Habitat importance score
A1.1.1	Semi-natural broadleaved woodland	Woodland	17.87	2	4	4
A1.1.2	Broadleaved plantation	Woodland	0.438	1	1	0
A1.2.2	Coniferous plantation	Woodland	0.356	1	0	0
A1.3.2	Mixed plantation	Woodland	1.337	1	1	0
A2.1	Dense/continuous scrub	Woodland	0.145	1	3	1
B4	Improved grassland		0.007	0		
C3.1	Tall ruderal	Ruderal	0.004	1	2	1
F2.2	Inundation vegetation	Wetland	0.134	2	4	4
G1	Standing water	Wetland	0.087	1	3	1
G2	Running water		7.563	0		
H1.1	Intertidal: mud/sand	Coastal	0.382	0	5	0
J1.1	Arable		0.126	0		
J1.2	Amenity grassland		0.42	0		

Species

Data used in assessment:

- CEC Phase 1 habitat survey (2001/2) target notes
- SWT site survey – date
- Edinburgh & Lothians Badger Group records – 1995
- SEPA water monitoring survey -1994
- National vascular plants recording scheme – 1955-1988

Notable species summary table:

Vascular plants:

Scientific name	Common Name	Broad habitat	Rarity score
Solidago virgaurea	Goldenrod	Ruderal	1
Scrophularia umbrosa	Green Figwort	Wetland	1
Saxifraga granulata	Meadow Saxifrage	Grassland	1
Cystopteris fragilis	Brittle Bladder-fern	Ruderal	1

Other groups:

Scientific name	Common Name	Group	Broad habitat	Rarity score
Meles meles	Badger	Mammal	Woodland	6

Features

Special features:
Ancient woodland (from Ancient Woodland Inventory) at west end of site (score 1).

Biodiversity assessment

Biodiversity assessment table:

Broad habitat	Species rarity score	Species diversity score	Habitat importance score	Connectivity score	Feature Scores	Biodiversity Total score
Woodland	2	1	4	2	1	10
Grassland	0	0	0	1	0	1
Wetland	0	0	4	2	0	6
Moorland/mire	0	0	0	0	0	0
Coastal	0	0	0	0	0	0
Ruderal	1	0	1	0	0	2

All species rarity scores were based on vascular plants except woodland for badger sett.

Biodiversity outcome table:

No of habitats	Total Biodiversity Scores	Outcome
1	10	Pass
2	16	Pass
3	18	Borderline
4	19	Borderline
5	19	Borderline
6	19	Borderline

Biodiversity assessment decision: **Pass**

Social factors

Social Factor	Result	Score
Only accessible site within 300m walking distance of 500 households (distance measured from site boundary as the crow flies)	950 households	1
Site actively used by schools/educational institution for biodiversity education	Yes	1
Only accessible site within 300m of educational institution		
Actively used by local community for biodiversity access purposes		
Managed, improved or interpreted by community/interest group(s)	Tree wardens	1
LBAP action(s) being implemented on site	Yes	1
Regular systematic biodiversity recording at site		
Recognised as being of at least local landscape importance		
	Total Site Score	**4**

Overall LBS decision = PASS

Appendix 2 - LBS Species List for River Almond

Species list for River Almond (03/01/2006)

	Scientific name	Common name
Group	**Beetle**	
	Limnius volckmari	a riffle beetle

	Group Bird	
	Sylvia atricapilla	Blackcap
	Accipiter nisus	Sparrow Hawk
	Aegithalos caudatus	Long-tailed Tit
	Alcedo atthis	Kingfisher
	Anas platyrhynchos	Mallard
	Anser anser	Greylag Goose
	Apus apus	Swift
	Ardea cinerea	Grey Heron
	Bombicylla garrulus	Waxwing
	Branta canadensis	Canada Goose
	Bucephala clangula	Goldeneye
	Carduelis carduelis	Goldfinch
	Carduelis chloris	Greenfinch
	Carduelis spinus	Siskin
	Certhia familiaris	Treecreeper
	Cinclus cinclus	Dipper
	Columba palumbus	Wood pigeon
	Corvus corone corone	Carrion Crow
	Corvus frugilegus	Rook
	Corvus monedula	Jackdaw
	Cygnus olor	Mute Swan
	Delichon urbica	House Martin
	Dendrocopos major	Great Spotted Woodpecker
	Erithacus rubecula	Robin
	Falco peregrinus	Peregine
	Fringilla coelebs	Chaffinch
	Gallinula chloropus	Moorhen
	Hirundo rustica	Swallow
	Larus argentatus	Herring Gull
	Larus canus	Common Gull
	Larus marinus	Lesser black backed gull
	Larus ridibundus	Black Headed Gull
	Mergus	Merganser Goosander
	Mergus serrator	Red-breasted Merganser
	Motacilla alba	Pied wagtail
	Motacilla cineria	Grey Wagtail
	Nicticorax nicticorax	Night Heron

	Parus ater	Coal Tit
	Parus caeruleus	Blue Tit
	Parus major	Great Tit
	Passer domesticus	House Sparrow
	Phalacrocorax aristotelis	Shag
	Phalacrocorax carbo	Cormorant
	Phasianus colchicus	Pheasant
	Pica pica	Magpie
	Podiceps nigricollis	Black-necked Grebe
	Prunella modularis	Dunnock
	Pyrrhula pyrrhula	Bullfinch
	Regulus regulus	Goldcrest
	Streptopelia turtur	Collared Dove
	Sturnus vulgaris	Starling
	Tachybaptus ruficollis	Little Grebe (Dabchick)
	Tringa totanus	Redshank
	Troglodytes troglodytes	Wren
	Turdis iliacus	Redwing
	Turdis Merula	Blackbird
	Turdis philomelos	Song Thrush
	Turdis pilaris	Fieldfare
	Turdis viscivorus	Mistle Thrush

Group Butterfly

	Aglais urticae	Small tortoiseshell
	Anthocharis cardamines	Orange Tip
	Cynthia cardui	Painted lady
	Inachis io	Peacock
	Pieris napi	Green-veined White
	Pieris rapae	Small White
	Polygonia c-album	Comma
	Vanessa atalanta	Red Admiral

Group Caddisfly

	Hydropsyche angustipennis	a caddisfly
	Hydropsyche pellucidula	a caddisfly
	Rhyacophila dorsalis	a caddisfly

Group Crustacean

	Asellus aquaticus	a water slater
	Gammarus pulex	a freshwater shrimp

Group Mammal

	Meles meles	Badger
	Rattus norvegicus	Brown Rat

	Otter
	Fox
	American Mink

Group Mayfly

Baetis rhodani	a mayfly
Baetis scambus	a mayfly
Ecdyonurus torrentis	a mayfly
Ephemerella ignita	a mayfly

Group Mollusc

Acroloxus lacustris	Lake Limpet
Ancylus fluviatilis	River Limpet
Lymnaea peregra	Wandering Snail
Physa fontinalis	a bladder snail
Potamopyrgus jenkinsi	Jenkins' Spire Snail

Group Moss

Rhynchostegiella tenella	a moss
Pohlia Nutans – Moss	
Lunularia Cruciata - Liverwort	

Group Vascular Plant

Alnus Glutinosa	Alder
Acer platanoides	Norway Maple
Acer pseudoplatanus	Sycamore
Aegopodium podagraria	Ground-elder
Aesculus hippocastanum	Horse-chestnut
Agrostis capillaris	Common Bent
Ajuga reptans	Bugle
Alliaria Petiolata	Garlic Mustard
Allium paradoxum	Few-flowered Garlic
Allium ursinum	Ramsons
Alnus Glutinosa	Alder
Anemone Nemorosa	Wood Anemone
Angelica Sylvestris	Angelica
Anthriscus Sylvestris	Cow parsley
Arctium Minus Lesser	Burdock
Arrhenatherum elatus	False oat grass
Artemisia vulgaris	Mugwort
Asplenium Trichomanes	Maidenhair / Common Spleenwort
Bellis Perennis	Daisy
Berberis Darwinii	Berberis
Betula pendula	Silver Birch
Caltha Palustris	Marsh marigold
Calystegia Silvatica	Great Bindweed
Campanula Latifolia	Giant Bellflower
Cardamine Hirsuta	Hairy Bittercress
Cardamine Pratensis	Cuckoo Flower
Carduus Crispus	Welted Thistle
Centranthus Ruber	Red Valerian
Chaerophyllum Temulentum	Rough Chervil
Chamerion angustifolium	Rosebay Willowherb
Chamomilla Suaveolins	Pineapple Mayweed

Chrysosplenium oppositifolium	Opposite-leaved Golden-saxifra
Circaea lutetiana	Enchanter's-nightshade
Cirsium Arvense	Creeping Thistle
Cirsium vulgare	Spear Thistle
Claytonia sibirica	Pink Purslane
Cornus Sanguinea	Dogwood
Corydalis Lutea	Yellow Corydalis
Corylus Avellana	Hazel
Crataegus Monogyna	Hawthorn
Crocus Albiflorus	Crocus
Cymbalaria Muralis	Ivy Leaved Toadflax
Cystopteris fragilis	Brittle Bladder-fern
Dactylus Glomerata	Cocksfoot
Doronicum Pardalianches	Leopards Bane
Dryopteris dilatata	Broad Buckler-fern
Dryopteris filix-mas	Common Male Fern
Epilobium Brunnescens	Newzealand Willowherb
Epilobium Hirsutum	Greater Willowherb
Epilobium Montanum	Broadleaved Willowherb
Erophila Praecox	Early Whitlow-grass
Fagus sylvatica	Beech
Fallopia japonica	Japanese Knotweed
Filipendula Ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galanthus Nivalis	Snowdrop
Galeopsis Augustifolia	Red Hemp Nettle
Galeopsis Tetrahit	Common Hemp Nettle
Galium aparine	Cleavers
Geraneum Lucidum	Shining Cranesbill
Geraneum Pratense	Meadow Cranesbill
Geraneum Sanguineum	Bloody Cranesbill
Geranium Endressii	French Cranesbill
Geranium robertianum	Herb-robert
Geum Rivale	Water Avens
Geum urbanum	Herb Bennet
Gymnocarpium dryopteris	Oak Fern
Hedera helix	Ivy
Heracleum Mantegazzeanum	Giant Hogweed
Heracleum Sphondylium	Hogweed
Hieraceum Aurantiacum	Orange Hawkweed
Holcus Lanata	Yorkshire Fog
Hyacinthoides non-scripta	Bluebell
Hypericum Androsaemum	Tutsan
Ilex aquifolium	Holly
Impatiens glandulifera	Himalayan Balsam
Lamiastrum Galeobdolon	Yellow Archangel
Lamium Album	White Dead Nettle
Lamium Purpureum	Red Dead Nettle
Lapsana Communis	Nipplewort
Larix decidua	Larch
Ligustrum Vulgaris	Privet
Linaria Purpurea	Purple Toadflax
Lonicera Periclymenum	Honeysuckle
Luzula sylvatica	Great Wood-rush
Lycesteria Formosa	Himalayan Nutmeg

Lysimachia Vulgaris	Yellow Loosetrife
Matricaria Perforata	Scentless Mayweed
Mercurialis perennis	Dog's Mercury
Mimulis Guttatus	Monkey Flower
Montia Sibirica	Pink Purslane
Mycelis Muralis	Wall Lettuce
Myosotis Sylvatica	Wood Forget-me not
MyosotisSylvatica	Wood Forgetmenot
Myrrhis Odorata	Sweet Cicely
Narcissus Pseudonarcissus	Daffodil
Oxalis Corniculata	Yellow Oxalis
Petasites Alba	White Butterbur
Petasites hybridus	Butterbur
Phalaris arundinacea	Reed Canary-grass
Phyllitis Scolopendrium	Harts Tongue Fern
Picea abies	Norway Spruce
Plantago Lanceolata	Ribwort Plantain
Plantago Major	Greater Plantain
Polygonatum Multiflorum	Solomon’s Seal
Polypodium Vulgare	Common Polypody
Populus Tremula	Aspen
Potentilla Erectus	Sulphur Cinquefoil
Prunella vulgaris	Selfheal
Prunus avium	Wild Cherry
Prunus Laurocerasus	Cherry Laurel
Quercus Borealis	Red Oak
Quercus petraea	Sessile Oak
Ranunculus Acris	Meadow buttercup
Ranunculus Ficaria	Lesser Celandine
Ranunculus Repens	Creeping Buttercup
Rhododendron Ponticum	Rhododendron
Rhododendron ponticum	Rhododendron
Ribes Sanguineum	Flowering Currant
Ribes Uvacrispa	Gooseberry
Rubus Fruticosus	Bramble
Rubus fruticosus agg.	Bramble
Rubus Idaeus	Raspberry
Rumex Acetos	Common Sorrel
Rumex Crispus	Curled leaved Dock
Rumex Obtusifolius	Broad leaved Dock
Rumex Sanguineus	Wood Dock
Salix cinerea	Grey Willow
Sambucus nigra	Elder
Saxifraga granulata	Meadow Saxifrage
Scrophularia Auriculata	Water Figwort
Scrophularia Nodosa	Common Figwort
Scrophularia umbrosa	Green Figwort
Senecio Jacobaea	Ragwort
Senecio Squalidus	Oxford Ragwort
Senecio Vulgaris	Groundsel
Silene Dioica	Red Campion
Silene dioica	Red Campion
Sisymbrium Officianale	Hedge Mustard
Solanum Dulcamara	Bittersweet
Solidago virgaurea	Goldenrod

Sonchus Arvensis	Perennial Sow Thistle
Sonchus Oleracius	Smooth Sow Thistle
Sorbus aucuparia	Rowan
Spirea Salicifolia	Willow leaved Spirea
Stachys Sylvatica	Hedge Woundwort
Symphoricarpos Albus	Snowberry
Symphytum Officinale	Common Comfrey
Symphytum Tuberosum	Tuberous Comfrey
Syringa Vulgaris	Lilac
Tanacetum Parthenium	Parthenium Feverfew
Tanacetum vulgare	Tansy
Taxus Baccata	Yew
Tellima Grandiflora	Fringecups
Tilia x europaea	Lime
Trifoleum Pratense	Red Clover
Ulmus glabra	Wych Elm
Urtica dioica	Common Nettle
Veronica Chamaedris	Germander Speedwell
Veronica filiformis	Slender Speedwell

Group Worm

Batracobdella paludosa	a leech
Dendrocoelum lacteum	a flatworm
Erpobdella octoculata	a leech
Glossiphonia complanata	a leech
Helobdella stagnalis	a leech
Trocheta bykowskii	a leech

Appendix 3 - Extract form Forth Fisheries Management Plan for the Forth Catchment with specific reference to the River Almond

viii) RIVER ALMOND

The River Almond rises among the moors of the Cant Hills at an altitude of 275m approximately 5km south-west of Harthill in Lanarkshire. It flows in a north-easterly direction and reaches the

Forth estuary at Cramond where it discharges on to the intertidal Drum Sands. From its source to its estuary is a distance of approximately 50km draining a catchment of 175km^2.

The upper reaches of the river flow through mainly unimproved acid grasslands and heathers. It then drops into the middle reaches where land-use is a mixture of arable rotation, and as it finally drops down onto the valley floor, agriculture is mainly arable.

Water quality has been adversely affected over the years by effluent from the sewage treatment works at Whitburn, Blackburn, Seafield, Mid Calder, and Newbridge. The various discharges from the now defunct coalmines, including Polkemmit, also have a depressive effect on water quality. The Muirieston and Linhouse Waters, which enter the river at mid Calder, appear to have the best water quality on the river and it has been suggested that it is in these streams that the Almond's salmon predominantly spawn.

There are many obstructions on the river which in terms of migratory fish appear to be the predominant limiting factor. From Kirkton Campus at Livingston to the weir at Cramond there are eight obstacles, some of which are very severe.

Appendix 4 - Edinburgh's Biodiversity Action Plan 2010-2015 extract relating to Freshwater and Wetland areas and selected associated fauna

Freshwater and Wetland

Introduction
Edinburgh has a variety of watercourses running through both rural and urban areas, ranging in size from the Water of Leith and River Almond, to the smaller Braid Burn and Niddrie Burn. The Union Canal also passes through part of Edinburgh. These watercourses provide an important function in the city, providing semi-natural habitat and commuting corridors for wildlife, as well as recreation and amenity benefits. It is therefore important that habitat and water quality is maintained and enhanced.

Managing freshwater habitats for biodiversity
There are certain habitat features which, if maintained or created, will maximise the value of freshwater habitats for biodiversity.

Watercourses:
- Uncut bankside vegetation leaving a buffer of at least 2m each side of the watercourse where possible.
- Continuity of bankside habitat.
- Riparian woodland strip.
- Aquatic vegetation.

Variety of flow types – slow flowing deeper pools and fast shallow sections

Ongoing Actions in 2010 EBAP Relating to River Almond

Monitor known Kingfisher breeding sites and record all sightings.	WOLCT, CEC CRS, SWT, PHRS
Monitor mink populations and record sightings	CEC CRS, WOLCT
Include awareness of invasive non-native species in educational work and community action.	CEC CRS, WOLCT.

Unfunded projects
At the time of writing the following projects have not yet secured resources necessary to include them as priority actions. The Edinburgh Biodiversity Partnership hopes to make progress in implementing these projects during the life of this Plan.

Project	Action	Organisations
Riparian projects	Riparian habitat enhancement or creation projects in rural areas or on smaller urban watercourses.	CEC, PHRS, SAC, FWEG
River restoration	Identify watercourses suitable for localised restoration projects.	CEC
Riparian woodlands	Identify sites suitable for riparian woodland creation or enhancement.	CEC, ELGT, ELFHNP, SEPA.

Otter (*Lutra lutra*)

Description
Otter numbers have shown a recovery over the last 20 years, and they have begun to recolonise rivers in Edinburgh. There are recent records of otters on all of Edinburgh's main watercourses, although it is thought that the population is still small. Improvements to water quality and riparian habitat have improved conditions for otters across the city.

Status
The otter has the highest level of legal protection; it is listed on Annexes II and IV of the Habitats Directive which gives the species protection at a European level. It is a UKBAP species and is also listed on the Scottish Biodiversity List of priority species.

Context and review of past action

The conservation of Edinburgh's otter population is delivered mainly by ensuring that there is enough good quality habitat to support it. This includes having well vegetated banks to provide cover for refuges, couches and holts, as well as habitats that provide enough food by supporting a good fish population. Protecting otters and their habitat in the Planning system is essential both to comply with European legislation and to ensure their continued survival in areas where development pressure is great.

Objectives

1. To maintain a stable population of otters in Edinburgh;
2. To protect key otter habitats and raise awareness of otters in Edinburgh;
3. To identify areas of possible otter population expansion.

Priority actions

Action	**Action description**	**Who?**	**Targets**
OT01	Review surveys and sightings of otters to build a picture of river use to identify areas for habitat improvements/links.	**CEC Biodiversity Officers,** WOLCT, CEC CRS.	1. Collate surveys and sightings of otters to build a picture of river use and behaviour, by 2011.
			2. Use this information to identify areas for improvement to allow for refuges or movement by creation of continuous habitat, by 2013.
			3. Implement habitat improvements on at least 3 sites, by 2015.
OT02	Work with landowners and developers to ensure habitat protection, mitigation and artificial holt provision where appropriate	**CEC Planning**, SNH, SEPA	1. Work with landowners and developers to ensure habitat protection, mitigation and artificial holt provision where appropriate, as required or as opportunities arise.
OT03	Ensure the implementation of otter mitigation measures during flood prevention works (e.g. creation of ledges, prevention of disturbance).	**CEC CRS**, WOLCT	1. During and after Flood Prevention works, ensure otter mitigation measures have been implemented, as required.
OT04	Publish an otter survey handbook for volunteers, and carry out training.	**CEC CRS**	1. Publish an otter survey handbook for volunteers, by 2010.
			2. Hold a training day for volunteers on otter survey techniques, by 2010.
OT05	Continue to record, survey and monitor otter numbers as opportunities arise.	**CEC Biodiversity Officers,** CEC CRS, WOLCT, SNH, SEPA	1. Record sightings, ongoing. Carry out surveys as opportunities arise, ongoing.
			2. Report all records to The Wildlife Information Centre, ongoing.
OT06	Raise awareness of otters and the need for continued habitat improvements, at appropriate events such as river clean ups.	**CEC CRS, WOLCT.**	1. Raise awareness of otters and the need for continued habitat improvements, at appropriate events such as river clean ups, ongoing.

Appendix 5 Extract from Glamis Consultatncy document (executive summary) detailing Cramond and Barnton Community Council Chain Ferry Feasibility and Business Plan

1. Summary of Study Conclusions

This assessment of the feasibility of the proposed Cramond Chain Ferry has found that a visitor market exists for the ferry and that it may be feasible for the Cramond Chain Ferry to be operated on a financially sustainable basis. The study concludes that the ferry is a central component of potential for tourism development in the Cramond area and is a "missing link" in the Edinburgh footpath and cycleway network. There is broad support for the ferry across a wide range of community and business groups and in the public sector. However it is unlikely that the operation of the ferry can receive any form of ongoing revenue grant support from the public sector agencies.

2. Capital Costs

The capital costs of the ferry and infrastructure is estimated to be around £243,000. In the current financial climate, at a time when future funding resources remain unclear, securing capital funding support represents a major challenge to the project. However this situation may not be indefinite and future funding sources may exist for further development of the project. In the short term it is feasible that the development costs of the project could be supported by Lottery sources such as Awards for All.

3. Operating Characteristics

The feasibility has been undertaken on the basis that the ferry is fully staffed and is available on a year round basis, operating for 277 days per year, with winter opening being restricted to weekends.

4. Market and Performance Assessment

An assessment of the potential user market for the ferry has estimated that around 48,561 single journeys could be undertaken per year on the ferry, representing around 10% of the estimated total Cramond visitor market, and generating around £72,841 in revenue with an estimated annual operating surplus of around £30,214. This represents around 2.3 times the number of journeys estimated to have been taken on the previous ferry.

It is feasible that if this level of usage was achieved, and taking into account estimated running costs, the ferry could break even around 26,180 single journeys on the basis of a one way flat rate ferry fare of £1.50.

5. Sensitivity Analysis

A number of sensitivity analyses have been undertaken which indicate that if the one way fare is £0.50, the same as that of the previous ferry, then the ferry is unlikely to be viable on the basis of the projected 48,561 single journeys.

6. Ownership and Operation

Operationally, it is proposed that ownership of the ferry could be undertaken by a charitable trust or by a Community Interest Company. Any operating surpluses generated by the ferry could be remitted back to the trust for maintenance and future replacement of the ferry and for the development of projects aimed at enhancing Cramond as an attractive destination. There are a number of operational options to be considered, each with their own benefits and weaknesses. These options include setting up an "arms length" trading company or contracting out the operation to a management company

7. Risk Assessment

There are a number of risks associated with the ferry establishment and operation, the most significant being the challenges in securing capital finding support. There are also operational risks associated with operational factors but these are generally believed to be relatively minimal.

8. Support for the Project

Broad support for the project has been indicated from a range of potential stakeholders from the local authority to groups representing walkers, cyclists and natural heritage interest, together with support from Cramond heritage groups and businesses.

9. Conclusions

Overall, it is concluded that the Cramond Chain Ferry appears to be a project which can be financially viable, has broad support from various quarters and could offer a unique and attractive new visitor attraction whilst facilitating enhanced use of the Edinburgh core paths network and encouraging walking and cycling facilities in the waterfront locality.

Appendix 6a - Photo showing Cramond Ferry Boat prior to closure in 2000

Appendix 6b - Photo showing Proposed Chain Ferry (artists impression)

Appendix 7 – Table detailing Cramond Angling Club catch returns from 2007-2010

Salmon & Grilse					
	2007	2008	2009	2010	2011
Killed	8	13	10	8	0
Released	3	11	13	45	0
Sea Trout & Finnock					
	2007	2008	2009	2010	2011
Killed	8	3	4	2	0
Released	106	128	88	219	0
Brown Trout					
	2007	2008	2009	2010	2011
Killed	2	1	4	2	0
Released	99	209	271	652	0

References

Catchment Pollution Reduction Programmes under Directive 78/659/EEC on The Quality of Freshwaters Needing Protection or Improvement in Order to Support Fish Life. Improvement programme to achieve Guideline values under Article 5 of the Directive.
River Forth and Forth Estuary Catchments: Monitoring Years: 2005-2007.
SEPA.

Edinburgh Airport Rail Link: An Assessment of the Effects to the Firth of Forth Special Protection Area, Draft report. December 2005. Environmental Resources.

Rural West Edinburgh Local Plan Inquiry: Commenced 29 November 2004 Precognition by Alvin Barber in response to Objection No. 068/03 by FSH Airport (Edinburgh) Services to Policy E45/MAP of the Plan – Flood Designation.

Integrated catchment management planning: a handbook for project officers Version 1.0 July 2009. Funding for the CATCH workshop and handbook was received by The Macaulay Land Use Research Institute as part of the Scottish Government's research programme
Environment: Land Use and Rural Stewardship. catch@macaulay.ac.uk

Forth Replacement Crossing DMRB Stage 3 Environmental Statement Appendix A9.2: Surface Water Hydrology – NO DATE

A Fisheries Management Plan for the Forth Catchment. (June 2009). Patrick Fothringham. Forth District Salmon Fishery Board & River Forth Fisheries Trust.

Historic Cramond Final Report. 21 July 2003. Marta McGlynn Associates.

The River Almond 5-year Management Plan: Improvement Measures and Implementation Timescales. Consultation Draft version 1.0. © Cramond Angling Club 2009. Produced by Fen Howieson on behalf of the Cramond Angling Club & Forth District Salmon Fishery Board, July 2009.

The River Almond Catchment: A Plan for Integrated Management. River Almond Catchment Partnership Group (1997) Scottish Wildlife Trust

Managing a Complex River Catchment: A Case Study on the River Almond Pollard P, Devlin M and Holloway D (2001) *Science of the Total Environment*, Vol. 265, 343–357.

State of Scotland's Environment: Supplementary Material
Paula Woolger NO DATE

Many thanks to Patricia Eason of Cramond and Barnton Community Council for information provision and chivvying along the process of forming this plan.