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Whitehill & Bordon Eco-town
Walking and Cycling Strategy
Hampshire County Council

February 2013



QM

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Executive Summary

WSP has been appointed by Hampshire County Council (HCC) to produce a Walking and Cycling Strategy to support the Emerging Transport Strategy and the 2012 Masterplan for Whitehill & Bordon Eco-town. This document outlines provision for walking and cycling, which will encourage current and future residents of Whitehill & Bordon and Lindford to make a greater proportion of their journeys on foot or by bicycle within the settlement areas, in addition to providing an attractive range of leisure routes around the town.

In producing this strategy a number of stages have been completed including an examination of national, regional and local policy to ensure compliance with best practice, a detailed audit of existing walking and cycling provision in Whitehill & Bordon and extensive public and stakeholder consultation. Each of these stages feed into the production of the strategy for walking and cycling for the Eco-town development.

The Strategy provides clear guidance on the delivery of future walking and cycling infrastructure in the town, including the facilities to be provided on the proposed Green Loop and Green Grid and how existing routes can link with this and the proposed areas of new development. It identifies a phasing for new walking and cycling infrastructure to meet the objectives of the 2012 Masterplan.

The recommended strategy has been developed into a series of short, medium and long-term improvements to provide the following key facilities:

- The provision of a primary network of pedestrian and cycle routes that provides a continuous loop around the Eco-town for walking and cycling that links major employment areas, proposed town centre, existing and proposed residential areas and Lindford;
- A secondary network of pedestrian routes that provides an attractive set of leisure routes and linkages through natural areas, proposed SANGs and the Deadwater Valley Local Nature Reserve. The primary and secondary network of routes will form part of the Masterplan's proposed Green Grid and Green Loop;
- New links to improve walking and cycling connectivity on the existing highway network around Whitehill & Bordon;
- A change in character for the A325 to encourage its use as a main route for walking and cycling;
- New crossing points to provide easier access across main routes;
- Dedicated route facilities to provide better signage, encourage their greater use and to provide rest points; and
- A consistent approach to walking and cycling networks across existing and proposed areas of the Whitehill & Bordon settlement areas.

1 Preamble and Background

1.1 PREAMBLE

1.1.1 Whitehill & Bordon is one of four towns in the country which has been designated as an Eco-town, with the aim of becoming an exemplar for sustainable development.

1.1.2 The town currently has a population of around 14,000 people and 6,000 homes. The Ministry of Defence is due to leave Whitehill & Bordon in 2015, providing an opportunity for development and regeneration within the town.

1.1.3 The development of an Eco-town aims to deliver 4,000 new homes, along with a new town centre providing commercial and retail development to support the town, delivering up to 5,500 new jobs.

1.1.4 An Emerging Transport Strategy has been prepared by Hampshire County Council to support the 2012 Masterplan for development of the Eco-town. WSP has been appointed by Hampshire County Council (HCC) to produce a suite of Transportation Strategies to support the Emerging Transport Strategy and the 2012 Masterplan for Whitehill & Bordon Eco-town:

Walking and Cycling Strategy

- The Walking and Cycling Strategy outlines provision for walking and cycling, which will encourage current and future residents of Whitehill & Bordon and Lindford to make journeys on foot or by bicycle in preference to car;

Parking Strategy

- The Parking Strategy seeks to balance parking availability and managing the level of demand, with development viability. The Strategy seeks to complement parking through providing an alternative to car use and hence aiding the reduction of demand.

Traffic Management Strategy

- The Traffic Management Strategy proposes mitigation measures to minimise the impact of traffic arising from the development proposals and discourage the use of inappropriate routes, taking into account consultation responses from local communities.

1.1.5 HCC anticipates that the strategies will inform future interventions and infrastructure requirements for the Whitehill & Bordon Eco-town project. The Walking and Cycling Strategy is presented in this document.

1.1.6 This document is based upon the latest Masterplan for the Eco-town, which was formally approved in May 2012.

1.2 SUPPORTING DOCUMENTATION

1.2.1 During the development of the Whitehill & Bordon Eco-town proposals, a considerable amount of supporting documentation has been produced, including:

- Whitehill & Bordon Eco-Town Masterplan (Revised May 2012);
- Whitehill & Bordon Eco-Town Suitable Alternative Natural Greenspace Design and Delivery, Halcrow, October 2012;
- Whitehill & Bordon Green Infrastructure Strategy, Halcrow, July 2011;
- Emerging Transport Strategy, Hampshire County Council, September 2011;
- Framework Travel Plan, Hampshire County Council, June 2011; and
- Transport Assessment, Amey, September 2011.

1.2.2 During the production of this Strategy, the content of the supporting documentation has been considered in full.

1.3 AIMS AND OBJECTIVES OF THE WALKING AND CYCLING STRATEGY

1.3.1 The aim of this Strategy is:

To develop a phased strategy for the implementation of a comprehensive and cohesive network of pedestrian and cycle links and facilities in Whitehill & Bordon (and Lindford).

1.3.2 The objectives of this Strategy are:

- To provide clear guidance on the delivery of future walking and cycling infrastructure in the town, linking Whitehill & Bordon with its surrounding communities for each different journey purpose;
- To identify a phasing for the delivery of infrastructure in line with the 2012; Masterplan, including potential early-win schemes;
- To identify appropriate construction techniques and materials that fit with the Eco-town ethos in Whitehill & Bordon; and
- To identify constraints to the delivery of the identified walking and cycling infrastructure which would guide further work.

1.4 METHODOLOGY

1.4.1 The Walking and Cycling Strategy for Whitehill & Bordon has been developed by following a staged process with completion of the following tasks:

- An examination of the national, regional and local policy context for walking and cycling;
- Analysis, background review and route audits of the existing provision of walking and cycling infrastructure and Public Rights of Way within Whitehill & Bordon to inform the recommendations. The background review includes a gap analysis, ACCESSION modelling, on site observations; and Personal Injury Accident analysis;
- Extensive public and stakeholder consultation to determine baseline perceptions and opinions on proposed recommendations;

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- Determination of recommendations for improving walking and cycling infrastructure, including phasing, in Whitehill & Bordon.

1.5 REPORT STRUCTURE

1.5.1 This report is set out as follows:

- Section 2 provides a review of relevant Policy;
- Section 3 summarises the Eco-town 2012 Masterplan proposals;
- Section 4 details review of existing conditions undertaken to determine the existing conditions associated with walking and cycling in Whitehill & Bordon and on surrounding Rights of Way and highway network;
- Section 5 summarises the public consultation undertaken as part of this study;
- Section 6 sets out the Walking and Cycling Strategy Recommendations; and
- Section 7 provides a Summary and Conclusion.

2 Transportation Policy Context

2.1 INTRODUCTION

2.1.1 Planning at the national, regional and local level has been an essential consideration in determining this Walking and Cycling Strategy. The following section summarises the relevant National, Regional and Local planning policies.

2.2 NATIONAL POLICY

CREATING GROWTH, CUTTING CARBON (DFT, 2011)

2.2.1 *Creating Growth, Cutting Carbon* sets out plans for transport to become an engine for economic growth through careful investment in sustainable transport. It aims to encourage more sustainable transport choices through returning decision making to the local level where people know what works.

2.2.2 With regards walking and cycling, it highlights active travel as an excellent way for people to incorporate exercise into their daily lives. The return on investment in cycling initiatives show benefits outweighing costs by a factor of three.

MAKING SMARTER CHOICES WORK (DFT, 2004)

2.2.3 The Department for Transport (DfT) report 'Making Smarter Choices Work' signals continued government support for a range of measures aimed at raising awareness of alternative modes of travel to private car use, and actively encouraging the use of a wider range of travel modes amongst individuals.

2.2.4 These measures include travel plans, travel awareness campaigns, car sharing initiatives, and individualised travel marketing. Contemporary transport policy now recognises the impact that such measures can have in encouraging a shift in mode choice, particularly when accompanied by demand management restraints on single-occupancy car use.

NATIONAL PLANNING POLICY FRAMEWORK (DCLG, 2012)

2.2.5 Adopted on 27 March 2012, the National Planning Policy Framework (NPPF) seeks to reduce the complexity and improve the accessibility of the planning system, whilst protecting the environment and encouraging growth in a sustainable manner.

2.2.6 The NPPF replaces all previous Planning Policy Guidance Notes and Statements, becoming the definitive national planning guidance from which local planning authorities can, in collaboration with their communities, produce local plans appropriate to the character and needs of their area.

2.2.7 Key to the NPPF and its success is the following statement from Paragraph 14:

*“At the heart of the National Planning Policy Framework is a **presumption in favour of sustainable development**, which should be seen as a golden thread running through both plan-making and decision-taking.”*

2.3 LOCAL POLICY

HAMPSHIRE LOCAL TRANSPORT PLAN 2011-2031

2.3.1 Hampshire's Local Transport Plan contains two elements: a 20-year Strategy, which sets out a long-term vision for how the transport network of Hampshire will be developed; and a three-year Implementation Plan setting out planned expenditure on transport over the period April 2011 to March 2014. Whitehill & Bordon falls within the Central Hampshire and New Forest local area transport strategy of the LTP.

2.3.2 One of the outcomes that the LTP seeks to deliver is reducing dependence on private cars which accords with the objectives of this and the other strategies.

HCC COUNTRYSIDE ACCESS PLAN FOR THE SOUTH DOWNS (2008 - 2013)

2.3.3 Whitehill & Bordon is located north of the East Hampshire AONB, meaning that accessibility, not only for cyclists and pedestrians, but also for equestrians needs to be considered. HCC's Countryside Access Plan sets out a vision that aims to ensure that access opportunities, both new and existing:

- Provide a high quality network and facilities suitable for the recreational needs of the 21st century;
- Excite and invite exploration and appreciation of the special qualities of the area;
- Are managed in a way that balances the needs of recreational users with the protection of the environment and working landscape within the area;
- Provide links directly into the area from adjacent settlements to encourage car free recreation; and
- Support sustainable tourism in ways that uphold and reinforce the unique qualities of the South Downs as an area for self-discovery and refreshment rather than for mass tourism.

2.4 ECO TOWN POLICY

PLANNING POLICY STATEMENT: ECO-TOWNS - A SUPPLEMENT TO PLANNING POLICY STATEMENT 1 (PPS1)

2.4.1 PPS1 is concerned with the planning policies relating to delivery of sustainable development. The supplement outlines government policy specifically on Eco-towns and hence requires higher minimum standards to be obtained. This document is no longer a statutory document and has been replaced by NPPF but remains guidance on Eco-towns. The standards act to ensure that eco towns are exemplars of good practice and provide a showcase for sustainable living and allow Government, business and communities to work together to develop greener, low carbon living. The higher standards ensure the development is set apart from normal development.

2.4.2 With regards to specific guidance on transport and travel, it recognises that people want freedom of movement. The emphasis should be on satisfying that demand through public transport provision and provision of infrastructure to facilitate walking and cycling. These sustainable modes should take priority over private cars through streetscape design and layout.

2.4.3 In terms of target setting, a figure of at least 50% of trips originating in the Eco-town should be made by non-car means, with the potential for this to increase over time to 60%.

EMERGING TRANSPORT STRATEGY (2011)

2.4.4 The Emerging Transport Strategy highlights the importance of walking and cycling as the only mode which can provide an alternative to car trips for journeys within the town. It states that this can only happen if neighbourhoods are genuinely walkable with safe, well lit routes.

EAST HAMPSHIRE DISTRICT COUNCIL (EHDC) LOCAL PLAN: PRE-SUBMISSION JOINT CORE STRATEGY 2012

2.4.5 The Joint Core Strategy, will guide the way in which new development, including housing and employment, will be planned up to 2028 and has been prepared jointly by EHDC and South Downs National Park Authority (SDNPA). An Examination of the Joint Core Strategy was undertaken in October and November 2012 but suspended in January 2013 to allow EHDC and SDNPA adequate opportunity to respond to the Inspectors preliminary conclusions. The Examination is due to resume in October 2013. The Core Strategy has been prepared in order to facilitate and support the vision of the district, which is as stated in paragraph 1.4:

“By 2026, East Hampshire will be a better place where people live, work and build businesses in safe, attractive and prosperous towns and villages. They will have good access to a range of housing, jobs leisure and community facilities, and enjoy a high quality built, historic and natural environment. They will live and work in a way that respects resources and protects and enhances the District’s natural environment..”

2.4.6 The entirety of Chapter 9 of the document is dedicated to Whitehill & Bordon, with 18 associated policies. Several policies indirectly include transport requirements; however there are seven which directly address transport. These are:

- CSWB11 – New roads and traffic management on the A325;
- CSWB12 – Pedestrian and cycle routes;
- CSWB13 – Public Transport;
- CSWB14 – Travel plans;
- CSWB15 – Local transport network improvements;
- CSWB16 – Travel Monitoring;
- CSWB17 – Car Parking; and
- CSWB18 – Low Carbon Vehicles.

2.4.7 Policies CSWB11 and CSWB12 set out a desire for the development to be designed in such a way that accessibility to facilities by sustainable modes is an attractive choice, with distances to these facilities kept as minimal as possible.

2.5 SUMMARY

2.5.1 The Transportation Policy summarised above provides a strong framework for the development of the Walking and Cycling Strategy. The key themes that are prevalent within policy documentation are sustainability, and ensuring a shift in mode share from private car driver to sustainable modes such as walking and cycling. The methods for meeting these aims are also detailed within the policy documentation and have been taken forward in considering the Walking and Cycling Strategy. Namely, these are:

- Providing facilities to incorporate exercise in the form of walking and cycling into people’s daily lives and activities;
- Creating networks of high quality walking and cycling facilities;
- Providing a desirable streetscape design and layout;

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- Interconnection of existing facilities to ensure a permeable network; and
 - The importance of consultation in developing local improvement schemes.

3 Eco-town Proposals

3.1 INTRODUCTION

3.1.1 The vision for Whitehill & Bordon contained within the 2012 Masterplan will put the outstanding natural environment at the heart of the regeneration with new facilities, leisure opportunities, jobs education, infrastructure and housing provided to enhance this unique area and create a model sustainable community. The Eco-town aims to deliver a development of 4,000 new homes with a new town centre that provides commercial floorspace and retail development to support the town, along with 5,500 new jobs..

3.2 2012 MASTERPLAN DEVELOPMENT SCHEDULE

3.2.1 In summary, the 2012 Masterplan proposes:

- a new mixed-use town centre at a location linking Prince Phillip Barracks to the existing shops on the High Street and Chalet Hill, with around 50,000sqm of gross, retail and commercial floorspace;
- two new primary schools and a new secondary school;
- skills training and further education facilities through the expansion of Mill Chase Community Technology College;
- sites for new commercial leisure facilities;
- around 4,000 new homes within identified new residential neighbourhoods and the town centre;
- a public sports hub with leisure centre and pitches;
- local health care and emergency services;
- around 70,000sqm of commercial floorspace and opportunities across the Masterplan for the creation of at least 5,500 new jobs;
- around 90 hectares of new public green-spaces which provide Suitable Accessible Natural Green-space (SANG) to mitigate against human impacts on nearby European Designated Sites;
- a central public transport hub and a three-tier bus strategy providing services at town, local and regional level;
- construction of an inner relief road within Whitehill & Bordon, offering an alternative route for through traffic and removing non-local traffic from the town centre;
- retrofitting of existing homes and businesses to improve energy and reduce utilities bills; and
- a biomass powered combined heat and power plant (CHP), expanded recycling centre and community 'swap-shop'.

3.2.2 The implementation of proposals contained within the Masterplan are driven by timing of the MoD withdrawal from the site, which has been confirmed as 2015. The development proposals will be split into four stages and the development is anticipated to be completed between 2029 and 2033.

3.3 IMPORTANT GREEN AREAS IN AND AROUND THE TOWN

3.3.1 The Masterplan notes that Whitehill & Bordon is located in an area that is characterised by gently undulating hills, woodlands, heathlands and farmland, with the town being near to a number of European Designated Sites. The town is a gateway to the South Downs National Park and environmental designations within the town include a Local Nature Reserve at Deadwater Valley and a number of Sites of Importance for Nature Conservation (SINC) including Hogmoor Inclosure and Eveley Wood. Other important areas include:

- Boxhead Common Wealden Heaths Special Protection Area (SPA);
- Kingsley Common Wealden Heaths SPA;
- Woolmer Forest Special Area of Conservation (SAC); and
- Shortheath Common SAC.

3.3.2 Due to the proximity of Whitehill & Bordon to these designated sites a Habitat Regulations Assessment (HRA) has been undertaken in parallel with development of the Masterplan to assess potential impacts, and determine appropriate avoidance and mitigation measures which should be implemented alongside delivery of the Eco-town.

3.3.3 One of the key components of the avoidance and mitigation strategy for the European Designated Sites area Suitable Alternative Natural Green Space (SANGs), which will be delivered as a core part of the town's wider green infrastructure network for recreational use. Stanford Grange Farm and Hogmoor Inclosure will provide the major SANGs, supplemented by Bordon Inclosure and other areas, such as Bordon and Oakhanger Sports Club (BOSC) and proposed new parks.

3.4 THE GREEN GRID AND GREEN LOOP MASTERPLAN PROPOSALS

3.4.1 The Masterplan proposes a continuous, multi-functional corridor of green-spaces and watercourses known as the green loop and green grid that will unite new and existing communities making the town more permeable to people and wildlife. The Masterplan states that the green loop will:

- Create a recreation route around the town which is within easy access of residents. Existing green-spaces such as Deadwater Valley Local Nature Reserve including Alexandra Park and Jubilee Park will be linked with new and improved public parks and natural areas of Bordon Garrison, Hogmoor Inclosure, Bordon Inclosure and Stanford Grange Farm.
- Run past and through new and existing sports fields, leisure facilities, parks, play areas, schools the Forest Shopping Centre and the town centre to provide a safe and attractive way to get around the town without the need for a car.
- Have a varied character in response to the environment through which it passes and will include some sections on existing residential streets which will be improved with cycle lanes, signage and tree planting.

3.5 TRANSPORTATION 2012 MASTERPLAN PROPOSALS

3.5.1 In addition to the Green Loop proposals, the 2012 Masterplan outlines the following key elements for the Transport Strategy:

- A central transport hub in the town centre along the existing High Street, where all local bus services interconnect and information is provided on a range of sustainable travel options.
- Construction of an inner relief road that will offer an alternative route for through traffic, removing non-local traffic from the town centre and delivering quality access to new communities and facilities;
- A redesign of the existing A325, incorporating traffic management measures to make it less attractive route to through traffic, to reduce traffic speeds and promote a sharing of space that creates a better environment for pedestrians and cyclists.
- A series of 'car-free' and 'car-reduced zones' within the heart of the town centre, along with innovative approaches to residential parking to maximise efficiency of parking provision.
- High quality bus routes servicing three levels of passenger usage – sub-regional, local, town wide.
- A safe guarded rail corridor for future development and an indicative station location close to the town centre.
- A network of clear and direct cycle routes connecting Whitehill & Bordon with surrounding towns, villages and stations.
- Traffic management strategy for surrounding villages.

WALKING AND CYCLING TARGETS

3.5.2 There is an aim in the Masterplan to increase the overall mode share of trips on foot from 20% to 25% and the number of trips by bicycle from 2% to 8% which is considered to be a reasonable target for the town, particularly with the creation of new jobs, shops and services in close proximity to new homes. The Masterplan has been developed to ensure that the town has genuine walkable neighbourhoods to make walking a more attractive and safer option for local residents.

3.5.3 In addition, the green loop and green gird will provide a network of pedestrian and cycle routes throughout the town linking up existing town-wide and long distance routes via new streets and footpaths. The green loop and green grid will link all facilities together.

3.5.4 The Masterplan cites the following opportunities for promoting cycling in order to achieve the modal share targets:

- Provision of safe and secure cycle parking facilities adjacent to, or at the front door of residential units, employment and commercial hubs and transport interchanges, providing an immediate option instead of the car;
- Improved cycle infrastructure on the road network including good surfaces and safe, well-lit routes including a main cycle route along the existing High Street;
- Promotion of facilities for taking cycles on buses and trains;
- Provision of showers, changing rooms and lockers at work places, delivered through commercial Travel Plan obligations;

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- Community bike rental initiatives and 'bikeability' training, along with incentives such as cycle purchase schemes and discounted equipment;
 - Delivery bike loan schemes from local supermarkets to transport goods home without a car; and
 - The enhancement and extension of cycle route networks connecting Whitehill & Bordon to the National Cycle Network.

3.6 SANG DESIGN AND DELIVERY DOCUMENT (HALCROW, OCTOBER 2012)

3.6.1 The SANG Design and Delivery Document sets out the overarching design approach to the SANG network identified in the 2012 Masterplan. This document utilises Natural England's SANG design guidance (2008) and builds upon the outline designs set out in the Green Infrastructure Strategy, includes proposals for access in relation to the green grid and green loop and recommended design of such routes. With this in mind, the Walking and Cycling Strategy contained within this document applies recommendations from the SANG Design and Delivery Document where applicable.

3.7 SUMMARY

3.7.1 The premise of the 2012 Masterplan compliments the themes detailed within policy documentation, as detailed within Section 2. Specific themes and objectives within the Masterplan that have been taken forward within the development of the Walking and Cycling Strategy are as follows:

- Ensuring sustainable movement to and from all land uses within the Eco-town, particularly via walking and cycling;
- Making walking and cycling a more attractive mode within Whitehill & Bordon via the introduction of new facilities e.g. crossing points, bike stands;
- Developing cohesive networks for walking and cycling to ensure that all areas, old and new, of Whitehill & Bordon are accessible by sustainable modes;
- Developing the Green Loop and Green Grid to connect all facilities town wide.

3.7.2 The principles in the policy documentation (Section 2) and Masterplan considering walking and cycling have been taken forward in the development of the Walking and Cycling Strategy.

4 Existing Conditions Review

4.1 INTRODUCTION

4.1.1 To inform the Walking and Cycling Strategy recommendations, a review of existing conditions has been undertaken, considering the following:

- A review of existing ecological designations of land that forms part of the Green Grid and Green Loop;
- A gap analysis of off-road routes (existing footpaths and bridleways) which form part of the majority of the Green Loop and Green Grid;
- A gap analysis of areas surrounding the proposed Green Loop and Green Grid that will feed into proposed routes;
- A gap analysis of urban routes (existing infrastructure) that will form part of the Green Loop and Green Grid or have been identified as useful links to the proposed walking and cycling network;
- Personal Injury Accident analysis; and
- Stakeholder and Public Consultation.

4.1.2 Detail of each element is provided below with summary boxes at the close of each section.

4.2 REVIEW OF ECOLOGICAL DESIGNATIONS

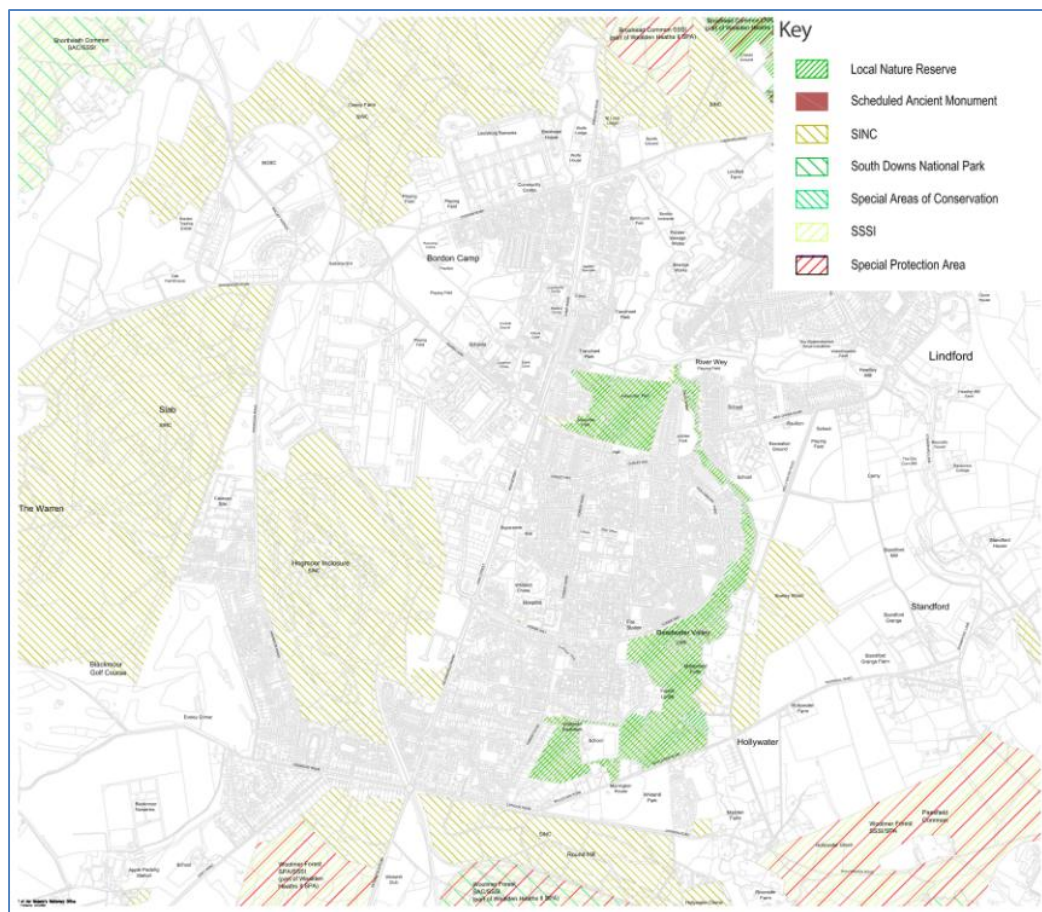
4.2.1 As identified in the 2012 Masterplan and Green Infrastructure Strategy, Whitehill & Bordon has a wealth of ecological sites both within and adjacent to the town. Figure 4.1 below shows that Hogmoor Inclosure, Alexandra Park, Deadwater Valley Local Nature Reserve, Eveley Wood and Round Hill are all European Designated Sites, which will need to be taken into consideration during the audit of existing conditions and Green Loop and Green Grid proposals.

4.2.2 For the areas proposed for SANG provision (Hogmoor Inclosure and Bordon Inclosure) Natural England guidance includes a number of 'must haves' that the walking and cycling strategy will need to consider:

- The accessibility of the site must include access points appropriate for the particular visitor use the SANGs is intended to cater for;
- All SANGs must have a circular walk which starts and finishes at the car park;
- SANGs must be designed so that they are perceived to be safe by users; and
- Paths must be easily used and well maintained but should remain un-surfaced to avoid the site becoming too urban in feel.

4.2.3 For Deadwater Valley Local Nature Reserve the walking and cycling strategy must recognise that this area is designated for protection and improvement of habitats and wildlife and is subject to a local by-law that restricts cycling in the Nature Reserve.

Figure 4.1 – Ecological Designations in Whitehill & Bordon

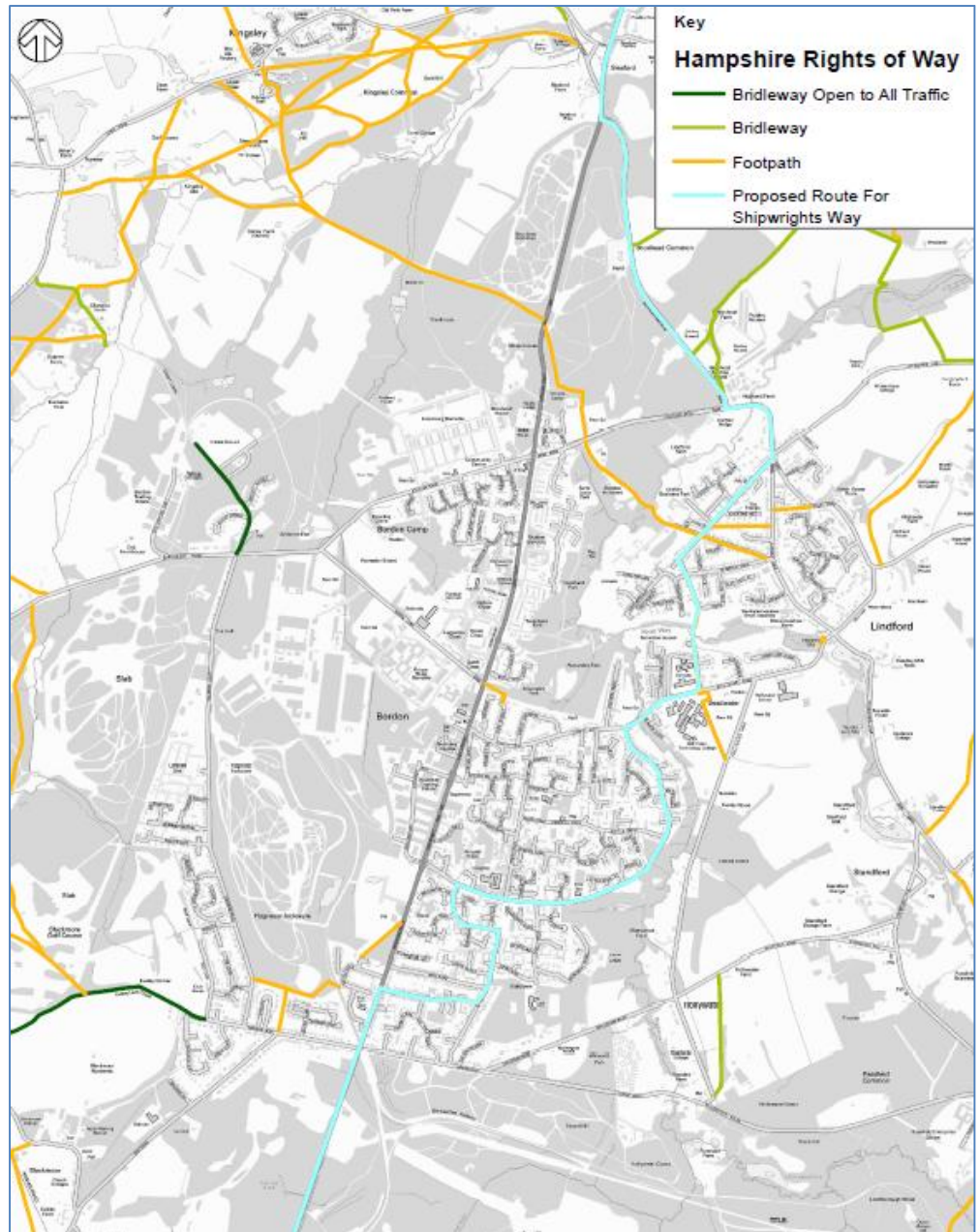


4.3 LINKS WITH EXISTING PUBLIC RIGHTS OF WAY, BRIDLEWAYS AND CYCLE ROUTES

4.3.1 Figure 4.2 below shows public rights of way, bridleways and cycle routes that currently exist in Whitehill & Bordon along with those that connect the town to surrounding communities. The plan shows that there are numerous footpaths connecting Whitehill & Bordon to surrounding villages (Lindford, Headley, Oakhanger and Kingsley) but very few bridleways for use by cyclists.

4.3.2 Figure 4.2 also shows the proposed route for Shipwrights Way, which is a long-distance shared-use route currently being developed by East Hampshire District Council, Hampshire County Council, South Downs National Park Authority and the Forestry Commission. Once complete this route will link Alice Holt Forest with the Historic Dockyard in Portsmouth passing through Bordon, Liphook, Liss, Petersfield, Queen Elizabeth Country Park, Staunton Country Park, Havant, Hayling Island and via ferry into Portsmouth.

Figure 4.2 – Existing Footpath & Bridleway Provision



4.4 ACCESSION MODELLING

4.4.1 ACCESSION modelling has been undertaken to determine the accessibility of the various important origins and destinations in the 2012 Masterplan. ACCESSION is a Geographical Information System based accessibility computer analysis tool which has the capability to measure journey distances and times for all modes of travel.

4.4.2 The programme was developed on behalf of the Department for Transport in response to their requirement for accessibility indicators to be included within the second

round of Local Transport Plans. As such, ACCESSION is the national standard (in England), government approved tool for accessibility mapping.

4.4.3 The pedestrian and cycle linkages in and around Whitehill & Bordon were coded into ACCESSION as well as routes proposed in the Eco-town masterplan. The outputs from the ACCESSION modelling have been used in conjunction with the gap analysis to understand and identify any missing or broken pedestrian and cycle links.

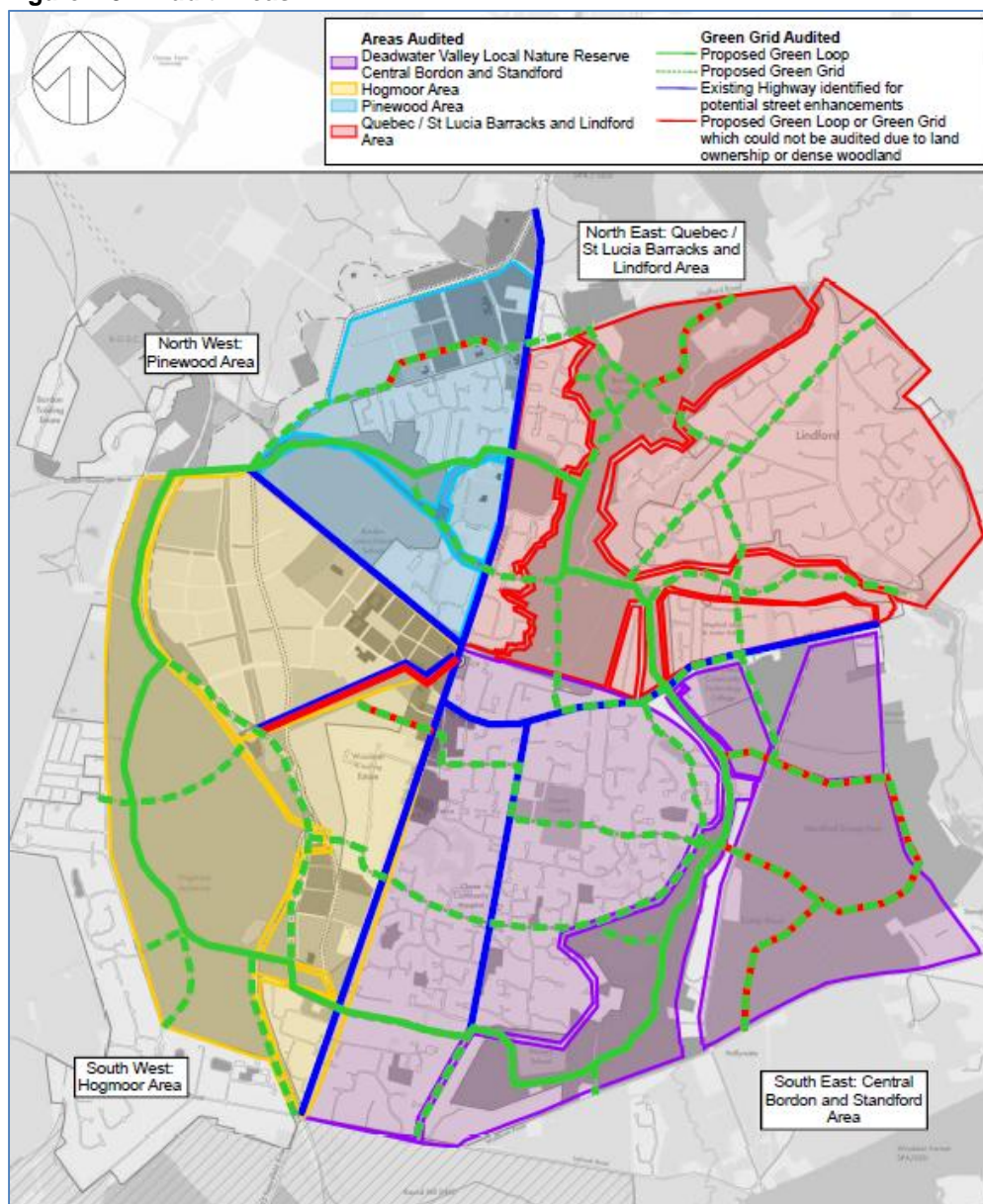
4.4.4 Pedestrian and cycle ACCESSION modelling has been undertaken separately, and each are summarised in Appendix A.

4.5 GAP ANALYSIS

4.5.1 Gap analysis has been undertaken to determine the existing conditions of Whitehill & Bordon in terms of walking and cycling. This is discussed in Sections 4.6 to 4.9. To determine an appropriate strategy for walking and cycling in Whitehill & Bordon, it is first necessary to consider the current performance and offerings of walking and cycling facilities on existing Public Rights of Way (footpaths and bridleways) and parts of the highway network (existing infrastructure) that will form part of the proposed Green Loop and Green Grid, and areas that will link into these routes. Shortfalls and deficiencies in facilities can then be determined and addressed accordingly. The gap analysis has been undertaken via on-site observations and route audits, and has been split into four areas of Whitehill & Bordon. These are summarised below and shown on Figure 4.3, along with the routes which have been audited:

- North West: Pinewood Area – bounded by Budds Lane, Louisburg Barracks to the north of Station Road and the A325 (discussed in Section 4.6);
- North East: Quebec Barracks / St Lucia Barracks and Lindford bounded by Lindford Road, the B3004 and Chalet Hill / Mill Chase Road (discussed in Section 4.7);
- South-West: Hogmoor Area - bounded by Budds Lane, A325, Firgrove Road and Hogmoor Road (discussed in Section 4.8); and
- South East: Central Bordon & Standford Area – bounded by Chalet Hill & Mill Chase Road, B3004 and Liphook Road (discussed in Section 4.9).

Figure 4.3 – Audit Areas



OFF ROAD AUDITS

4.5.2 To review the proposed off-road Green Loop and Green Grid provision, existing Public Rights of Way have been audited, taking into account a range of criteria to assess the suitability of these routes for walking and cycling (where appropriate). These audits took place where access to these areas was not restricted through land ownership or dense woodland. For each route, a description has been provided against the following criteria to determine the current suitability and potential upgrades required to meet relevant design standards:

- Ecological designation;
- Surface quality and type;

-
- Width of path;
 - Directness;
 - Legibility;
 - Watercourses;
 - Gradient; and
 - Quality of environment.

4.5.3 In addition to this route audit, a review of land ownership has been undertaken as shown in Figure 3. This provides details of potential constraints which would need to be resolved before development of parts of the Green Loop and Green Grid which does not form part of the public highway or public rights of way network.

EXISTING INFRASTRUCTURE (HIGHWAY) AUDITS

4.5.4 To inform the highway network gap analysis, areas that link into the proposed Green Loop and Green Grid and those identified for 'proposed street enhancement' have been audited to establish missing or broken links, crossing points, short cuts and desire lines. These routes are important as they will not only form part of everyday journeys but also provide connectivity with the Green Loop and Green Grid. The onsite observations are based on the existing composition and facilities offered within Whitehill & Bordon, rather than the 2012 Masterplan proposals. It is of note that some of the missing elements cited below are addressed within the Masterplan.

4.5.5 The route audits have been undertaken using the following criteria to determine the current suitability and potential upgrades required to meet relevant design standards. The criterion used differs for those applied to the off-road Grid Loop and Green Grid audit as the requirements differ:

- Directness
- Permeability
- Road Safety
- Personal Security
- Legibility
- Crossing Points
- Junctions
- Rest Points
- Quality of Environment

4.6 NORTH WEST – PINEWOOD AREA

4.6.1 This audit covers the area on the north west side of Whitehill & Bordon, bounded by Louisburg Barracks to the north of Station Road, the A325 and Budds Lane. The area is comprised of existing residential pockets to the south of Station Road as well as a significant amount of proposed development, including the Northern Employment Area, Secondary School / Sports Hub and residential areas. Figure 4.4 shows the area covered. This area includes no European Designated Sites.

Figure 4.4 – North West Area



PINEWOOD AREA PROPOSED GREEN LOOP & GREEN GRID ROUTE AUDIT

4.6.2 In regards to Green Loop and Green Grid provision, this area provides a route that links the A325 to the west to Oakhanger Road and the northern end of the Hogmoor Inclosure. The Green Loop runs east-west from Oakhanger Road to the junction of A325 and Ennerdale Road. It connects the existing footway along Oakhanger Road to Oakley Road via the MOD recreation ground. There is a proposed section of Green Grid running along Station Road, linking the Northern Employment to the Green Loop. Figure 2 shows important features and constraints which were identified during the route audit.

4.6.3 There is already a footway along Oakhanger Road which is approximately 1.5m wide, with a wide verge running alongside it which is encroaching on it in places. There is no street lighting on Oakhanger Road, and the footway is not overlooked.

4.6.4 The route runs along the north-eastern edge of the MOD recreation ground to avoid crossing the existing sports pitches. At present there is no formal path along this section. The route then briefly joins a formal path running south-east through the recreation ground past the Scout and Guide Hut. The path is approximately 1m wide and this section is in a poor state of repair with several potholes along it. There are benches located approximately every 100m along this section. Following on from this,

the path crosses another sports pitch to the western end of the existing woodland. This woodland is dense with no formal path. Therefore, it has not been possible to audit this section of the route.

4.6.5 To the east of the existing woodlands is a 1.5m wide path between Oakley Road and the woods through an open grassed area. This path connects with the footway along Oakley Road, Beaufort Road and Ennerdale Road. The footways along these roads are 1.5m wide (but with wide verges) with street lighting along them.

4.6.6 Station Road has footways along both sides for most of its length, with a short section of footway missing between the Household Waste Recycling Centre and Budds Lane. There are no crossing points along it and high traffic levels flows, which could present problems for users. Permeability from Station Road into the residential area is poor with walls or fencing blocking access from the ends of several cul-de-sac.

Table 4.1 Pinewood Area Green Loop & Green Grid: Main Findings

Main Findings
Ecological Designation
<ul style="list-style-type: none">• None
Surface Quality and Type
<ul style="list-style-type: none">• Paths were either informal in nature or hardstanding but in a poor state of repair.
Width of Route
<ul style="list-style-type: none">• The formal paths were generally between 1.5-2m wide.
Directness
<ul style="list-style-type: none">• With the need to avoid the MOD recreation ground to the west and permeate residential streets to the east this route provides a more direct link between Oakhanger Road and the A325.
Legibility
<ul style="list-style-type: none">• With parts of the route having only informal paths and the existing woodland being inaccessible, it was not clear how to follow this route.• There are very few access points off Station Road making it easy to walk along without conflict from vehicle movements.
Watercourses
<ul style="list-style-type: none">• One watercourse is bridged to the west of the existing Scout Hut.
Gradient
<ul style="list-style-type: none">• This route is generally flat.
Rest Points
<ul style="list-style-type: none">• There were benches provided along the path passing through the MOD recreation ground.
Lighting
<ul style="list-style-type: none">• Street lighting is currently provided through the residential parts of the route only.

Quality of Environment

- The quality of environment along the majority of the route is generally good although most sections are very secluded. The recreation ground could potentially be secluded after dusk. The woodland is very secluded at present and poor in terms of personal security.

4.6.7 In regards to land ownership along this route, the Pinewood area is currently owned by a number of parties, including Annington Properties Ltd, the MOD and EHDC. This is shown on Figure 3. This will need to be considered as part of any improvements which are proposed for this route.

PINEWOOD AREA EXISTING INFRASTRUCTURE AUDIT

4.6.8 The key origins and destinations within this area are the Northern Employment Area and Secondary School/Sports Hub and the Green Loop and Green Grid is likely to be used to access these facilities. Table 4.2 below provides a summary of assessment undertaken.

Table 4.2 Pinewood Area Existing Infrastructure: Main Findings

Walking

Directness

- No direct route through on an east to west axis i.e. Oakhanger Road to A325.

Permeability

- The northern residential area demonstrates a good level of permeability with many culs-de-sac connected via cut troughs, although not all offer full access.
- Secondary School / Sports Hub (Western) is a potential barrier / access hindrance, with pedestrians diverted around the site.

Road Safety

- All journeys to or from the Northern Employment Area on foot route via Station Road or the A325 which both currently experience high traffic flows.

Personal Security

- Some footways and cut throughs through Pinewood are not fully overlooked, leading to a potential underuse.
- Pedestrians must use the A325 to reach most destinations. The A325 is dominated by backs of housing and garages and thus is not well overlooked. This may potentially result in a feeling of insecurity.

Legibility

- Wayfinding through Pinewood to reach Prince Phillip Barracks is difficult without a strong knowledge of the network of footway and roads.
- Maps on Hampshire Road make destinations in this residential area easy to find.

Crossing Points

- The minor roads within the area are lightly trafficked and therefore formal crossings are not required.
- Pinewood has three busy roads (Station Road, A325 and Budds Lane) which border the area and have poor pedestrian crossing provision.
- The only formal crossing point across the A325 from Pinewood is an underpass adjacent to Quebec Barracks.

Rest Points

- A bench is situated outside the Post Office on Camp Road enabling pedestrians to rest along their route to or from this area.

Quality of Environment

- The footways in the southern half of Pinewood pass through green spaces, providing a pleasant walking environment.
- Many of the routes must however follow the A325 to reach the key destinations. The A325 is not considered a pleasant environment due to traffic volumes.

Cycling

Directness

- No direct route through on an east to west axis i.e. Oakhanger Road to A325.

Permeability

- Secondary School / Sports Hub (Western) is a potential barrier / access hindrance, with pedestrians diverted around the site.
- Many of the cut throughs within the residential area are unsuitable for cyclists with physical measures to dissuade usage.

Road Safety

- All cycle journeys to or from the Northern Employment Area must use Station Road or the A325 which have high traffic flows.

Personal Security

- Some cut throughs through Pinewood are not fully overlooked, leading to a potential underuse.

Legibility

- Utilising the A325 to access destinations makes wayfinding relatively easy.
- Maps on Hampshire Road make destinations in this residential area easy to find.

Crossing Points

- The quiet nature of the residential roads means that crossing points are not required.
- The only formal crossing point across the A325 from Pinewood is an underpass adjacent to Quebec Barracks.

Junctions

- The major junctions within this area are considered within Section 4.10

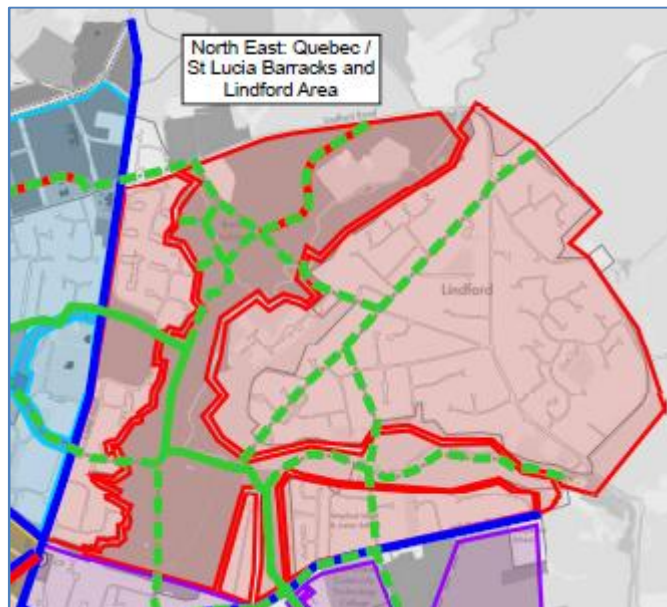
Quality of Environment

- The residential areas provide a suitable environment for cyclists of all levels.

4.7 NORTH EAST - QUEBEC / ST LUCIA BARRACKS AND LINDFORD AREA

4.7.1 This area covers the north eastern corner of the Whitehill & Bordon area, and includes the Quebec/St and Lindford. It is bounded by Lindford Road, the B3004, Chalet Hill / Mill Chase Road and A325. As a result, this area contains Jubilee Park, Alexandra Park and the Bordon Inclosure. Figure 4.5 shows the area covered. Jubilee Park and Alexandra Park form part of Deadwater Valley Local Nature Reserve and therefore are part of a protected area. The Green Loop is proposed to pass through the proposed employment and housing area in Quebec Barracks, Bordon Inclosure, Alexandra Park and Jubilee Park.

Figure 4.5 – North East Area



JUBILEE PARK (DEADWATER VALLEY LOCAL NATURE RESERVE) - PROPOSED GREEN LOOP AND GREEN GRID ROUTE AUDIT

4.7.2 This is a short section of route, between Mill Chase Road to the south and the northern end of Branson Road. The route is through Jubilee Park, and there is currently no path linking the southern entrances with Branson Road. The park itself consists of a single grassed area and a skate park at the northern end. The river which runs along the eastern boundary is separated by trees and other vegetation. Figure 4 shows important features and constraints which were identified during the route audit.

4.7.3 Access is from the south from two entrances, either through the main gate or via steps at the south east corner (which link Alexandra Park to the section of Deadwater Nature Local Nature Reserve to the south of Mill Chase Road). These steps appear to be a suitable design for use by those with mobility impairments.

4.7.4 Approaching Branson Road, a 1m gap in the existing metal fence allows access across the residential parking area. From the park this route slopes downhill, although not excessively. There is no dropped kerb at either end of the side of the parking area and the entrance to the Deadwater Nature Local Nature Reserve to the north is blocked by a two rung metal fence. The parking area is overlooked by

residential properties on one side and woodland on three sides. Despite being overlooked by residential properties this area feels quite secluded. There is also no street lighting in the residential area.

Table 4.3 Jubilee Park: Main Findings

Main Findings
Ecological Designation <ul style="list-style-type: none">Jubilee Park and Alexandra Park form part of Deadwater Valley Local Nature Reserve and therefore cycling is prohibited.
Surface Quality and Type <ul style="list-style-type: none">Route mainly passes through open parkland. Therefore the existing route path is over grass, but no formal path currently links the northern and southern parts of the park.
Width of Route <ul style="list-style-type: none">N/A.
Directness <ul style="list-style-type: none">An informal path can currently be followed from the southern edge of the park to the entrance to Deadwater Valley Local Nature Reserve.
Legibility <ul style="list-style-type: none">The legibility of the route was not clear, with no signage directing users between the Nature Reserve and Mill Chase Road. The route also passes across an existing stake-park.
Watercourses <ul style="list-style-type: none">The existing route does not cross any existing watercourses.
Gradient <ul style="list-style-type: none">This route is generally flat.
Rest Points <ul style="list-style-type: none">There are no rest points along this route
Lighting <ul style="list-style-type: none">There is no lighting provided along this route.
Quality of Environment <ul style="list-style-type: none">This route follows an open park and therefore the quality of environment is generally good. However, at the northern end of the route, the route passes through an existing skate-park and residential parking area. Despite being overlooked for the latter section, this route feels quite secluded and intimidating.

4.7.5 In regards to land ownership along this route, Jubilee Park is currently owned by East Hampshire District Council and leased to Whitehill Town Council and thus there should not be any constraints on future improvements which are proposed for this route. This is shown on Figure 3.

ALEXANDRA PARK (DEADWATER VALLEY LOCAL NATURE RESERVE) -
PROPOSED GREEN LOOP AND GREEN GRID ROUTE AUDIT

4.7.6 This route forms a continuation of Deadwater Valley Local Nature Reserve, and therefore local bylaws state that cycling on this section is prohibited. Alexandra Park covers the area between Branson Road and Saville Crescent to the south and existing MOD sub-station access road to the north (from Quebec Barracks). As a result of this, there are several access points into and out of this area, as shown on Figure 4.

4.7.7 From Jubilee Park, the existing route east to west consists of a woodland path, generally ranging between 1.5 and 2.5m wide. The path extends over an oil pipe and drops down to a watercourse along this section. The watercourse is bridged via tree stumps and wooden planks and the surface is quite wet underfoot surrounding this area. After this, the undulating route diverges several times and becomes difficult to follow, until reaching the crossroads with the north to south route through Alexandra Park.

4.7.8 From the eastern end of Saville Crescent, the path directly north of the residential properties has drainage problems and appears to be used for fly tipping. At this point the path is fairly illegible, until it reaches the north to south route through Alexandra Park. At this point, the path widens to between 2m and 3m and traverses the edge of the heathland until reaching the crossroad with the east to west path.

Table 4.4 Alexandra Park (Deadwater Valley Local Nature Reserve): Main Findings

Main Findings

Ecological Designation

- Jubilee Park and Alexandra Park form part of Deadwater Valley Local Nature Reserve and therefore cycling is prohibited.

Surface Quality and Type

- This is a woodland path along each part of the route, with an unbound, informal nature.

Width of Route

- Generally between 1.5-2m but narrows to approximately 1m and pinch points through woodland on east to west routes. On the north to south route through the Park the path is between 2-3m wide.

Directness

- The paths along each section generally provide a direct north to south and east to west route.

Legibility

- The path is generally legible on most sections, although the route from Jubilee Park becomes difficult to follow approaching the existing crossroads and the east access from Saville Crescent is poor. No signage is provided on any section of the existing routes.

Watercourses

- The east to west link from Jubilee Park bridged one watercourse with tree-stumps and wooden planks. This proved both slippery and difficult to cross after wet weather.

Gradient

- Other than around the watercourse described above, this route is flat.

Rest Points

- There are no rest points along this route

Lighting

- There is no lighting provided along this route.

Quality of Environment

- The quality of environment in Alexandra Park differs quite noticeably depending on which section of route is being used. The east to west link from Alexandra Park and latter half of the north to south link are generally of good quality. However, the east to west section directly north of Saville Crescent is poor quality, with noticeable fly-tipping and drainage problems and sections where the route becomes less discernible.

4.7.9 In regards to land ownership along this route, Alexandra Park is currently owned by Whitehill Town Council. This is shown on Figure 3. As a result, this should not prove to be a constraint on any future improvements which are proposed for this route.

BORDON INCLOSURE PROPOSED GREEN LOOP AND GREEN GRID ROUTE AUDIT

4.7.10 This route is a direct continuation of Alexandra Park from the south and provides access to Lindford Road, St Lucia Park and Quebec Barracks and Canes Lane to the north. Figure 4 shows important features and constraints which were identified during the route audit. Between the crossroads that mark the northern boundary of Alexandra Park and the barracks, this route consists of a 2.5-3m hard-standing route, which is currently used as an access route to the MOD sub-station. The surface is heavily worn in places but given the nature of the vehicle access, this route is clear and easy to follow. This means that the existing route provides an excellent route for walking and cycling.

4.7.11 North of the link with the barracks the route becomes less formal and less direct, passing indirectly through open woodland. Approximately 50m of wooden decking covers a watercourse along this section, which includes a passing place about halfway along. This decking is 1.5m wide. Upon reaching the east to west route between Lindford Road and Canes Lane the route again becomes more formal, with (worn) hardstanding, approximately 2.5m to 3m wide.

Table 4.5 Bordon Inclosure: Main Findings

Main Findings

Ecological Designation

- High invertebrate interest of District significance

Surface Quality and Type

- The hardstanding path is generally of good quality although the surface becomes worn in places. The route through the woodland consists of an unbound, informal path. Around the existing watercourse the surface becomes quite wet in places.

Width of Route

- 2.5-3m on the hardstanding routes and 1.5-2m on the woodland path.

Directness

- The north to south section between Alexandra Park and the barracks provides an excellent north to south route. North of this, the route somewhat meanders through the open woodland until reaching the east to west link between Lindford Road and Canes Lane, which is also direct.

Legibility

- The path is clearly legible for the vast majority of the route. The only issues were at the point where the path diverged when meeting the Lindford to Canes Lane path. No signage is currently provided on any routes.

Watercourses

- Approximately 50m of wooden decking covers a watercourse along the section of route north of the barracks. In addition, there is a 1.5m wide concrete bridge over the River Wey which is in good condition.

Gradient

- There is an uphill gradient when travelling south to north between Alexandra Park and the barracks, but this should not cause any difficulties for users. This route then descends to the existing watercourse on the section of route north of the barracks and remains relatively flat up to Lindford Road

Rest Points

- There are no rest points along this route

Lighting

- There is no lighting provided along this route.

Quality of Environment

- The quality of environment in Bordon Inclosure is generally good, passing through woodland on clear and legible paths for the majority of the route. However, due to its woodland nature, this is very secluded.

4.7.12 In regards to land ownership along this route, Bordon Inclosure is currently owned by the MOD but ownership will transfer to a development vehicle including EHDC and HCC as part of the Eco-town development. The links in the existing barracks are currently owned by Annington Properties Ltd, but forms part of the 2012 Masterplan for the Eco-town. This is shown on Figure 3. As a result, this should not prove to be a

constraint on any future improvements which are proposed for this route, so long as they are programmed to occur after the transfer of land ownership.

LINDFORD PROPOSED GREEN LOOP AND GREEN GRID OFF-ROAD ROUTE AUDIT

4.7.13 The route located to the north of the river Wey has been developed as part of the recently completed housing development on Sycamore Road, Rowan Road and Hawthorn Way in Lindford, and is currently managed through a private company. Given its recent completion, this route meets standard Manual for Streets guidance through the provision of a hardstanding shared-use path with benches approximately every 100m. At present this path follows a general route approximately 50-100m away from the edge of the new residential properties, providing a leisure route for local residents. This is shown on Figure 4.

4.7.14 At the eastern end of this route the path, although informally, links the north to south footpath that links Washford Lane either side of the river. This route provides an excellent link for school children to access Mill Chase School / College and Whitehill & Bordon Town Centre. The proposed east to west Green Grid between Washford Lane and the B3004 could not be audited due to dense woodland.

4.7.15 The proposed Green Link between the existing path and the north to south route through Bordon Inclosure could not be reviewed due to the inability to cross the river at this location.

Table 4.6 Lindford Green Loop and Green Grid: Main Findings

Main Findings
Ecological Designation
<ul style="list-style-type: none">• None
Surface Quality and Type
<ul style="list-style-type: none">• The hardstanding path is of excellent quality.
Width of Route
<ul style="list-style-type: none">• 1.5 - 2.0m.
Directness
<ul style="list-style-type: none">• The existing path is a leisure route around the edge of the new housing development and therefore provides a meandering route across existing open space. Given that the majority of this route would not be used to access key destinations this is not seen as a negative.
Legibility
<ul style="list-style-type: none">• Excellent. The route of the path is clear and easy to follow. There isn't however any signage.
Watercourses
<ul style="list-style-type: none">• The existing route crosses the River Wey at Washford Lane via a wooden bridge, which is approximately 2m wide and in good condition.

Gradient

- This path is flat, except where the informal link is provided down to the Washford Lane link. At this location users with mobility impairments may struggle to use this path.

Rest Points

- There were benches provided approximately every 100m where the path followed the open space to the south and west of Sycamore Way, Rowan Way and Hawthorn Way.

Lighting

- There is no lighting provided along this route.

Quality of Environment

- The quality of environment along this route is excellent and is overlooked by residential properties along much of its length.

4.7.16 In regards to land ownership along this route, the land northwest of the River Wey is currently owned by Bellway Homes and managed by Meadfleet, an environmental management company. This is shown on Figure 3. Therefore, any proposals which involve the linking the Green Grid / Loop with land north of the River Wey will need to be discussed with Bellway Homes and Meadfleet at the earliest opportunity.

QUEBEC / ST LUCIA BARRACKS AND LINDFORD - EXISTING INFRASTRUCTURE AUDIT -

4.7.17 This is predominately existing residential units and includes the village of Lindford. Lindford and Quebec/St Lucia Barracks are bounded by the A325 to the west, Lindford Road to the north and Mill Chase Road to the south. A section of the Green Grid runs through this area, and the issues within this area are considered separately within the section on Alexandra Park / Bordon Inclosure.

4.7.18 The key origins and destinations within this area are the re-developed Quebec Barracks (employment and housing area), Mill Chase Community Technology College and Hollywater Road. Table 4.7 below provides a summary of the key observations.

Table 4.7 Lindford and Quebec/St Lucia Barracks Existing Infrastructure: Main Findings

Walking

Directness

- There are limited linkages between Lindford and Whitehill & Bordon.
- The lack of through routes for cyclists results in journeys from Lindford and Quebec/St Lucia Barracks to Prince Phillip Barracks being taken via the Lindford Road & A325.

Permeability

- The River Wey, Bordon Inclosure and Alexandra Park restrict permeability between Quebec Barracks, St Lucia Park and Lindford.

-
- The A325 causes severance from Lindford and Quebec/St Lucia Barracks due to the lack of crossing points.

Road Safety

- There is no footway on the eastern side of the A325 north of Quebec Barracks.
- In Lindford the network mainly consists of quiet residential roads.
- Access routes to school site from the south are limited.

Personal Security

- There is no footway on the eastern side of the A325 north of Quebec Barracks. Therefore those travelling to or from St Lucia Park must use internal roads to reach Quebec Barracks. These internal roads are not well overlooked.
- Pedestrians must use the A325 to reach all destinations. The A325 is dominated by backs of housing and garages and hence is not well overlooked resulting in a feeling of insecurity and intimidation.
- All routes are well lit and overlooked within the area with the exception of the route from St Lucia Park to Lindford which runs through a rural, wooded area.

Legibility

- Quebec Barracks and St Lucia Park have a good network of roads which run roughly parallel or perpendicular to one other.

Crossing Points

- The minor roads within the area are sufficiently quiet that formal crossings are not required.
- The A325 runs along the western edge of the Area which has a poor crossing provision between Station Road and Budds Lane.

Rest Points

- There were no benches or rest points observed within Lindford and hence nowhere for pedestrians to rest along their route.

Quality of Environment

- The streetscape within Quebec Barracks and St Lucia Park is poor and is considered an unpleasant environment for pedestrians.
- To streetscape in Lindford is good, with the route passing through a recently completed housing development and other residential areas.
- To reach most destinations, pedestrians must use the A325 which does not provide a pleasant environment due to the volumes of traffic.

Cycling

Directness

- There are no links towards Lindford from Quebec Barracks and St Lucia Park increasing cycle distances to adjacent areas.

-
- The lack of routes for cyclists through Pinewood results in journeys from Lindford and Quebec/St Lucia Barracks to Prince Phillip Barracks being taken via the A325.

Permeability

- Within Quebec Barracks and St Lucia Park, there are numerous interconnecting residential roads suitable for cycling
- The lack of connections eastwards from Quebec Barracks and St Lucia Park restricts potential connections.
- The River Wey, Bordon Inclosure and Alexandra Park divide Whitehill & Bordon from Lindford with only two links for cyclists connecting them.
- A third link which connects, Washford Lane, Lindford and Washford Lane, Whitehill & Bordon is linked by a footpath.
- Mill Chase Road is a one way road which accommodates a ford. Whilst there is a footbridge, it is not of sufficient width for shared pedestrian / cycle use. Therefore cyclists must dismount and push their bike for 230m.
- Within Lindford many of the culs-de-sac (e.g. Washford Close) are linked by footpaths but these are not suitable for cyclists due to width and/or geometry.

Road Safety

- The residential roads provide a safe environment for cyclists.
- The A325, which connects the area to other destinations, is detailed in Table 4.14 below.

Personal Security

- All routes are well lit and overlooked within the area with the exception of the route from St Lucia Park to Lindford which runs through a rural wooded area.

Legibility

- All routes are easy to follow using the main roads within Whitehill & Bordon, albeit wayfinding markers are not in place.

Crossing Points

- The roads within the area are sufficiently quiet that crossing points are not necessary.
- The area is bounded on the western side by the A325 which has a poor crossing provision between Station Road and Budds Lane.

Junctions

- The junctions out of both Quebec Barracks and St Lucia Park are priority controlled and therefore have no facilities for cyclists.

Rest Points

- There is a bench outside the Post Office on Camp Road enabling cyclists to rest along their route.

Quality of Environment

- The streetscape within Quebec Barracks and St Lucia Park is poor, although it offers low

traffic volumes making it suitable for cycling.

- To reach most destinations, cyclists must use the A325 which does not provide a pleasant environment due to the volumes of traffic.
- To streetscape in Lindford is good, with the route passing through a recently completed housing development and other residential areas.

4.8 SOUTH WEST - HOGMOOR AREA

4.8.1 This area covers the south western area of Whitehill & Bordon covering Hogmoor Inclosure, Prince Phillips Barracks and Woolmer Industrial Estate. It is bounded by Budds Lane and Oakhanger Road, the A325, Firgrove Road and Hogmoor Road. Figure 4.6 shows the area analysed. The Hogmoor Inclosure is currently designated as a SINCR, it is home to a number of key reptile sites and invertebrate interest of regional significance.

Figure 4.6 – South West Area



HOGMOOR INCLOSURE PROPOSED GREEN LOOP / GRID ROUTE AUDIT

4.8.2 Hogmoor Inclosure is currently used by the MOD on a regular basis. Figure 2 shows important features and constraints which were identified during the route audit. The route is located to the west of the A325, and links Firgrove Road to the south with Oakhanger Road to the north. There are also a series of east to west links across the existing Inclosure, linking Hogmoor Road with Sutton Field and Woolmer Industrial Estate.

4.8.3 The main north to south route approximately follows the alignment of the old railway line which, from the Firgrove Road access, is separated from a parallel hardstanding path by a 3-5m cutting. The southern section of the railway cutting, from Firgrove Road to Sutton Field is inaccessible due to the steepness of the slope down to it. There is stagnant water at this point, along with a large amount of litter.

4.8.4 Upon reaching the access to and from Sutton Field, there are steep steps leading down from the path and Sutton Field into the railway cutting. The stairs are concrete and has a metal handrail on one side but are in poor condition. At the time of the route audit, there was a large amount of litter and broken glass at the bottom of this access link. However, from this point northwards, the old railway line was usable (despite not having a formal path) although there were low level plants growing along its length, whilst the trees and steep banks made this section quite secluded. The width between embankments was 5-6m.

4.8.5 Further north there is a link to the path from the northern part of Sutton Field and A325. This path is approximately 1-1.5m wide and runs along the boundary of residential properties on Sutton Field. There appear to be problems with fly-tipping along this path, especially in close proximity to the access point.

4.8.6 From this point northwards, the path widens to between 9 and 10 metres. The path is a mix of sand and gravel in this section and is at present used by the MOD for tank training exercises. This results in the surface becoming quite uneven in places, which in wet conditions makes use by cyclists difficult. The east to west path linking Woolmer Way is approximately 2.5m wide and has an uneven, muddy surface containing a number of potholes. The access gate onto Woolmer Way itself has a large earth mound across its entrance to prevent access by motorised vehicles.

4.8.7 Where the path meets the southern edge of the Barracks, it curves off in a westerly direction towards Hogmoor Road. The route straight ahead, following the previous alignment of the old railway line, runs through wooded area but there is a clearing of 2.5 to 3 metres allowing for a path. The section of route through the Barracks is presently inaccessible and thus users must divert around the perimeter fence. There is no formal path but there is evidence of people having used this route.

4.8.8 The route from the Barracks towards Oakhanger Road follows the alignment of the old railway line through dense woodland. There is no formal path on this section but there is a clearing of approximately 5 metres, blocked by the occasional fallen tree.

4.8.9 At present there are numerous paths which lead from the north to south route in a westerly direction towards Hogmoor Road. These paths generally become hilly in nature and heavily rutted due to MOD use. After wet weather large parts of these routes were impassable due to problems with drainage.

4.8.10 There is no formal route at present from the main path through Hogmoor Inclosure to the junction of Budds Lane and A325 and location of the new town-centre.

4.8.11 The area is lightly wooded with a stream running through it which may require bridging. The north-eastern end of this route runs through MOD land and thus is inaccessible.

Table 4.8 Hogmoor Inclosure Green Loop & Green Grid: Main Findings

Main Findings
<p>Ecological Designation</p> <ul style="list-style-type: none">Hogmoor Inclosure is currently designated as a SINC, which is home to a number of key reptile sites and invertebrate interest of regional significance.
<p>Surface Quality and Type</p> <ul style="list-style-type: none">The main route consisted of a gravel / sandy surface. This surface is good in dry conditions but makes cycling difficult after wet weather
<p>Width of Route</p> <ul style="list-style-type: none">The width of the route differed along its length, ranging from 5-6m in the old railway cutting on the southern end of the site, 9-10m between the Woolmer Way link and barracks and then 5-6m north of the existing barracks (following the old railway).
<p>Directness</p> <ul style="list-style-type: none">The north to south link is extremely direct as are the routes to the east of this main path linking Woolmer Way and Sutton Field. However, paths to the west of this linking with Hogmoor Road are very indirect and difficult to follow.
<p>Legibility</p> <ul style="list-style-type: none">The north to south link is very easy to follow as are the routes to the east of this main path linking Woolmer Way and Sutton Field. However, paths to the west of this linking with Hogmoor Road are very indirect and difficult to follow.
<p>Watercourses</p> <ul style="list-style-type: none">The existing route does not cross any watercourses but the main north to south route does pass an existing lake.
<p>Gradient</p> <ul style="list-style-type: none">Aside from accessing the existing railway cutting on the southern end of the site, the north to south route is flat. This is also true to the east of this route. However, to the west, the landscape rises westwards towards Hogmoor Road.
<p>Rest Points</p> <ul style="list-style-type: none">There are currently no rest points along any of the route audited
<p>Lighting</p> <ul style="list-style-type: none">There is no lighting provided along this route.
<p>Quality of Environment</p> <ul style="list-style-type: none">The quality of environment along the majority of the route is generally good although most sections are very secluded. Areas of concern are the links to Woolmer Way and Sutton Field, especially in regards to the amount of litter / fly-tipping which was observed at the latter location.

4.8.12 In regards to land ownership along this route, Hogmoor Inclosure is currently owned by the MOD but ownership will transfer to a development vehicle including EHDC and HCC as part of the Eco-town development. This is shown on Figure 3. As a result, this should not prove to be a constraint on any future improvements which are proposed for this route, so long as they are programmed to occur after the transfer of land ownership.

HOGMOOR AREA - EXISTING INFRASTRUCTURE AUDIT

4.8.13 In tandem with Pinewood, Prince Phillip Barracks will be subject to a significant level of development. The Area will include the Eco-town Town Centre, Residential Areas and Employment & Leisure uses at Viking Park. The area is bounded to the south west by Hogmoor Inclosure, to the north by Budds Lane and to the east by the A325. Table 4.7 below provides a summary of the key observations.

Table 4.9 Hogmoor Area Existing Infrastructure: Main Findings

Walking
<p>Directness</p> <ul style="list-style-type: none"> • There are good links to the majority of destinations.
<p>Permeability</p> <ul style="list-style-type: none"> • The network of streets within the Hogmoor Area enables easy movement. • The low number of crossing points on the A325 restricts movement to reach other areas.
<p>Road Safety</p> <ul style="list-style-type: none"> • Roads are residential in nature and thus provide a safe environment for pedestrians.
<p>Personal Security</p> <ul style="list-style-type: none"> • Routes through this area are well overlooked giving a sense of security. • Routes to numerous destinations are through residential areas with only a small number requiring pedestrians to route along A325.
<p>Legibility</p> <ul style="list-style-type: none"> • Due to the irregular layout of streets, local navigation requires a good knowledge of the road and footway layout to take the shortest route to a destination.
<p>Crossing Points</p> <ul style="list-style-type: none"> • The area is predominately residential, with low traffic volumes and hence formal crossings are not necessary. • The A325 runs along the eastern edge and accommodates controlled and uncontrolled crossing points. However only the crossings at the junction of Chalet Hill / High Street and adjacent to Lemon Grove are signal controlled.
<p>Rest Points</p> <ul style="list-style-type: none"> • There were no benches observed along the routes to/from the key destinations within this area.

Quality of Environment

- The residential area provides a pleasant environment for pedestrians.

Cycling

Directness

- The area has a good network of interconnecting roads which enable direct routes to be taken through it.

Permeability

- The area can easily be traversed and there are no barriers to cyclists.
- Access from Woolmer Way is difficult with a large earth mound at the access point. This is likely to be a measure to prevent motorcyclists using Hogmoor Inclosure.

Road Safety

- The residential nature of the streets means that cyclists can safely ride on the carriageway.
- Woolmer Trading Estate is used by LGVs and HGVs which makes it unsuitable for inexperienced cyclists as there is no off street provision.

Personal Security

- All routes are well lit and overlooked within the area.

Legibility

- To route through this area requires a good knowledge of the road layout due to the irregular layout of streets within this area.

Crossing Points

- The roads within the area are sufficiently quiet that crossing points are not necessary.
- The A325 and Budds Lane have no crossing provision for mounted cyclists.

Junctions

- There is no provision for cyclists at the junctions with the A325 and Budds Lane.

Rest Points

- There are no rest points for cyclists.

Quality of Environment

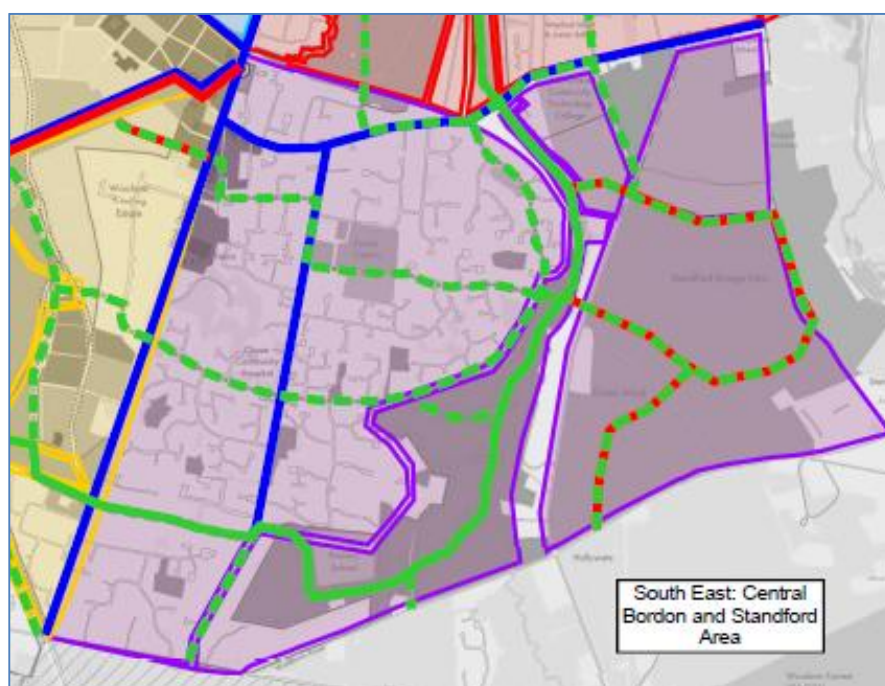
- The residential areas provide a good environment for cyclists and are suitable for inexperienced cyclists.

4.9 SOUTH EAST AREA – CENTRAL BORDON AND STANDFORD GRANGE FARM

4.9.1 This area covers the south eastern area of Whitehill & Bordon covering the town centre, main residential area, Deadwater Valley Local Nature Reserve and Stanford. It is bounded by Chalet Hill / Mill Chase Road, B3004, Liphook Road and A325. The area is shown in Figure 4.7.

4.9.2 Due to constraints posed by the farm being operational it has not been possible to complete an audit on the proposed Green Grid route through Stanford Grange Farm.

Figure 4.7 – South East Area



DEADWATER VALLEY LOCAL NATURE RESERVE (FROM FOREST ROAD TO MILL CHASE ROAD) - PROPOSED GREEN LOOP & GREEN GRID ROUTE AUDIT

4.9.3 This route links Forest Road to Mill Chase Road through woodland located between Chalet Hill to the west and Hollywater Road to the east. It is 2.3km in length and, local bylaws restrict cycling in the nature reserve. The existing path currently meanders through open woodland for the majority of its length, following the riverbank for the northern part of the route. The path itself is not clearly marked other than at the two access points and simply follows a well-trodden woodland path formed by previous use. Figure 5 shows important features and constraints which were identified during the route audit.

4.9.4 The lack of signage along the route makes navigation difficult, especially at various points where the path diverges.

4.9.5 The width of the path varied between 1m at pinch points between trees to over 3m in more open parts of woodland. However, it generally consisted of a 1.5m to 2.5m clearing between vegetation. The southern part of the route between Forest Road and

Woodlea Primary School presents some difficulties for users, with steep drops at the edge of a narrow 1m path.

4.9.6 There are eight bridges on the route, ranging from beam bridges (planks of wood) over small watercourses to a full concrete structure over the river. Where these bridges constituted proper structures they were approximately 1.5m wide but the beam bridges were generally 1m at most. The route was also wet underfoot at various locations. Wood chippings have been used in some of these wet sections to help improve the surface.

4.9.7 Access points along the route differed in nature. The route from Alpine Road uses timber steps, which provided good access into the Local Nature Reserve. However, from Conde Way (close to the junction with Apollo Drive) access to the route is via a stile with quite a steep slope on the side of the nature reserve. There are also no crossing points on Conde Way close to this access. From Britannia Walk, there is a steep slope down to the riverside where the path was raised steeply over a pipe outlet.

Table 4.10 Deadwater Valley Local Nature Reserve Green Loop and Green Grid: Main Findings

Main Findings

Surface Quality and Type

- Unbound and informal forest path which becomes muddy in wet conditions.

Width of Route

- The path was generally 2-2.5m wide but narrowed to 1m in places, especially along the southern part of route between Forest Road and Woodlea School.

Directness

- The existing path was not particularly direct and followed the path of the river along its northern section. This would not provide a particularly attractive route for those wishing to travel between access points except for leisure purposes.

Legibility

- The legibility of the route was quite unclear in places, especially at points where the path diverged and between Forest Road and Woodlea School.

Watercourses

- There were numerous watercourses along this route, all of which are bridged. However, these bridges ranged from full structures to beam bridges. Where watercourses were bridged by simple beam bridges there tended to be slight drainage issues at either side of the bridge.

Gradient

- Deadwater Valley is generally flat, except between Forest Road and Woodlea School. On this section, there are steep falls along the path edge and a noticeable downhill section heading from west to east.

Rest Points

- There are no rest points along this route

Lighting

- Given that this is a nature reserve, there is no lighting provided along this route.

Quality of Environment

- This route follows a woodland path for the entirety of its length. It is therefore secluded along much of its length, although there are residential properties backing onto the path along the northern quarter.

4.9.8 In regards to land ownership along this route, HCC own land making up the southern half of this route and Whitehill Town Council own land making up the northern half of this route. This is shown on Figure 3. As a result, this should not prove to be a constraint on any future improvements which are proposed for this route.

CENTRAL BORDON AREA - EXISTING INFRASTRUCTURE AUDIT

4.9.9 As shown on Figure 1 and 4.5, this area encompasses the Forest Centre, Tesco and Mill Chase Technology College, as well as a significant residential area. Conde Way / Hollybrook Park/Chase Hill, all of which are considered below, loop through the Area.

4.9.10 Mill Chase Road and Forest Road Area provide the main link to railway stations (Liss, Liphook, Haslemere), namely via Hollywater Road in the first instance. The Green Loop is proposed to use New Road whilst Green Grid links are proposed on Conde Way, Apollo Drive, Pinehill Road, parts of Forest Road and Devon Road

4.9.11 Table 4.11 below provides a summary of the key observations recorded in the audit of this area.

Table 4.11 Central Bordon Existing Infrastructure: Main Findings

Walking

Directness

- The roads and culs-de-sac in the eastern side of the area are interconnected by cut throughs enabling direct routes to be taken through the area. The use of Apollo Drive, Pinehill Road, Devon Road Forest Road and Conde Way also provide a good network of routes around the area.

Permeability

- The residential areas have well connected streets with several cut throughs and paths linking them allowing easy permeation of the area.
- The north to south route that runs adjacent to Forest Centre car park forms an important link; however there is no pedestrian path through it.

Road Safety

- The residential roads provide a safe environment for pedestrians.
- Chalet Hill and Conde Way, which loops through the area, have no formal crossing points making it difficult for vulnerable users to safely use the road in the area.

-
- Hollywater Road is underused by pedestrians due to perceived safety issues, the lack of a footway along it and the national and 40mph speed limits in place along its northern and southern sections respectively.

Personal Security

- The A325 must be used by pedestrians travelling to northern destinations. The northern half of the A325 does not feel like a secure environment as it is not well overlooked.
- Pedestrian routes to southern destinations are through residential areas and thus feel secure as they are overlooked.

Legibility

- Whilst the roads through this area are well connected, wayfinding through it requires a good knowledge of the footway, short cuts and road layout.

Crossing Points

- Most of the area is residential with low traffic flows through it and thus formal crossing points are not necessary.
- There are no controlled crossing points on Forest Road or on Conde Way which splits Forest Road. This route is used by a high proportion of vulnerable pedestrians.

Rest Points

- There are no rest points along the routes to/from the key destinations within this area.
- The Forest Centre provides a potential rest stop, however requires a deviation from many routes.

Quality of Environment

- The residential areas within Mill Chase Road and Forest Road Area are of a reasonable quality with low levels of traffic.

Cycling

Directness

- There are several direct routes through the area including some off street provision. The use of Apollo Drive, Pinehill Road, Devon Road Forest Road and Conde Way also provide a good network of routes around the area.

Permeability

- The area consists of numerous cul-de-sac several of which are interconnected by cut throughs. Several of these are unsuitable for cyclist with cycle barriers restricting use.
- There is no link to the green area and route east of Hollybrook Park which forms part of the Deadwater Valley.

Road Safety

- The residential nature of the streets means that cyclists can safely ride on the carriageway.
- Conde Way / Chalet Hill pass through the area and the A325 bounds the area on the western

side. Cyclists must use these roads to reach key destinations.

- Build outs on Forest Road area create an obstruction for cyclists.
- The A325 currently experiences high traffic flows.
- Hollywater Road is underused by cyclists due to perceived safety issues.

Personal Security

- All routes are well lit and overlooked within the area.

Legibility

- The off-street routes through the area are not signed. Therefore knowledge of the road network is required to wayfind effectively.
- There are numerous cut throughs, but these are not signed making them difficult to negotiate.

Crossing Points

- There are no controlled crossing points on Forest Road or on Conde Way which splits Forest Road. This route is used by a high proportion of vulnerable pedestrians.
- Conde Way / Chalet Hill passes through the area and the crossing points along this route affect the Mill Chase Road and Forest Road Area.

Junctions

- The key junctions within this area are discussed within the Conde Way / Chalet Hill junctions section.

Rest Points

- The Forest Centre offers a place for cyclists to rest and includes cycle racks to lock cycles, albeit that the existing provision of cycle parking at community centre is poor – e.g. butterfly brackets.

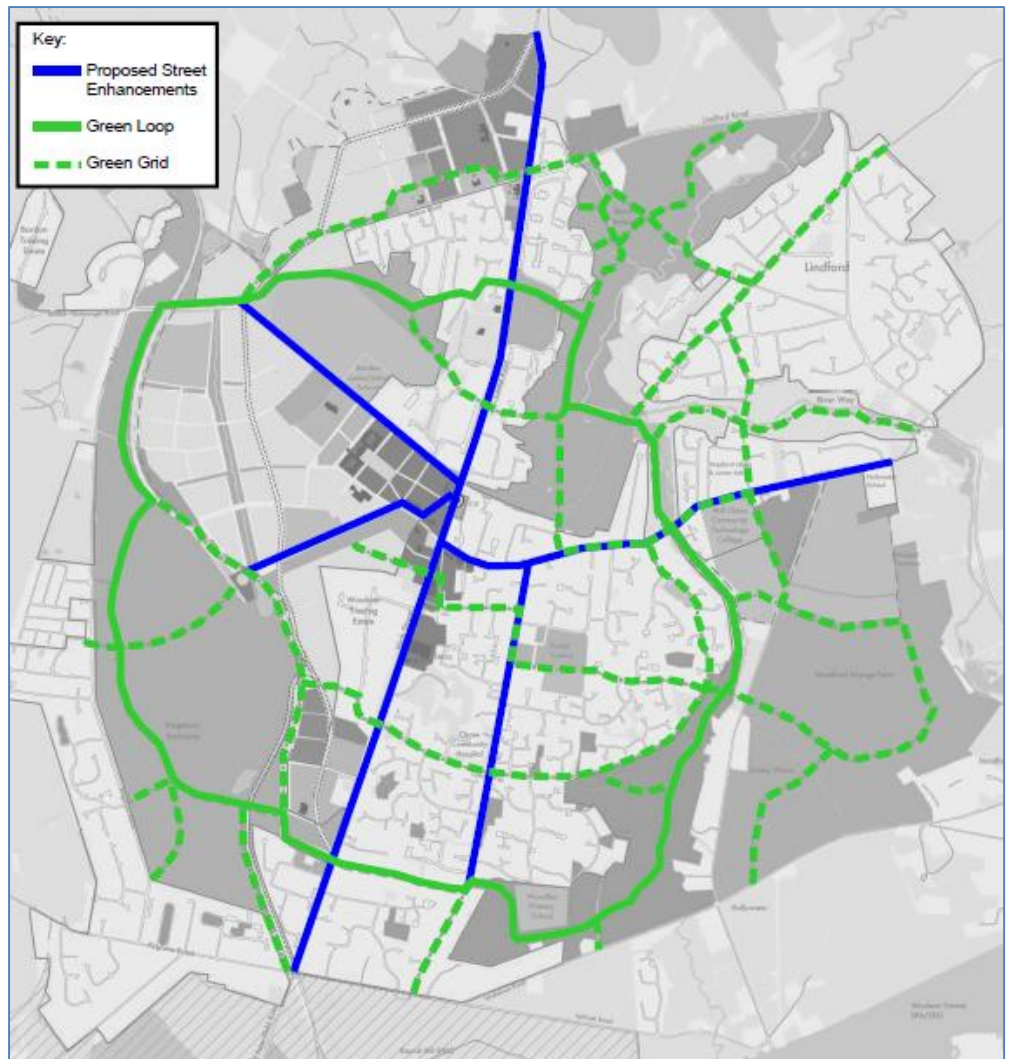
Quality of Environment

- Mill Chase Road and Forest Road Area are residential in nature and thus a suitable environment for cyclists of all abilities.

4.10 AUDIT OF EXISTING HIGHWAY IDENTIFIED FOR PROPOSED STREET ENHANCEMENTS

4.10.1 This section provides a summary of the audit and gap analysis that has been undertaken on existing highway identified for proposed street enhancement. These routes will provide routes from the centre of the Masterplan to the north, south, east and west of the development and onto the Green Loop and Green Grid. These routes are shown in Figure 4.8 below.

Figure 4.8 – Existing Highway Identified for Proposed Street Enhancements



4.10.2 The existing highway links proposed for street enhancements (shown in blue in Figure 4.8) will provide suitable pedestrian and cycle routes between various sections intersections of the Green Grid and Green Loop.

A325

4.10.3 The A325 runs north to south through Whitehill & Bordon, providing access to Farnham and Aldershot to the north and the A3 to the south. The A325 is a key link in Whitehill & Bordon which currently bisects the eastern and western parcels of the town.

For this reason, a significant number of walking and cycling journeys includes the link. The A325 is subject to a 30mph speed limit throughout Whitehill & Bordon.

4.10.4 The Eco-town proposals propose that the A325 will become a key Public Transport link, as well as facilitating safe and convenient pedestrian and cycle access to all amenities within the town. It is proposed to introduce a relief road to the west of the A325 to carry the majority of vehicular through traffic. Table 4.12 below provides a summary of the key observations for the current configuration of the A325.

Table 4.12 A325: Main Findings

Walking
Directness <ul style="list-style-type: none">The A325 provides a direct route from northern Bordon to Whitehill.
Permeability <ul style="list-style-type: none">Pedestrians must cross several side roads when walking along the A325.Footway width is restricted along some sections of the A325, resulting in opposing pedestrians needing to adopt single file.Key junctions along the A325 (E.g. Fire Station and Tesco) do not promote priority for pedestrians.
Road Safety <ul style="list-style-type: none">There are several roads that must be crossed along the A325. In addition there are several accesses providing potential conflict points between vehicles and pedestrians.Due to the busy nature of the road traffic speeds can feel higher than 30mph which in turn can make this route unappealing to pedestrians.
Personal Security <ul style="list-style-type: none">The A325 is not well overlooked by adjacent buildings in several places and as such may be intimidating for pedestrians.Street lighting is present along the length of the A325.The section of the A325 from Budds Lane to Station Road is traffic orientated and dominated by backs of houses.The section of the A325 from Budds Lane and Kildare Road is traffic orientated and is dominated by garages backing onto it and high fences.
Legibility <ul style="list-style-type: none">There are several roads to cross on the A325 but it is relatively simple to follow.

Crossing Points

- The northern half of the A325, from Chalet Hill north, only has one crossing point. The crossing point is a subway located adjacent to Quebec Barracks leading to a Post Office and Londis and it offers poor lighting and security.
- Crossing points do not line up with desire lines leading pedestrians to either cross away from the crossing or deviate from their route.

Rest Points

- There is a bench outside the Post Office, providing pedestrians a place to rest.

Quality of Environment

- The A325 has high traffic flows along it making it noisy and intimidating for some users.
- Numerous dwellings back onto it making it visually uninteresting.
- Parts are tree lined which reduces the urban feel in places.
- Gradient change along length of the A325 makes the route less desirable for less mobile pedestrians.
- Bus stops infringe upon the footways, restricting useable width for pedestrians, particularly those with pushchairs / wheelchairs.
- Cars parked on footways adjacent to parades of shops, restricting pedestrian access.
- Vegetation adjacent to shared footway / cycleway restricts movement and requires frequent maintenance.

Cycling

Directness

- There is a designated cycle route from the A325 / Liphook Road / Firgrove Road junction which provides a direct link from there to Chalet Hill.
- After this point cyclists must either cycle on the carriageway or divert through residential areas.

Permeability

- The cycle route is interrupted at several points by side roads.
- Some parts are shared use and hence pedestrians can restrict flow along it.

Road Safety

- There are some points of conflict between cyclists and vehicles. In particular adjacent to the petrol station where the access crosses the cycle route.
- There is only a cycle route along part of the A325. Cyclists must ride along the carriageway north of Chalet Hill. The speeds and size of the vehicles using this road and restricted carriageway width may make it feel unsafe for cyclists.
- Restricted carriageway width means that HGVs and other large vehicles cannot pass cyclists when vehicles are approaching in the other direction.

Personal Security

- The A325 is not well overlooked in several places but there is street lighting along its length so cyclists are visible to road users.

Legibility

- There are several roads to cross on the A325 but it is relatively simple to follow.

Crossing Points

- The A325 lacks in crossing points which are in line with desire lines.
- Where the cycle path intersects Woolmer Way there is poor crossing provision.
- Only one crossing point is suitable for cyclists – the subway adjacent to Quebec Barracks. The subway offers poor lighting and security, making it potentially an undesirable route.

Junctions

- There is poor provision for cyclists at the junction with Woolmer Way / Conde Way with poor visibility at the crossing.
- A325 / Chalet Hill junction is intimidating for cyclists due to lane arrangement.
- The junction with Station Road is signalised but there is no provision for cyclists wishing to turn right. Cyclists must move lanes at this junction to execute a right-turn.

Rest Points

- There is a bench outside the Post Office, providing cyclists a place to rest.

Quality of Environment

- The section of the A325 north of Chalet Hill could feel intimidating for cyclists as this is an on road route.

CHALET HILL & MILL CHASE ROAD

4.10.5 As shown on Figure 4.8 Chalet Hill and Mill Chase Road provide a link between the A325, Mill Chase Technology Community College and Hollywater School. The link is subject to a 30mph speed limit throughout. Mill Chase Road is the proposed location for community /education and sports facilities as part of the Eco-town proposals. Table 4.13 below provides a summary of the key observations.

Table 4.13 Conde Way / Hollybrook Park / Chalet Hill: Main Findings

Walking

Directness

- Mill Chase Road and Chalet Hill provide a direct link between the A325, Mill Chase Technology Community College and Hollywater School.

Permeability

- There are several side streets leading onto this road. In addition several properties have driveways which are accessed across the footway.
- Footway provision is generally of a good standard on both sides of the carriageway and at

least 2m wide.

- Off-road pedestrian links percolate through the area but are unsigned.

Road Safety

- There is a kerb-build out in close proximity to Mill Chase Technology Community College but no other formal crossings between this location and the junction with the A325
- Vehicle speeds feel as they are in excess of 30mph speed limit.
- Visibility for crossing is restricted at the key junction of Chalet Hill / A325.

Personal Security

- Chalet Hill and Mill Chase Road have residential frontages for most of the route and are therefore overlooked and lit.

Legibility

- The road is easy to follow between the A325 and education facilities.

Crossing Points

- There is a lack of crossing points, in particular in line with pedestrian desire lines and Green Grid accesses.

Rest Points

- There were no rest points observed along the road.

Quality of Environment

- This link is through a residential area providing an agreeable walking environment.
- The section of Chalet Hill adjacent to parade of shops is steep in gradient and surfacing is poor.
- Vehicles parked on footways on Chalet Hill.

Cycling

Directness

- Mill Chase Road and Chalet Hill provide a direct link between the A325, Mill Chase Technology Community College and Hollywater School.

Permeability

- Both roads maintain priority along their entire length and thus are easy to cycle along.

Road Safety

- Vehicle speeds felt to be in excess of 30mph speed limit, causing possible cyclist intimidation.

Personal Security

- Chalet Hill and Mill Chase Road have residential frontages for most of the route and are therefore overlooked and lit.

Legibility

- As the link maintains priority along its entire length, it is simple to navigate along.

Crossing Points

- There is a lack of crossing points, in particular in line with desire lines and Green Grid accesses.

Junctions

- Where the link meets A325 at Chalet Hill, there is a steep gradient. This junction is signalised and moving off when the lights turn green is potentially challenging for cyclists. The junctions with Forest Road and Hollbrook Park are also busy junctions

Rest Points

- There are no rest points for cyclists.

Quality of Environment

- This link is through a residential area providing an agreeable walking environment.

The section of Chalet Hill adjacent to the parade of shops is steep in gradient and surfacing is poor.

BUDDS LANE

4.10.6 As shown on Figure 4.8, Budds Lane forms a junction with the A325, extending north westerly to join Station Road and Oakhanger Lane. The Eco-town proposals cite Budds Lane as a key link through the new town centre and to the residential areas and Secondary School. / Sports Hub. Budds Lane is subject to a 30mph speed limit along its length. Table 4.14 below provides a summary of the key observations.

Table 4.14 Budds Lane: Main Findings

Walking

Directness

- Budds Lane provides a direct link from the A325 to the B3002 and Green Loop.

Permeability

- There are a very few side roads off this link.
- The condition of the footway along Budds Lane is poor with an uneven surface in places and excessive vegetation.
- The footways are narrow and not sufficient for two pushchairs or wheelchairs to pass.
- There is a section of footway missing at the northern end from the entrance to School of Electrical and Mechanical Engineers Bordon Teacher Training Agency until the junction with Station Road.

Road Safety

- Vehicle speeds are thought to be excessive due to the road being long and straight possibly

causing pedestrian intimidation.

Personal Security

- This link is not well overlooked as there are no residential properties at present.
- The presence of Prince Phillip Barracks provides some sense of security.

Legibility

- The straight nature of this road makes it easy to follow.

Crossing Points

- There are no crossing points at present along this link. However the only attractor along it is the Garrison swimming pool.

Rest Points

- There are no rest points for pedestrians using this link.

Quality of Environment

- There are trees and fields along either side of the link. There are also army barracks at present which have fencing topped with barbed wire. This makes the environment feel slightly oppressive.
- The quality of the footway is poor and its width insufficient.

Cycling

Directness

- A straight link between B3002 and A325 is provided by this route.

Permeability

- Budds Lane maintains priority along its length and thus cyclists can easily ride along it.

Road Safety

- The straight nature of this link makes it conducive to speeding. As there are no cycle paths along it, cyclists must ride along the road.
- Traffic speeds could be in excess of the speed limit due to the road being long and straight, leading to potential intimidation for cyclists.

Personal Security

- There are no residential properties at present along Budds Lane but the presence of Prince Phillip Barracks provides some sense of security.

Legibility

- Budds Lane is easy to follow due to its straight nature.

Crossing Points

- There are no crossing points along Budds Lane; however traffic flows along it are low.

Junctions

- There are priority junctions at either end of Budds Lane. At both, Budds Lane is the minor road. There is no provision for cyclists at either junction.

Rest Points

- There no rest points along Budds Lane.

Quality of Environment

- The road is tree lined along much of its length and hence is pleasant to cycle along.

4.11 SUMMARY OF EXISTING CONDITIONS AUDITS

4.11.1 The table below summarises the findings of the infrastructure audits broken down into cycling and walking issues.

ON SITE OBSERVATIONS: SUMMARY

Walking

Numerous culs-de-sac limiting permeability for pedestrians.

Missing infrastructure (rest points, crossing points) limits desirability of routes.

Numerous cut throughs offer limited security, lighting and maintenance.

Poor signage limits legibility.

Gradient and topography, coupled with surroundings impact on walking as an alternative mode choice.

Lack of controlled crossings on desire lines.

Footway width is limited especially for wheelchairs / pushchairs / double file pedestrians.

Vegetation restricts pleasure of environment e.g. tree roots, overgrown planting etc.

Hollywater Road experiences perceived safety issues and high traffic flows.

Not all signalised junctions offer pedestrian crossing facilities.

A number of woodland areas experience drainage problems after wet weather which makes them difficult to negotiate or impassable.

Poor route continuity on proposed Green Loop and Green Grid links due to existing woodland, land-use restrictions or land ownership.

Cycling

Poor signage limits legibility.

Lack of on and off road cycle routes limit desirability.

Topography and gradient are intimidating for some cyclists.

Lack of controlled crossings on desire lines.

Limited infrastructure is available for cyclists.

High traffic flows along all routes can be intimidating for cyclists.

No toucan crossings to assist cyclists.

A number of woodland areas experience drainage problems after wet weather which makes them difficult to negotiate or impassable.

Poor route continuity on proposed Green Loop and Green Grid links due to existing woodland, land-uses or land ownership.

4.12 PERSONAL INJURY ACCIDENT DATA

4.12.1 As part of the gap analysis, it is necessary to ascertain if there are any existing prominent safety issues associated with pedestrians and cyclists, in the locality of Whitehill & Bordon. Personal Injury Accident (PIA) data has been obtained from Hampshire Constabulary for Whitehill & Bordon and Lindford for the most recent five year period (1 September 2006 to 31 August 2011).

4.12.2 A description of accidents involving pedestrians or cyclists and full data is attached at Appendix B and Figure 6 illustrates the study area and highlights the accidents showing severity, location and road user involved. During the study period a total of 112 PIAs were recorded of which 15 involved cyclists and 21 involved pedestrians. Table 4.15 below provides a summary of the road users involved, together with the severity of the PIA.

Table 4.15 PIA Breakdown

	Vehicle	Cyclist	Pedestrian	Total
Fatal	3	0	0	3
Serious	8	4	4	16
Slight	74	11	17	102
Total	85	15	21	121

SUMMARY

4.12.3 Taking account of the Personal Injury Accident analysis contained in Appendix B the key conclusions are:

PERSONAL INJURY ACCIDENT ANALYSIS: SUMMARY

All accidents involved a motorised vehicle and there were no pedestrian/cyclist conflicts;

The majority of accidents are attributable to error either on the part of the pedestrian, cyclist or driver;

Only one accident observed related to the highway layout or existing pedestrian or cyclist facilities, which occurred when the pedestrian was walking in the carriageway due to the lack of footway and was consequently struck by a motorcyclist; and

The majority (19) of accidents have involved a child.

4.12.4 It is evident that the key issue which requires addressing in line with the Walking and Cycling Strategy is the level of accidents involving children. Several accidents were attributable to children not crossing roads safely or paying sufficient attention when doing so. Better education about using roads safely and bikeability training could reduce the incidences involving children occurring.

4.12.5 Another measure that could be introduced is bikeability training which is suitable for both adults and children. Bikeability training better equips cyclists for road use and hence will reduce the number of accidents attributable to poor cycle skills.

4.12.6 Improvements to streetscapes around Whitehill & Bordon should reduce vehicular speeds so that when accidents occur, the severity is lessened or avoided. These improvements should also increase the visibility of pedestrians and cyclists reducing the incidences of car drivers not seeing such users.

4.12.7 It is envisioned that there will be an increase in numbers of walking and cycling as a result of the improved infrastructure and availability of jobs and amenities within Whitehill & Bordon. The increase in numbers will make car drivers more aware of cyclists and pedestrians.

4.13 SUMMARY AND CONCLUSIONS

4.13.1 The Background Review has considered a number of elements to determine the existing and potential issues regarding walking and cycling in Whitehill & Bordon. In summary, six key elements require consideration and appropriate recommendations and solutions to counter problems as described below:

Green Grid / Loop Quality of Links

4.13.2 The off-road audit completed on existing sections of the Green Loop and Green Grid has highlighted the need to upgrade the quality of existing routes, where appropriate in terms of ecological designation and surrounding environment, if they are to form legitimate routes for walking and cycling in the future. From the audits, the following common themes were identified at various locations along existing Rights of Way and proposed links:

- Existing access points were sometimes unclear, and there was a lack of directional and wayfinding signs along most routes
- There were pinch points at various locations along existing Rights of Way which would make shared walking and cycling use difficult.
- The surfacing of existing paths was poor in some locations, especially after wet weather.
- There were instances of fly-tipping and littering at various locations, which made existing routes unattractive to use. This was particularly a problem in Hogmoor Inclosure between Firgrove Road and Sutton Field and directly north of Saville Crescent.
- There was no lighting provided along any parts of the existing off-road network. Given the nature of some routes this is understandable but would discourage use outside of daylight hours.

-
- The inconsistent provision for walking and cycling along the existing Green Loop and Green Grid route.

A325 Severance

4.13.3 The A325 runs north to south through Whitehill & Bordon, and, at present, creates a division within the community as it is a prominent traffic route. Issues to be considered in addressing the severance on the A325 include road width, traffic flow and composition, traffic speeds, the availability of crossing facilities and the number of pedestrian movements across the A325. To encourage walking and cycling it is imperative that these issues are addressed appropriately.

4.13.4 The Eco-town 2012 Masterplan details a relief road to the west of the town centre which is intended to relieve through traffic from the A325. It is important that the severance currently experienced with the A325 is not transferred to the relief road, and appropriate crossing points and further severance reduction measures are considered.

Personal Injury Accidents involving children

4.13.5 A high proportion of pedestrian or cyclist Personal Injury Accidents (PIAs) involving children have occurred within the given study period. In addressing the safety issues it is necessary to consider the reasoning behind the level of accidents. Whitehill & Bordon has a strong military presence – typically, barracks are closed communities where traffic speeds are lower, and children are able to walk and cycle without significant threat from vehicles. It is evident that a level of road safety education is required for children.

Permeability and Legibility (signing)

4.13.6 Permeability needs to be introduced to encourage alternative routes for pedestrians and cyclists. The alternative routes must be visible to enable residents and visitors alike to negotiate the area with ease. At present it is evident that Whitehill & Bordon has a number of cut throughs and linkages which many residents are not aware of, and therefore do not use. It is imperative that the permeability of Whitehill & Bordon is increased accordingly.

4.13.7 In tandem legibility must be considered as it is the quality and environment that makes a place attractive and more inviting for walking and cycling. Pedestrians and cyclists will only take advantage of the permeability of Whitehill & Bordon if they can grasp the layout. The layout is intrinsically related to the land uses and facilities. Facilities located in appropriate buildings create a legible environment and network for pedestrians and cyclists. In tandem, a legible environment will encourage the use of various facilities.

Crossing points

4.13.8 To ensure that the pedestrian and cycle routes within Whitehill & Bordon create a cohesive network it is appropriate to connect routes via roads with crossing points. To avoid segregation, surface level crossings are the preferred form and should be provided where practicable. The key crossing types that are considered appropriate for Whitehill & Bordon Eco-town are: uncontrolled crossings (dropped kerbs at intervals along a link); informal crossings (careful use of paving materials etc.); pedestrian refuges and kerb build outs and signalised crossings. Manual for Streets suggests “If the crossing pattern is fairly random and there is an appreciable amount of pedestrian activity, a minimum

frequency of 100m is recommended". Crossing points will be provided at appropriate junctures throughout Whitehill & Bordon.

Topography

4.13.9 The gradient and topography of pedestrian and cycle links in Whitehill & Bordon is currently a disincentive for pedestrians and cyclists. The A325 and Chalet Hill have been identified as the two key links where the topography is intimidating and undesirable for pedestrians and cyclists. Whilst it is desirable that alternative linkages with a shallower gradient are provided, the A325 and Chalet Hill are key roads within Whitehill & Bordon and pedestrian and cyclist activity is imperative to ensure their vitality and viability.

4.13.10 To ensure that pedestrians and cyclists frequent the routes and are not consciously aware of the topography, the Masterplan must address the character, environment and facilities offered along the A325 and Chalet Hill. For example, the topography of a 20 minute walk along an active frontage with facilities and activity will be regarded subconsciously, whereas if the same topographical stretch is a busy, highly trafficked road the topography will be regarded consciously.

5 Public and Stakeholder Consultation

5.1 INTRODUCTION

5.1.1 Stakeholder engagement has been an important element in the development of the Walking and Cycling Strategy. Consultation activities to inform the Walking and Cycling and Parking Strategies have been undertaken simultaneously to realise efficiencies and minimise consultation fatigue. The full summary of outputs from the consultations undertaken to date are provided in a separate WSP report entitled 'Report on Consultation for Walking, Cycling & Parking Strategies'. A summary of the consultation process is provided below, however, the Consultation Summary Report should be read in conjunction with this report.

5.2 CONSULTATION STRATEGY

5.2.1 The consultation activities have been undertaken in two distinct stages to reflect the output required for the studies:

- **Stage 1:** Stakeholder and public consultation – to inform the development of the draft transport strategies.
- **Stage 2:** Stakeholder consultation – to provide stakeholders with an opportunity to comment on the draft strategies, prior to them being finalised.

Stage 1 Community Drop-in Sessions

5.2.2 For this first stage of consultation, WSP held two drop-in sessions in early January 2012 to enable the local community to feed into the development of the draft strategies. The sessions were publicised by the local media.

Stage 1 Questionnaire

5.2.3 A paper and web-based questionnaire was designed to gather the local community's views on issues, barriers and potential solutions. Questionnaires were handed out at the community drop-in sessions and the survey was publicised through the Eco-town website.

Stage 1 Workshop

5.2.4 Following the drop-in sessions, WSP invited a range of key stakeholders to attend a workshop.

CONSULTATION STAGE 1 SUMMARY

5.2.5 The key elements that were recommended by members of the public and stakeholders throughout the consultation process are as follows:

STAGE 1 PUBLIC AND STAKEHOLDER CONSULTATION: SUMMARY

A network of direct, safe, secure walking and cycling routes across Whitehill & Bordon, linking existing and new residential communities to green spaces, the town centre and leisure facilities, and linkages to the wider area;

Segregated, well-lit, flat, well-maintained and well-drained routes that are suitable for all users, including provision for the mobility impaired (e.g. dropped kerbs) ;

More pedestrian crossing points;

Covered cycle parking at the heart of new facilities / in town centre and at bus stops / public transport interchange facilities;

Cycle hire scheme;

Incentives for cycling (e.g. discounts) and provision of cycle maintenance

Cycling events, training and promotion;

Complementary measures such as bike trailers for loan from supermarkets/ supermarket free home delivery service.

CONSULTATION STAGE 2 SUMMARY

5.2.6 A second consultation exercise was conducted on the Draft Walking and Cycling Strategy between the 1st October and the 14th December 2012. During this period, a copy of the Draft Walking and Cycling Strategy was made available on the Eco-town website, Forest Community Centre and Bordon Library. Accompanying the report was a questionnaire for consultees to complete, the results of this are summarised below with full responses and other correspondence included in Appendix C.

Table 5.1 Stage 2 Public & Stakeholder Consultation

Question	Yes	No & additional comments	Further Comments
Do you think that all the key routes have been included within the green grid and green loop?	1	4	6
Do you agree that the development of the green grid and loop would encourage you to walk and cycle more often?	0	4	
The strategy includes a number of proposals to help make the green grid and loop attractive. Do you agree that the following are needed? Can you identify any further measures?	1	3	

Do you agree with the recommendations for short-term walking and cycling improvements (set out in Chapter 5)?

1

2

5.2.7 In total there were six respondents to the online questionnaire and another seven consultees provided written responses. A summary of the main points raised as either further comments to the questionnaire or as part of separate written responses is provided below. In some cases, similar responses have been combined where appropriate.

STAGE 2 PUBLIC AND STAKEHOLDER CONSULTATION: SUMMARY

Concerns over the impacts to the natural environment and biodiversity as a result of the proposals;

Concerns over the potential urbanisation of existing areas as a result of proposals;

The A325, B3002 and B3004 currently have poor conditions and environment for walking and cycling, which could be improved by reducing traffic speeds and flow;

Cycle routes should lead to schools on Mill Chase Road and Atholl Road;

There should be three categories of provision based upon commuter trips, routes between residential areas and services and leisure routes;

A commuter route should be provided alongside the proposed inner relief road, linking into intersecting roads to employment areas;

There should be greater connectivity to the major employment areas of the Masterplan;

Proposals contain no links to communities surrounding the Eco-town;

Concerns over routes attracting anti-social behaviour and motor-cyclists;

Concerns over the archaeological impacts to Walldown monuments;

Roads need to be made safe for cycling and cycling proficiency is essential;

Cycleways should be segregated from roads and pedestrian routes to avoid accidents;

Adoption of walking and cycling is likely to have a negative impact on public transport provision;

Cycle storage does not always work unless it is secure and has CCTV;

Proposals for community hubs need to be clarified;

5.2.8 The responses received during the second consultation exercise have been incorporated in the final Walking and Cycling Strategy where appropriate, as outlined in Section 6 of this report.

6 Walking and Cycling Strategy Recommendations

6.1 INTRODUCTION

6.1.1 The findings from the Existing Conditions Review detailed within Section 4 have been analysed to determine appropriate solutions for delivering a comprehensive network of connected walking and cycling routes, addressing accessibility and key safety issues.

6.2 KEY ISSUES

6.2.1 The comprehensive Existing Conditions Review considered Gap Analysis (ACCESSION Modelling and on site observations), Personal Injury Accident Analysis and Stakeholder and Public Consultation. As detailed in Section 4, the key issues were identified as follows:

- Quality of existing Green Grid / Loop routes;
- A325 Severance;
- Personal Injury Accidents involving children;
- Permeability and Legibility;
- Crossing points; and
- Topography.

6.2.2 The Strategy seeks to address the various issues which have transpired from the Existing Conditions Review with a series of recommendations. The Strategy Recommendations are two-fold; quantitative (hard) measures and qualitative (soft) measures. The quantitative measures focus on infrastructure improvements, whilst the qualitative measures address road safety education and technology that, whilst not necessarily providing a direct intervention in the walking and cycling network, will assist in delivering the objectives of improved attitudes to, and take up of, the networks.

6.2.3 It has been assumed that footways will be provided in areas of new development that allow for the easy movement of pedestrians and that cyclists are able to make safe use of the roads, especially to and from the proposed Green Loop and Green Grid. These facilities provide a substantial resource in addition to the network of streets that already exist. The Strategy has been developed to make best use of these, to use them to facilitate access within the local area and improvements have been identified to improve access across the settlement area. This includes proposals for the Green Loop and Green Grid and built environment.

6.3 GREEN LOOP & GREEN GRID PRIMARY AND SECONDARY ROUTE NETWORK

6.3.1 The 2012 Masterplan states that the Green Loop will provide a continuous, multi-functional corridor of green spaces that will unite new and existing communities making the town more permeable to people and wildlife. In order to recognise and provide for different types of usage and environment, it is appropriate for the proposed Green Loop and Green Grid to be categorised into a primary and secondary network of routes. As such, the proposals contained within this section are based upon the following hierarchical approach:

-
- **Primary Network:** Provision for pedestrians and cyclists.
 - **Secondary Network:** Provision for pedestrians only.

6.3.2 As part of this hierarchical approach it will be possible to provide a comprehensive network that not only provides pedestrian and cycle links to the major Eco-town land-uses but also provides attractive leisure routes. A plan showing the proposed primary and secondary network against the 2012 Masterplan Green Loop and Green Grid is shown in Figure 7.

6.3.3 In all cases the proposals for each route will reflect the surrounding natural environment and any ecological designations which may be present in each area, through the use of a three tier approach to design standards as discussed in Section 6.4.

6.4 GREEN LOOP AND GREEN GRID DESIGN STANDARDS AND COSTINGS

6.4.1 Improving pedestrian and cycle linkages in and around Whitehill & Bordon is the lynchpin of this Walking and Cycling Strategy. As such, the Existing Conditions Review has considered shortfalls in linkages in and around Whitehill & Bordon. The proposed Green Grid and Green Loop will provide a strong basis for facilitating walking and cycling in and around Whitehill & Bordon, if designed to a standard that provides attractive routes that can be used for a variety of uses during daylight and non-daylight hours whilst also recognising the surrounding natural environment. Taking this into account, this section provides a summary of improvements which should be made to the proposed Green Loop and Green Grid, either as part of the primary or secondary network discussed in Section 6.3, so these become attractive and realistic routes around the Eco-town.

6.4.2 To encourage the use of the Green Loop and Green Grid at the earliest opportunity, short-term 'quick wins' and long-term improvements have been identified for each route.

6.4.3 To determine the most appropriate form of route provision the following documents have been reviewed:

- Whitehill & Bordon Eco-town Suitable Alternative Natural Greenspace Design and Delivery (Halcrow, 2012);
- Connect2 and Greenways Design Guide (Sustrans, 2008).
- By All Reasonable Means: Inclusive Access to the Outdoors for Disabled People (Countryside Agency, 2005)
- Sustrans Technical Information Note 8: Cycle Path Surface Options (2012);
- Sustrans Technical Note 29: Lighting of Cycle Paths (2012);
- Inclusive Mobility (DfT, 2005);
- Manual for Streets (DfT, 2007) and Manual for Streets 2: Wider Application of the Principles (DfT, 2010);
- DMRB Volume 6 Section 3 Part 5 TA 90/05: The Geometric Design of Cycle and Equestrian Routes;
- Local Transport Note 2/08: Cycle Infrastructure Design (DfT, 2008);

- Local Transport Note 2/95: The Design of Pedestrian Crossings;

6.4.4 For the off-road routes the design standards proposed either meet or improve upon the 'Zone A' classification outlined in the 2005 Countryside Agency document, which aims to provide access for **most** people, especially those with mobility impairments.

6.4.5 Proposed design standards based upon the above documents is provided below, split into the primary and secondary network provision where appropriate.

GREEN LOOP AND GREEN GRID OFF-ROAD ACCESS POINTS

6.4.6 The design of access points is an important consideration and should ensure that they are designed to reflect the permitted users of the route, take account of the surrounding environment and don't provide a physical barrier to users with mobility impairments.

Primary Network Access Points

6.4.7 For the primary network access points there is a need to provide a solution that allows convenient access by cyclists but also restricts access for motorised vehicles. Sustrans and LTN 1/08 recommend the installation of bollards at access points with a spacing of 1.2-1.5m, which should be removable if access by maintenance vehicles is required. Therefore for a 3m path one bollard should be installed in the centre of the access point which will prevent unauthorised access whilst also helping to separate conflicting movements.

6.4.8 Whilst both Sustrans and LTN 1/08 recognise potential misuse of cycle routes by motorcycles it is noted that access barriers deter legitimate use and are often ineffective at deterring anti-social behaviour. Instead the preferred approach is to only introduce such barriers if a definite need has been established.

6.4.9 Clear directional signage should be provided at the start to each Green Grid or Green Loop route.

Secondary Network Off-Road Access Points

6.4.10 For the off-road secondary network, which will only be for pedestrian use, it is recommended that Kissing Gates are installed at all access points. These should be wooden gates, rather than steel to reflect the nature of the Green Loop and Green Grid and should be 2.5m in width to cater for pushchair and wheelchair use. Although it is noted that this design will not completely restrict access by bicycle they will deter use through inconvenience whilst allowing for use by other users.

6.4.11 As with access point onto the primary network clear directional signage should be provided at the start to each Green Loop or Green Grid route. These may be complemented by information boards where the route passes through an area with ecological designations, such as Deadwater Valley Local Nature Reserve or Hogmoor Inclosure.

6.4.12 Where parts of the primary and secondary intersect it is recommended that Kissing Gates are installed to prevent cyclists from using inappropriate routes.

Ramped or Stepped Access

6.4.13 Where possible, ramped access should be provided in preference over steps. Such ramps should be designed to a maximum gradient of 1:12 and resting areas (1.5m flat area) should be provided every 10m if required. Handrails must also be provided along the entire length of any access ramp.

6.4.14 Where the provision of steps are unavoidable, these would be provided with a maximum step height of 150mm, a minimum depth of 250mm and a level resting place every 12 steps. As with ramped access, a handrail should be provided along the entire length of any steps.

GREEN LOOP AND GREEN GRID OFF-ROAD GEOMETRY, SURFACING & LIGHTING

6.4.15 Surfacing and lighting of off-road routes should reflect the permitted use of each route, surrounding environment and ecological designations especially in regards to Hogmoor Inclosure, the Deadwater Valley Local Nature Reserve and Bordon Inclosure. In addition to the Local Nature Reserve, Hogmoor Inclosure is designated as a SINC and SANG whilst Hogmoor & Bordon Inclosure are home to a number of key reptile sites and invertebrate interest of regional significance.

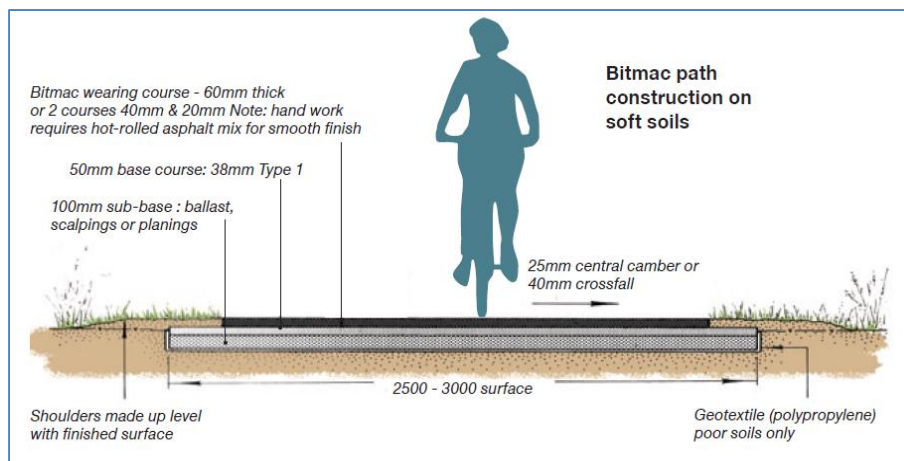
Primary Network Off-Road Route Surfacing

6.4.16 The proposed primary off-road network passes through areas with existing ecological designations, areas of woodland with existing hardstanding or unbound paths and areas which will be significantly redeveloped as part of the Eco-town proposals. Taking this into account it is appropriate to propose a two-tiered approach to the primary network that will provide routes which are suitable for use by all users that do not have a detrimental impact on the natural environment. All paths which form part of the primary network should be 3m wide where this can be achieved without significantly impacting on the surrounding environment.

Primary Network Off-Road Routes through Eco-town Development Areas

6.4.17 For routes passing through central parts of the Eco-town development or providing important links in existing area it is proposed that hardstanding surfaces are installed along with low level lighting. For these hard surfacing it is recommended that Dense Bitumen Macadam (DBM) or Hot Rolled Asphalt (HRA) is used to cater for long-term use with minimal maintenance. The diagram below shows an example of the proposed standard design using DMB construction as recommended by Sustrans (2008).

Diagram 5.1 – DBM path construction on soft soils



6.4.18 It should be noted that a single 60mm layer of DBM is preferable over two layer layers of 40mm and 20mm for ease of construction. Below this a 50mm Type 1 sub base should be provided and a 10mm ballast, scalpings or planings sub-base. HRA recycled aggregates or vegetable-based binders should be used to reduce the negative visual impact of 'blacktop'.

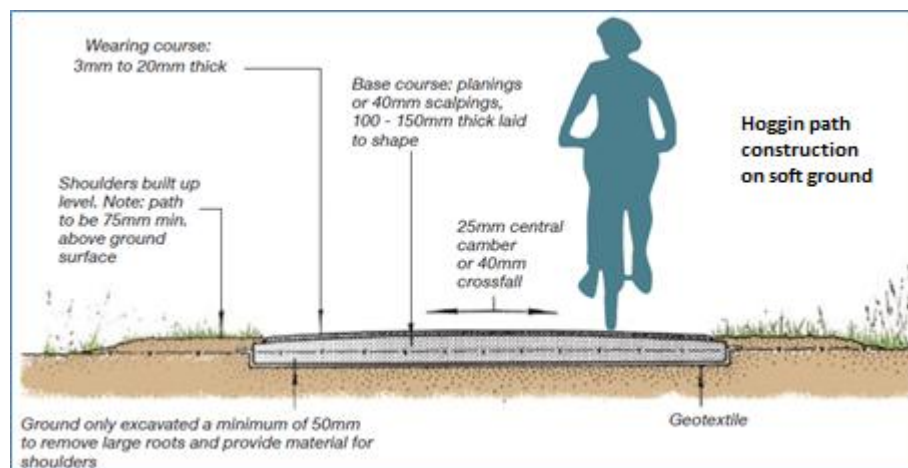
6.4.19 Low lighting bollards can be used to light these routes and should correspond to the guidance contained in the Institution of Lighting Engineers *Technical Report Number 23: Lighting on Cycle Tracks (BS 5489)*. Where a location has no existing power supply the use of solar powered lighting or studs may be used.

Primary Network Off-Road Routes through Existing Woodland or Ecological Protected Areas

6.4.20 In areas where the primary network passes through existing woodland areas it is proposed that paths are constructed using a self-binding material such as Hoggin, which is made up of a mixture of gravel, sand and clay. This type of surfacing is suitable for environmentally sensitive areas and is cheaper than DBM or HRA surfaces. Also, to prevent erosion of paths and provide clear boundaries it is recommended that timber edging is installed.

6.4.21 These paths will include a base course consisting of planings or 40mm scalping, 100-150mm in thickness with a 20mm thick Hoggin wearing course

Diagram 5.2 – Hoggin path construction on soft ground



6.4.22 For routes that pass through existing woodland or ecological protected areas it is proposed not to install any form of lighting.

Secondary Network Off-Road Route Surfacing

6.4.23 For off-road routes which form part of the secondary network (to be used only by pedestrians) it is noted that a balance must be reached between providing an attractive and useable route and ensuring there are minimal impacts to the surrounding natural environment. As such the following strategy is proposed for the secondary network:

- Where existing informal and unbound paths pass through ecological designated areas these should not be altered to maintain the natural environment except where access is significantly restricted or where routes are unclear. For example:
 - Where path widths are below 1m in width or are difficult or hazardous to negotiate;
 - Where sections of paths become unusable in wet weather due to drainage. Where this occurs either boardwalks or unbound gravel or wood chipping surfacing should be provided.
- Where new paths are to be provided these should be constructed with either gravel or wood chipping surfaces or Hoggin but without edging (except to stop encroachment) to ensure an informal nature of the secondary network is retained.

6.4.24 Generally design guidance suggests that a minimum width for pedestrian routes of 2m and it is recommended that this is applied to all newly constructed pathways on the secondary network. However, taking account of existing paths in ecological designated areas and 'Zone A' of the 2005 Countryside Agency document it is considered that a minimum width of 1m is recommended.

Green Loop and Green Grid off-road Bridges and Boardwalks

6.4.25 Where Bridges or boardwalks are required at crossing points or watercourses these should be designed to a minimum width of 2m wide on the primary network to cater for cycle use and 1.2m on the secondary network to cater for wheelchair use. All such facilities will be provided with edge protection and handrails.

6.4.26 Ramps and / or steps should be designed to the same standards as the discussed in paragraph 6.4.11 and .6.4.12.

GREEN LOOP AND GREEN GRID OFF-ROAD OTHER DESIGN PARAMETERS

6.4.27 Crossfall on footpaths or shared-use paths should be designed to provide good drainage whilst also ensuring it does not cause difficulties to users. Therefore a maximum crossfall of 1:50 (2%) should be used where possible, although it should be noted that cross slopes caused by trees routes and other natural features may be greater in some places.

6.4.28 To allow the Green Loop and Green Grid to be used as a leisure route, rest places should be provided at regular intervals along its length. It is recommended that seating is placed every 500m along a route where appropriate, set back from the path so not to block free passage of through traffic.

GREEN LOOP AND GREEN LINK PROVISION OR STREET ENHANCEMENTS ON EXISTING OR PROPOSED HIGHWAY NETWORK

6.4.29 In addition to off-road provision the 2012 Masterplan also proposes sections of the Green Loop and Green Grid that follow either existing highway or proposed highway links that will be constructed as part of the proposed Eco-town. As a result it is also appropriate to consider design standards for these parts of the network to ensure that the strategy provides a comprehensive and continuous network of routes.

6.4.30 In terms of the Green Grid and Green Loop that follows part of the highway network it should be noted that any provision should take account of future traffic flow predictions for these links with the Eco-town in place, which at this time is not available for all routes. As a result the proposals contained within this strategy are preliminary and should be subject to review as more detailed traffic flow information becomes available.

2012 Masterplan Proposed New Highway Links

6.4.31 With any new highway links that are proposed as part of the Masterplan for the Eco-town it is assumed that these will be constructed to a standard that encourages walking and cycling. Therefore, dependent upon the character and use of each street, this should include appropriate provision for all users that provides safe, attractive and continuous routes through the development.

Green Grid and Green Loop Proposed Street Enhancements

6.4.32 As with off-road routes, sections of the Green Loop and Green Grid that follow the existing highway network will be for use by pedestrians and cyclists. Therefore it is recommended that one of the following is provided:

- Provision of shared-space streets that reduce the dominance on the motor car through lower speeds and encourage drivers to behave more accommodatingly towards pedestrians and cyclists;
- Provision of 1.5m on-road mandatory cycle lanes with coloured surfacing and 2m footways;

-
- Provision of 1.5m on-road advisory cycle lanes with coloured surfacing and 2m footways;
 - Provision of 3m wide shared-use footways; and
 - Provision of on-road cycle symbols and 2m footways.

6.4.33 When considering the installation of cycle lanes it should be noted that substandard cycle lanes provide insufficient space for cyclists to position themselves away from the kerb to avoid debris, gully grates etc. and gives drivers a misplaced confidence that the cyclist has sufficient width. Where cycle lanes are installed there must be at least 5.5m carriageway width exclusive of such facilities in order to allow two HGVs to safely pass each other.

6.4.34 Where there is insufficient space to provide adequate width for a cycle lanes in two directions on road, it is preferable to provide it in a downhill direction only.

6.4.35 Any cycle lane must conform to the appropriate part of The Traffic Signs Regulations and General Directions 2002. On roads which will be developed as shared-use schemes the use on-road cycle lanes will not be required.

6.4.36 Where it is not possible to install on-road cycle lane to the standards discussed above, another option is the provision of a shared-use footway adjacent to the main carriageway. Where such provision is made, the path should be a minimum of 3m wide and be as clear as possible from street furniture that may impede a cyclist's route. Where such shared-use paths are provided the main carriageway must remain at least 5.5m wide to allow for HGVs to pass each other.

6.4.37 Any routes that contain on-road or off-road cycle provision should include adequate street lighting.

Green Grid and Green Loop Secondary Network Proposed Street Enhancements

6.4.38 For parts of the secondary network that follow existing highway links it is necessary to ensure that safe, attractive and continuous pedestrian routes are provided. As such the following should be considered as part of the secondary network:

- Provision of footways with a minimum width of 2m;
- Provision of street lighting; and
- Provision of safe crossing facilities that reflect highway conditions, traffic and pedestrian flow.

6.4.39 In regards to crossing facilities, an appropriate provision can vary significantly for different highway and traffic flow conditions. For example, where routes cross the A325 it would be appropriate for signalised pedestrian facilities to be provided due to traffic flows on this road but on residential streets such as Apollo Drive or Conde Way the provision of informal facilities such as dropped kerbs and build-outs would be appropriate.

6.4.40 As with the design of on-road or off-road cycle facilities the final provision for pedestrian crossings will be dependent upon traffic flows with the Eco-town in place,

which are not currently available. Therefore proposals for pedestrian crossing should be treated as preliminary, and each location should be considered individually.

GREEN LOOP AND GREEN GRID SIGNAGE

6.4.41 Signage is important, not only for aiding those using the Green Loop & Green Grid but also advertising its presence to those passing access points. As such it should be of sufficient size to be seen from the road. Signage on the highway should conform to DfT standard blue signs as recommended by Sustrans and ideally should give distance and/or walk time in addition to the destination. The location of such signage is particularly important where parts of the Green Loop and Green Grid are only permitted for pedestrian use. At these locations, clear signage should be provided that directs cyclists onto the permitted parts of the network, for example at accesses to Deadwater Water Local Nature Reserve.

6.4.42 Internally within the Green Loop and Green Grid network, there is flexibility as to the type of signage to be used. Within environmentally sensitive areas, wooden finger signage could be used showing the direction of different destinations. Within urban settings, the Sustrans system of continuity signage could be imitated. This system uses adhesive signs which can attach to lampposts etc. and rigid plastic signs which can attach to wooden posts.

SIGNALISED CROSSINGS

6.4.43 In order to provide safe facilities for crossing various parts of the Green Loop and Green Grid it is recommended that signalised crossings are installed at all major intersections of the proposed route where high traffic flows are expected.

6.4.44 For pedestrian crossings, it is recommended that Puffin Crossings are installed at a minimum width of 2.4m. The use of Puffin Crossings is recommended over Zebra or Pelican crossings due to ability of these to extend crossing times where required but also cancel a pedestrian phase where no longer required, therefore reducing unnecessary delays for traffic.

6.4.45 On primary network routes which form part of the Green Loop or Green Grid, it is recommended that Toucan crossings are installed, at a minimum width of 3m to ensure that pedestrians and cyclists have adequate space to safely cross. Toucan crossings can also be incorporated into traffic signal junctions as a replacement to pedestrian phases where necessary.

6.4.46 For all crossings, the following design criteria should be considered:

- Crossings must be located at least 20m from side-road junctions;
- Visibility should between pedestrians / cyclists and traffic should not be obscured by street furniture, parked cars or other obstructions;
- If crossings are to be installed close to a roundabout, they should be provided away from the flared approaches to reduce crossing widths;
- Dropped kerbs must always be provided across the crossing width and section of footway between the lowered kerb-line. The adjacent footway should be ramped with a slope having a desired gradient of 1 in 20 but not steeper than 1 in 12;
- Tactile paving should be installed across the dropped kerb, with a strip stretching back from the push button to the back of footway; and

-
- It is recommended that high skid resistance surfaces be provided on the carriageway approaches to pedestrian crossings.

COSTS OF ROUTE IMPROVEMENTS

6.4.47 The following cost assumptions have been used in assessing proposed improvement works. These are based on 2012 prices and thus will change over the life of the strategy and are not inclusive of maintenance costs:

- Provision of hardstanding path DBM or HRA with appropriate aggregate - £60 per linear metre for a 2m wide path and £90 per linear metre for a 3m wide path;
- Provision of unbound Hoggin or gravel pathway - £50 per linear metre for a 2m wide path and £75 per linear metre for a 3m wide path;
- Access points to Primary network (bollards and signage) - £500 each;
- Access points to secondary network (kissing gates and signage) - £500 each.
- The cost of clearing woodland and vegetation greater than 600mm in height - £10 per metre;
- Illuminated bollards (1m tall) - £575 per unit, placed every 50m along a route. These may be powered via solar panels;
- Direction signs - £250 for finger-post or way-marker signage;
- Where boardwalks are required as crossing points to watercourses a 3m long by 1.2m wide boardwalk will cost £300 per linear metre and a 3m long by 2m wide boardwalk and £450 per linear metre;
- Installation of Puffin or Toucan crossings - £50,000 to £80,000 each;
- Installation of uncontrolled or informal crossings - £5,000 to £20,000 each;
- Provision of on-carriageway cycle lanes (advisory or mandatory) - £40,000 per km;
- Provision of Shared-Use Paths (footways) - £60,000 per km; and
- Provision of on-carriageway cycle symbols - £1,500 per km with a minimum cost of £1,000.

6.4.48 Costings provided above are an approximation, are solely related to construction, exclude detailed design and do not consider any land or environmental constraints or specific costs. The provision of lighting is optional and this pricing is only for information and has not been included in any cost estimates for cost improvements.

6.4.49 In terms of implementation, the schemes are broadly categorised as follows:

- Short term – ‘easy wins’ to be implemented over 1-3 years;
- Medium term – beyond 3 years and / or in line with Eco-town development phasing; and
- Long term - beyond 5 years and / or in line with Eco-town development phasing.

6.5 NORTH WEST: PINEWOOD AREA

6.5.1 The following sections, 6.5 to 6.9, show proposals and costings for the four areas as defined in Figure 1 and 4.5 and cover both on and off road measures. These costs are based on 2012 prices and are not inclusive of installation or maintenance. As defined in the 2012 Masterplan, the Pinewood area will be home to residential, employment and community / education / sports land-uses of the Eco-town. For each area Figure 8 shows a breakdown of short-term, medium term and long-term proposals and Figure 9 shows all strategy recommendations with numbered references to scheme elements to each tables 6.1 to 6.9.

PINEWOOD OFF-ROAD GREEN LOOP & GREEN GRID IMPROVEMENTS

6.5.2 The proposed Green Loop passes through the Pinewood area between the Budds Lane / Station Road junction and the A325 running through the MOD sports pitches, existing woodland and existing residential areas. As most of this area lies within Ministry of Defence land improvements cannot be made until the land passes to a development vehicle including EHDC and HCC as part of the Eco-town development. Therefore all the improvements put forward are long term. These proposals are shown in Table 6.1.

Table 6.1 Pinewood Area Long-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
1. Through MOD recreation ground and existing woodland to Oakley Road	600m	Primary	Provide a 3m hardstanding shared-use path with illuminated bollards	£67,000
2. Oakley Road to A325 (Oakley Rd, Beaufort Rd, Ennerdale Rd)	310m	Primary	Upgrade to 3m shared use path adjacent to highway	£19,000
3. Link between primary route and A325 via St Lucia Barracks, linking with A325 north of Essex Road	350m	Secondary	Provision of 2m Hoggin path for pedestrian use only with kissing gates installed at junction with primary network and north of Hampshire Road	£21,000
4. Station Road	1000m	Primary	Upgrade to 3m shared use path on southern footway (where possible without removal of existing trees).	£60,000
LONG-TERM IMPROVEMENTS TOTAL COST				£167,000

6.5.3 The strategy for the Pinewood Green Loop and Grid proposes the installation of a shared-use path between Station Road and Oakley Road, which will link into Beaufort Road, Ennerdale Road and proposed employment land-uses to the east of the A325. This ensures that the part of the Green Loop that passes through the Pinewood area is available for use by all users. On Station Road itself, it is proposed to install a shared-use path adjacent to the carriageway. Where possible this should be designed to 3m but may be reduced as appropriate to avoid the felling of existing trees or hedgerow.

6.5.4 In addition, it is proposed to install a secondary network link between the Green Loop just west of Oakley Road and the A325 north of Essex Road in order to connect existing residential areas and provide route continuity with parts of the Green Grid on the eastern side of the A325.

6.6 NORTH EAST: QUEBECK BARRACKS, ST LUCIA BARRACKS AND LINDFORD

6.6.1 The proposed Green Loop passes through the North East area from the proposed employment area in Quebec Barracks, south through Bordon Inclosure and into Alexandra Park linking onto Chalet Hill / Mill Chase Road from Jubilee Park. The strategy provides a mix of primary and secondary network routes to reflect the fact that Jubilee Park and Alexandra Park form part of Deadwater Local Nature Reserve and that Bordon Inclosure is proposed as a SANG for the Eco-town.

QUEBEC BARRACKS, ALEXANDRA PARK AND BORDON INCLOSURE IMPROVEMENTS GREEN LOOP & GREEN GRID IMPROVEMENTS

6.6.2 This section of route includes links through Quebec Barracks from the A325 to Bordon Inclosure, north to south routes through Bordon Inclosure itself and Alexandra Park / Jubilee Park. Given the existing routes and land ownership constraints it is appropriate to consider short-term and long-term links between Whitehill & Bordon and Lindford at the earliest opportunity. Table 6.2 shows these short-term improvements which are mapped in Figure 8 and Figure 9.

Table 6.2 Quebec Barracks, Alexandra Park and Bordon Inclosure Short-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
5. North to South path through Jubilee Park	220m	Secondary	Provide 2m Hoggin path through Jubilee Park from western access gate following approximate route of existing informal path, and installation of kissing gate and signage at access point at northern end of Branson Road	£12,000
6. East to West path from Jubilee Park through Alexandra Park to Alexandra Park / Bordon Inclosure path crossroads	350m	Secondary	Provision of waymarker signage and boardwalks across watercourses.	£7,000
7. East to West path from A325 to Bordon Inclosure access	140m	Secondary	Improve access to Quebec Barracks from A325 through improved signage and footway provision	£9,000
SHORT-TERM IMPROVEMENTS TOTAL COST				£28,000

6.6.3 The short-term improvements focus on improving existing provision and increasing connectivity between the parts of Alexandra Park that form part of the Green

Loop whilst also providing a link to the A325. Given that these routes are designated as secondary parts of the network the proposals aim to improve the environment for pedestrians only and have an estimated cost of £28,000.

6.6.4 The strategy for long-term improvements in Quebec Barracks, Alexandra Park and Bordon Inclosure area aim to provide links between the Eco-town and Lindford on Green Loop and Green Grid routes identified in the Masterplan, as shown in Table 6.3.

Table 6.3 Quebec Barracks, Alexandra Park and Bordon Inclosure Long-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
8. Eastern end of Saville Crescent to existing north to south path through Alexandra Park	N/A	Secondary	Installation of kissing gate and signage at Saville Crescent access, provision of 2m Hoggin path to edge of woodland and 1.2m boardwalk link to existing north to south path through Alexandra Park.	£38,000
9. North to south through Alexandra Park	310m	Secondary	Installation of kissing gate and signage at Alexandra Park / Bordon Inclosure path crossroads and provision of waymarker posts on path	£1,000
10. North to South route through from Bordon Inclosure access at Quebec Barracks to Liphook Road	1,100m	Secondary & Primary	Upgrade existing path to 3m Hoggin path where possible without removal of vegetation and provision of route signage at appropriate points. Existing boardwalk to remain.	£83,000
11. Bordon Inclosure East to West path from Quebec Barracks employment and housing area to North to South path	150m	Primary	Upgrade existing path to 3m Hoggin path where possible without removal of vegetation and provision of route signage at appropriate points.	£12,000
12. Bordon Inclosure East to West path to Lindford	250m	Secondary	Upgrade existing path to 3m Hoggin path where possible without removal of vegetation and provision of route signage at appropriate points.	£23,000
13. Between North to South path through Bordon Inclosure (Item 11) and Canes Lane	150m	Primary	Upgrade existing path to 3m Hoggin path where possible without removal of vegetation and provision of route signage at appropriate points.	£11,000
14. Lindford Farm to primary network north of Canes Lane	400m	Secondary	Installation of kissing gate and signage access points and provision of 2m Hoggin path where possible without removal of vegetation	£21,000
LONG-TERM IMPROVEMENTS TOTAL COST				£237,000

6.6.5 Table 5.3 shows a long-term strategy for Quebec Barracks, Alexandra Park and Bordon Inclosure that further enhances links between Whitehill & Bordon and Lindford. This long-term improvement strategy, through the provision of a primary and secondary network based upon the Green Loop and Green Grid, will cost £237,000.

LINDFORD GREEN LOOP & GREEN GRID IMPROVEMENTS

6.6.6 Green Loop and Green Grid proposals in Lindford are mainly based upon the provision of links that form part of the existing highway network, with the exception of the route through woodland between Headley Mill and the existing path to the south of Lindford Village Hall. Given the nature of these routes and the existing highway conditions it is considered appropriate that these proposals are implemented in the long-term, with cost summarised in Table 6.4 below.

Table 6.4 Lindford Long-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
15. Between Linford Village Hall path and Headley Mill	950m	Secondary	Installation of kissing gate and signage access points and provision of 2m Hoggin path through woodland here possible without removal of vegetation	£48,000
16. Chase Road, Canes Lane and Washford Lane	1,150m	Primary	Provision of on-carriageway cycle symbols and signage to increase awareness of cycle route plus provision of lighted bollards on existing bridge across river	£5,000
LONG-TERM IMPROVEMENTS TOTAL COST				£53,000

6.7 SOUTH WEST: HOGMOOR AREA

6.7.1 Hogmoor Inclosure is to be designated as a SANG for the Eco-town and as a result proposals for the Green Loop and Green Grid need careful consideration to protect from the natural environment. Taking this into account, the proposals for Hogmoor Inclosure only three primary network routes (for walking and cycling use), all of which will be provided with Hoggin surfacing but without lighting. Secondary network routes are based on existing paths and will either be unaltered or provided with natural gravel surfacing.

HOGMOOR INCLOSURE GREEN LOOP & GREEN GRID IMPROVEMENTS

6.7.2 As with the Pinewood Area, most of this area lies within Ministry of Defence land and therefore improvements cannot be made until the land passes to a development vehicle including EHDC and HCC as part of the Eco-town development. Therefore all the improvements put forward are long term. These proposals are shown in Table 6.5.

Table 6.5 Hogmoor Inclosure Long-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
17. North to South route through Hogmoor Inclosure from Firgrove Road to BOSC north of Oakhanger Road	2,900m	Primary	Installation of a 3m Hoggin path with route signage at appropriate points and resting points every 500m	£225,000
18. East to west primary network route from south west corner of Hogmoor Inclosure to A325 in close proximity to New Road	750m	Primary	Installation of a 3m Hoggin path with route signage at appropriate points	£57,000
19. East to west primary network route through northern part of Hogmoor Inclosure from opposite Moor Close to proposed rail station location	500m	Primary	Installation of a 3m Hoggin path with route signage at appropriate points	£38,000
20. North to South secondary network route and East to West secondary network route	Approx 2,000m	Secondary	Installation of kissing gates and directional signage at access points or junctions with the primary route network and provision of resting points every 500m	£8,000
21. Oakhanger Road	280m	Primary	Upgrade footway to 3m to provide shared use	£17,000
22. East to West link between Hogmoor Inclosure and A325 opposite New Road	330m	Primary	Installation of a 3m Hoggin path with route signage	£25,000
23. East to West link between Hogmoor Inclosure and A325 via Woolmer Industrial Estate	300m	Primary	Upgrade of existing footway on Woolmer Way to 3m plus construction of a 3m Hoggin path with signage	£20,000
24.				
LONG-TERM IMPROVEMENTS TOTAL COST				£389,000

6.7.3 The long-term strategy for the Hogmoor Inclosure provides a comprehensive network of shared-use and pedestrian only paths which will provide excellent links between the Eco-town and surrounding areas for all users whilst also providing attractive leisure routes through the proposed SANG. The cost of these proposals is estimated as £389,000.

6.7.4 In the first instance, adequate planting should be provided between proposed routes and Forey Pond to restrict access and protect this watercourse. In regards to the protected railway corridor, although the proposed north to south route follows the alignment of the old railway line, the relocation of this to run parallel to new railway infrastructure can be achieved without significant alteration to the proposals or costings provided above.

6.8 SOUTH EAST: CENTRAL BORDON AND STANDFORD AREA

6.8.1 In this area the proposed Green Loop passes through the Deadwater Valley Local Nature Reserve between Chalet Hill / Mill Chase Road and Forest Road, before continuing along the existing carriageway and New Road. Green Grid links also connect Stanford Grange Farm and provide routes through the proposed Eco-town town centre.

DEADWATER VALLEY LOCAL NATURE RESERVE GREEN LOOP & GREEN GRID IMPROVEMENTS

6.8.2 The proposals for Deadwater Valley Local Nature Reserve take account of the natural environment, ecological designations and existing bylaws of this area through the provision of only secondary network routes that will be primarily for leisure use and also discourage cycle use. Specifically, proposals include kissing gates at all external access points to the Nature Reserve and no changes to existing path surfacing except where there are existing drainage problems.

6.8.3 Short-term and long-term improvements are proposed for the Nature Reserve. Short-term recommendations are based on providing 'quick wins' that improve access points and restrict cycle use while long-term recommendations provide links to other parts of the Green Loop and Green Grid network. The proposed improvements to Deadwater Valley are described below in Tables 6.6 and 6.7.

Table 6.6 Deadwater Valley Local Nature Reserve Short-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
25. Whole Route	N/A	Secondary	Provide kissing gates, signage and information boards at all external access points to the Nature Reserve (9 in total)	£9,000
26. Alpine Road access to south of Woodlea School	160m	Secondary	Remove existing fencing and replace on eastern side of path to improve safety. Also provide directional signage to Walldown Monuments.	£3,000
27. Whole Route	N/A	Secondary	Upgrade existing wooden plank watercourse crossings to full boardwalks (6 in total, each assumed to be 6m in length) plus provision of boardwalks on wet section of route south of Chalet Hill / Mill Chase Road.	£13,000
28. Whole Route	N/A	Secondary	Provision of waymarker posts and wooden direction signs at appropriate points	£1,000
SHORT-TERM IMPROVEMENTS TOTAL COST				£25,500

6.8.4 The short-term improvements shown above intend to improve access and way finding through Deadwater Valley Local Nature Reserve through the provision of

directional signage and improved access points. These would promote the use of this route in the short-term whilst also discouraging the use by cyclists at a cost of £25,500.

6.8.5 The long-term improvements for Deadwater Valley Local Nature Reserve are based on providing Green Grid links between the Nature Reserve, Hollywater Road and Stanford Grange Farm and are shown in Table 5.7 below.

Table 6.7 Deadwater Valley Local Nature Reserve Long-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
29. East to West path linking the Nature Reserve to Hollywater Road	75m	Secondary	Provide a 2m unbound path (which does not require tree felling) with appropriate signage and kissing gate at access to Hollywater Road.	£5,000
30. East to West path linking the Nature Reserve to Hollywater Road through Mill Chase Community College land	160m	Secondary	Provide a 2m unbound path (which does not require tree felling) with appropriate signage and kissing gate at access to Hollywater Road.	£9,000
LONG-TERM IMPROVEMENTS TOTAL COST				£14,000

6.8.6 In providing routes proposed in Table 6.7 between the Local Nature Reserve and Hollywater Road it is critical that these are designed in a way which does not require felling of existing trees and which minimises the removal of existing vegetation. If required, the provision of meandering routes through existing woodland will fit in with the existing provision in the Local Nature Reserve.

STANDFORD GRANGE FARM GREEN LOOP & GREEN GRID IMPROVEMENTS

6.8.7 This area is located to the east of Hollywater Road and is proposed to be designated as a SANG as part of the Eco-town proposals. As such the route proposals and network type for Stanford Grange Farm have followed that set out in the SANG Design and Delivery Document. It is proposed that all Green Grid routes for this area are implemented as part of the long-term strategy in line with construction of the Eco-town.

Table 6.8 Stanford Grange Farm Long-Term Improvements

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
31. Between Hollywater Road adjacent to the northern path from Deadwater Valley Local Nature Reserve to Whitehill Road	1500	Primary	Woodland clearance and Installation of a 3m Hoggin path with route signage at appropriate points and resting points every 500m	£128,000
32. Between Hollywater Road adjacent to southern path from	400	Secondary	Woodland clearance and provision of a 2m unbound surface with	£25,000

Deadwater Valley Local Nature Reserve to primary network route			appropriate signage and kissing gates at access points	
LONG-TERM IMPROVEMENTS TOTAL COST				£153,000

6.8.8 The long-term proposals for the Standford Grange Farm area are based upon providing a shared-use loop between Hollywater Road and Whitehill Road as laid out in the SANG Design and Delivery Document. The cost of delivering these proposals is £153,000.

CENTRAL BORDON GREEN GRID AND GREEN LOOP ON-HIGHWAY IMPROVEMENTS (INCLUDING STREET ENHANCEMENT EXTENSIONS TO CHALET HILL, MILL CHASE ROAD AND FOREST ROAD)

6.8.9 In addition to Deadwater Valley Local Nature Reserve and Standford Grange Farm, the central Bordon area also includes a number of proposed Green Loop and Green Grid routes that form part of the existing highway network. These include:

- Chalet Hill between Hollybrook Park and Saville Crescent;
- Hollybrook Park and Conde Way (part of Shipwright’s Way);
- Apollo Drive, Pinehill Road, Forest Road and Devon Road (including Forest Road between Pinehill Road and Devon Road);
- Forest Road between access to Deadwater Valley Local Nature Reserve and Liphook Road; and
- New Road between Forest Road and A325 (part of Shipwright’s Way).

6.8.10 Each of these routes provide valuable links to either different parts of the Green Loop and Green Grid (such as Deadwater Valley Local Nature Reserve) or to the existing or proposed town-centre and community facilities. As such all links are proposed as primary network routes and therefore include recommendations for pedestrian and cycling facilities. It should be noted, however, that due to the built-up nature of these routes in most cases there is inadequate highway land available to provide the ideal provision. Therefore alternative solutions have been proposed, as shown in Table 6.9 below. In order to promote and encourage walking and cycling around the Eco-town at the earliest opportunity it is recommended that these measures are implemented in the short-term.

Table 6.9 Central Bordon On-Highway Proposals

Section of Route	Length	Primary or Secondary Network	Route Description	Approx. Cost
33. Chalet Hill (including extension of proposed Green Grid route to between the junction with the A325 and Hollywater School)	1,400m	Primary	Provision of on-carriageway advisory cycle lanes in both directions.	£56,000
34. Hollybrook Park and Conde Way	1,650m	Primary	Provision of on-carriageway advisory cycle lanes in both directions plus the provision of a shared-use path between A325 and Forest Road to link with crossing facility	£66,000
35. Apollo Drive, Pinehill Road and Devon Road	1,000m	Primary	Provision of on-carriageway advisory cycle symbols	£2,000
36. Forest Road north of Conde Way (including extension of proposed Green Grid link to between Conde Way and Chalet Hill)	650m	Primary	Provision of on-carriageway advisory cycle lanes in both directions.	£26,000
37. Forest Road between Conde Way and Liphook Road	750m	Primary	Provision of on-carriageway advisory cycle symbols	£1,000
38. New Road	410m	Primary	Provision of on-carriageway advisory cycle symbols plus the provision of a link onto the A325 shared-use path and crossing facility.	£1,000
ON-HIGHWAY LINK IMPROVEMENTS TOTAL COST				£152,000

6.8.11 The proposals for the Green Loop and Green Grid on-highway links in central Bordon aim to provide route continuity with off-road proposals and link to major land-uses within the Eco-town. This is reflected by the consistent provision of facilities and extension to routes on Chalet Hill and Forest Road. The total cost of implementing these measures is £152,000.

OTHER CENTRAL BORDON ON-HIGHWAY IMPROVEMENTS NOT INCLUDED ON GREEN LOOP & GREEN GRID MASTERPLAN

6.8.12 It is recommended that an improved pedestrian link is provided between the residential area in Bordon and Tesco, located on Woolmer Way. This link should be provided from the garage block on Jacaranda Road, following the route of existing hedgerow to the entrance of Tesco. This link is approximately 50m in length and the provision of a gravel footpath along this route would cost £4,000.

6.9 A325 STREET ENHANCEMENTS

6.9.1 To take advantage of the new link road due to be provided within Whitehill & Bordon Eco-town a series of improvements are recommended to improve pedestrian and cyclist facilities along the A325. Specifically this will include:

- Provision of three Toucan crossings, either provided as stand-alone facilities or as part of junction improvements at the following locations:
 - North of the junction with Conde Way and Woolmer Way to provide a continuous Green Grid route and link into Woolmer Industrial Estate (£75,000);
 - At the junction with Chalet Hill as part of traffic signal junction, providing a link to and from the proposed town-centre location (Works to be completed as part of junction improvement scheme so no cost under this study); and
 - South of the junction with Station Road and Lindford Road to provide a continuous Green Grid route and link proposed employment, residential and community facilities (£75,000). This is proposed as a stand-alone crossing due to proposals in Junction Mitigation Report to install a roundabout at this location.
- Footway on both sides of carriageway at minimum width of 3m (works completed as part of A325 Traffic Management Study so no cost under this study);
- On road cycleway on both sides of carriageway at a minimum width of 1.5m (works completed as part of A325 Traffic Management Study so no cost under this study); and
- Provision of uncontrolled or informal crossing facilities at all locations where the Green Loop and Green Grid cross the A325. These could include kerb build-outs (to narrow crossing widths) or raised crossings (£15-20,000 each at four locations).

6.9.2 The total cost of A325 proposals is £195,000 to £210,000. These costs exclude works associated with carriageway or footway amendments, which would be completed as part of the A325 Traffic Management Study.

6.10 BUDDS LANE STREET ENHANCEMENTS

6.10.1 To provide a link between the proposed Eco-town town centre, Green Loop and A325 it is recommended that a 3m shared use path is installed adjacent to the existing carriage. This will cost £53,000.

6.11 IMPROVEMENTS APPLICABLE TO ALL AREAS

6.11.1 The existing networks across the settlement area do not actively encourage walking and cycling. Through the development of this Strategy best practice and contributions from public consultation events has identified potential improvements to greater encourage walking and cycling trips. The key to trip generation for these modes of travel is trip generators that capture trips within the settlement area rather than being made to destinations further afield. However, recommendations that have been included to support greater use of the proposed walking and cycling networks include:

- Wayfinding and signage to highlight routes and key destinations for pedestrians and cyclists (around the Green Grid and existing infrastructure) e.g. town centre and railway stations (cost included in Green Grid routes)

- Cycle infrastructure including bike stations and storage facilities at key trip attractors such as community facilities and town centre (£15,000 per station);
- Walking infrastructure including resting posts, benches, water fountains and play areas for children (£2,000 per station);
- Community Hubs at key community facilities to encourage residents to walk or cycle to Central Hubs for day-to-day needs e.g. postal deliveries and convenience stores (cost included in Masterplan). It is also recommended that these Community Hubs would provide information and maps of local Green Loop and Green Grid routes;
- Whitehill & Bordon Smart Phone Application to provide information on waymarking and signage, health & wellbeing, and real time information for buses (£30-50,000);
- 20mph zones to be introduced along key routes to reduce the deterrence impact of vehicles on cyclists and to encourage walking and cycling trips (cost included in Traffic Management Strategy); and
- Road safety education for children to be delivered in tandem with school curriculum (£10,000 per annum for up to ten years).

6.11.2 The measures described above will encourage use of the facilities and will also provide a safer environment in which these types of trips are accessible to a wider range of the local population. Details on the costs associated with these measures are detailed in Section 6.11 below.

6.11.3 The various off road Green Loop and Green Grid improvements, combined with further infrastructure on other key highway links, will assist in addressing the key points of note recorded in Section 4. The proposed infrastructure makes cycling to the various origins and destinations more desirable and accessible whilst also providing attractive leisure routes that have due regard to the surrounding natural environment. A network of potential walking and cycle routes is created via the A325, Green Loop and Green Grid, combined with existing on and off road routes, which provide a continuous route around the Eco-town for pedestrians and cyclists.

6.12 OVERALL STRATEGY RECOMMENDATIONS

6.12.1 To address and summarise the above elements, improvement schemes are recommended and are cited in Table 6.10 to 6.12 below, with comments, estimated cost and proposed phase of delivery. Figure 9 provides an illustrative overview of the measures noted in these tables and includes the numbered location references. For ease of reference, the overall strategy recommendations have been split into three tables as follows:

- Table 6.10 - Green Loop and Green Grid Strategy Recommendations;
- Table 6.11 – A325 Strategy Recommendations; and
- Table 6.12 – Strategy Recommendations to further facilitate walking and cycling.

Table 6.10 Green Loop and Green Grid Strategy Recommendations

Improvement Scheme	Comments	Estimated Cost	S / M / L Term
<p>Alexandra Park, Bordon Inclosure & Deadwater Valley Local Nature Reserve</p> <p>Between Mill Chase Road (Jubilee Park) and A325 (Bordon Inclosure and Quebec Barracks)</p> <p>(Ref: 6 to 8)</p> <p>Part of Green Loop</p>	<p>Provide formal path through Jubilee Park, kissing gates, signage and boardwalks through Alexandra Park and improvements to access through Quebec Barracks from the A325.</p>	£28,000	S
<p>Deadwater Valley Local Nature Reserve:</p> <p>Whole Route</p> <p>(Ref: 26 to 29)</p> <p>Part of Green Loop</p>	<p>Provision of kissing gates, signage and information boards at all external access points to the Local Nature Reserve, provision of waymarker posts along route and replacement of existing wooden plank crossings with boardwalks.</p>	£26,000	S
<p>Central Bordon (Includes Street Enhancements Links)</p> <p>On-highway Green Loop and Green Grid Links (Chalet Hill, Hollybrook Park & Conde Way, Forest Road, New Road, Apollo Drive, Pinehill Road and Devon Road) and Street Enhancement Links (Mill Chase Road, Chalet Hill, Forest Road).</p> <p>(Ref: 34 to 39)</p>	<p>Install advisory cycle lanes on Chalet Hill, Holybrook Park & Conde Way and Forest Road north of Conde Way plus provide a shared-use path between Conde Way & A325. Provision of on-carriageway cycle symbols on Forest Road south of Conde Way, New Road, Apollo Drive, Pinehill Road and Devon Road.</p>	£152,000	S
<p>Pinehill Area</p> <p>Between Oakhanger Road and A325</p> <p>(Ref: 1, 2, 3)</p> <p>Part of Green Loop</p>	<p>Install shared-use Green Loop route between Oakhanger Road and A325 through existing MOD recreation ground, woodland, Oakley Rd, Beaufort Rd, Ennerdale Rd. Also construct a pedestrian only link between the shared-use path west of Oakley Road to the A325 north of Essex Road.</p>	£107,000	L
<p>Pinehill & Hogmoor Area</p> <p>Station Road and Oakhanger Road</p> <p>(Ref: 4, 5 and 22)</p> <p>Part of Green Loop</p>	<p>Installation of a shared-use path adjacent to the existing carriageway.</p>	£114,000	L
<p>Alexandra Park</p> <p>Between Saville Crescent and Bordon</p>	<p>Install kissing gate and information board at Saville Crescent along with boardwalks</p>	£39,000	L

Improvement Scheme	Comments	Estimated Cost	S / M / L Term
Inclosure (Ref: 9 & 10)	linking path to existing north to south route. Also install waymarker sign posts along route and a kissing gate at north edge of Alexandra Park		
Bordon Inclosure Between Quebec Barracks, Canes Lane (Lindford) and Lindford Road (Ref: 11 to 13) Part of Green Loop	Provide a shared-use path between Quebec Barracks, Canes Lane and Lindford Road up to 3m in width with Hoggin surfacing where removal of existing surfacing is not required.	£106,000	L
Bordon Inclosure Secondary network routes (Ref: 14 & 15)	Install kissing gates, signage and a 2m path between Bordon Inclosure and Lindford and Lindford Road (at Lindford Farm).	£44,000	L
Lindford Headley Mill to Lindford Village Hall path (Ref: 16)	Installation of kissing gate and signage access points and provision of 2m Hoggin path through woodland here possible without removal of vegetation.	£48,000	L
Lindford Chase Road, Canes Lane and Washford Lane (Ref: 17)	Provision of on-carriageway cycle symbols and signage to increase awareness of cycle route plus provision of lighted bollards on existing bridge across river	£5,000	L
Hogmoor Inclosure Between Hogmoor Road, Firgrove Road, A325 Oakhanger Road (Ref: 18 to 20, 23 and 24) Part of Green Loop	Provide north / south and east / west paths shared-use paths with links to the A325 and Woolmer Industrial Estate with Hoggin surfacing, signage and resting points at appropriate locations.	£365,000	L
Hogmoor Inclosure Between Hogmoor Road, Firgrove Road, A325 and Oakhanger Road. (Ref: 21) Part of Green Loop	Installation of kissing gates and directional signage at access points or junctions with the primary route network and provision of resting points every 500m.	£8,000	L
Hogmoor Area Between Hogmoor Inclosure, Eco-town Town Centre and A325	Installation of hardstanding shared-use path with low level lighting and signage at appropriate locations	No cost under this study. Part of town	L

Improvement Scheme	Comments	Estimated Cost	S / M / L Term
		centre redevelopment	
Deadwater Valley Local Nature Reserve: Links to Hollywater Road (Ref: 30 & 31)	Provision of 2 unbound paths (which does not require tree felling) with appropriate signage and kissing gate at access points to Hollywater Road.	£14,000	L
Standford Grange Farm (Ref: 32 & 33)	Woodland clearance and Installation of one shared-use path and one secondary network path with Hoggin surfacing, route signage at appropriate points and resting points every 500m	£153,000	L

Table 6.11 A325 & Other Street Enhancement Strategy Recommendations

Improvement Scheme	Comments	Estimated Cost	S / M / L Term
Woolmer Way and Jacaranda Road	An improved pedestrian link between the residential area in Bordon and Tesco, located on Woolmer Way. This link should be provided from the garage block on Jacaranda Road, following the route of existing hedgerow to the entrance of Tesco.	£4,000	S
A325 Corridor North of Lindford Road / A325 Junction	Construction of Toucan crossing facilities recommended north of the junction to facilitate crossing between Eco-town land-uses.	c. £80,000	M
A325 Corridor Chalet Hill / A325 Junction	Chalet Hill / A325 junction arrangement altered to provide priority for pedestrians, reduce traffic speeds and severance. Signal controlled pedestrian crossing facilities introduced and surfacing altered to facilitate lateral and diagonal 'X' crossing points with an all red phase in signals. Examples include Oxford Circus junction, London and Maid Marion Way junction in Nottingham.	No cost under this study as included in junction improvement works	M
A325 Corridor North of Woolmer Way / Conde Way / A325 Junction	Construction of Toucan crossing facilities recommended north of the junction to facilitate crossing between Eco-town land-uses.	c. £80,000	M
A325 Corridor Footway Widening	Footway to be introduced along full length of A325 throughout Whitehill & Bordon extending from extent of Northern Employment Area to junction with Liphook Road. Subject to detailed design, footway to be provided on both sides of carriageway at a minimum width of 3m, allowing spacing for chat, play and street furniture such as resting posts, water fountains and bus stops. Footway width adjacent to the town centre area should be increased to a minimum width of 4m to account for pedestrian volumes and composition.	No Cost under this study as included in A325 Traffic Management Scheme	M
A325 Corridor Carriageway Amendments	On road cycle lanes to be introduced along full length of A325 throughout Whitehill & Bordon extending from extent of Northern Employment Area to junction with Liphook Road. Subject to detailed design, cycle lanes to be provided on both sides of carriageway at a minimum width of 1.5m. This could be implemented with a remaining carriageway width of 5.5m. Coloured carriageway surfacing will be introduced to delineate the cycleway.		M
A325 Corridor	Uncontrolled or informal pedestrian crossing points to be	£15-20,000	M

Improvement Scheme	Comments	Estimated Cost	S / M / L Term
Other Green Loop and Green Grid Crossing Points	<p>introduced / improved at the following locations to provide a continuous route along the Green Loop and Green Grid:</p> <ul style="list-style-type: none"> - Between Ennerdale Road and Quebec Barracks employment and housing area. Part of Green Loop - Between Essex Road and Quebec Barracks - Between New Road and route into Hogmoor Inclosure. Part of Green Loop 	per crossing	
Budds Lane	Provision of a 3m shared-use path adjacent to carriageway	£53,000	L
Other Green Loop and Green Grid Crossing Points	<p>Pedestrian and / or Cycle crossing points to be introduced or improved at the following locations (subject to detailed design):</p> <ul style="list-style-type: none"> - Oakhanger Road to link into route to BOSC; - Station Road close to new employment areas; - Forest Road between Pinehill Road and Devon Road; - Mill Chase Road close to Mill Chase Technology Community College; - Conde Way between Forest Road; - Conde Way between Green Grid and Apollo Drive; - Hollywater Road between Deadwater Valley Local Nature Reserve and Stanford Grange; - A325 Relief Road at appropriate intervals. 	<p>£5-20,000 per un-signalised crossing £50-80,000 per signalised crossing</p>	L

Table 6.12 Strategy Recommendations to Further Facilitate Walking and Cycling

Improvement Scheme	Comments	Estimated Cost	S / M / L Term
Road Safety Education	Education for children to be delivered in tandem with school curriculum by Road Safety Officer on a termly basis. Primary and Secondary schools to be targeted to ensure full coverage.	c. £100,000 @ £10,000 per annum	S, M & L
Technology Innovations Whitehill & Bordon 'Application'	Application (for smart phones and tablets) to be developed to: <ul style="list-style-type: none"> - Facilitate waymarking as part of the Signage Strategy - Provide information on: health and wellbeing, alternative routes, route information, public transport times, infrastructure locations - RTPI interface - Application to be designed, coded, tested, infrastructure developed and validated 	c. £30-50,000	M
Community Hubs	Staffed Community Hubs to be introduced at key locations within residential areas around Whitehill & Bordon. Residents will be encouraged to walk or cycle to Central Hubs for day-to-day needs, including: <ul style="list-style-type: none"> - Postal deliveries; - Convenience Shopping; - Community information; and - Community social events and gatherings. <p>The Community Hubs are intended to integrate walking and cycling into residents' every day activity.</p>	To be included within development	L
Cycle Infrastructure	Cycle infrastructure to be introduced along A325 and green grid and green loop, in the form of: <ul style="list-style-type: none"> - Bike stations accommodating bike pumps, water fountains and seating; and - Secure and sheltered storage facilities e.g. bike lockers. 	c. £15,000 per station	M
Walking Infrastructure	Walking infrastructure to be introduced along A325 and green grid and green loop, in the form of: <ul style="list-style-type: none"> - Resting 'posts' at 100m intervals along walking routes - Benches at key nodes; - Water fountains; and - Natural play areas for children. 	c. £2,000 per station	M

6.12.2 As noted, the phasing of the schemes, principally the medium and long term elements should be read as estimation only and will be dependent on the Eco-town development progressing accordingly. As many of the Green Loop and Green Grid links will form routes between parts of the Eco-town and surrounding areas, the implementation of these proposals in-line with the development phasing is appropriate.

6.12.3 Indicative budgetary costings have been calculated and are intended to inform decision making about the programming and phasing of schemes. Detailed cost estimates fully considering feasibility and constraints should be undertaken in due course to refine the costings and viability of schemes. Table 6.13 shows the costs for short, medium and long-term recommendations to the Green Loop and Green Grid.

Table 6.13 Short, Medium and Long-Term Recommendations

Recommendations	Cost
Short-Term (1 to 3 years)	£240,000
Medium-Term (+3 years)	£412,000 to £447,000
Long-Term (+5 years)	£1,276,000 to £2,113,000

6.12.4 The infrastructure detailed within Table 6.10, 6.11 and 6.12 is recommended to mitigate the key issues identified during the Existing Conditions Review and to provide a series of links that will foster wider use of the network for walking and cycling for all types of user. As noted in Section 4, many of the issues identified were specific to certain routes or areas within Whitehill & Bordon, which will require further consideration when the detailed design of the Whitehill & Bordon Eco-town is implemented. Notwithstanding this, the recommendations also highlight various hard and soft measures (Road Safety Education, Crossing Points etc.) to further encourage residents to walk and cycle, meeting the objectives of this Strategy.

7 Conclusions

7.1.1 This Strategy has been developed to provide a series of improvements in walking and cycling networks to assist in meeting the mode share targets established for the Whitehill & Bordon Eco-town and provide an attractive range of leisure routes that recognise the surrounding natural environment. To support development of the Strategy a comprehensive review of existing walking and cycling network conditions has been undertaken, supported by two phases of public consultation events to capture current problems that should be addressed and to provide comments on the draft strategy. During the course of the review the key issues identified were:

- Lack of local trip generators that positively attract residents to Whitehill & Bordon and the corresponding level of trips that are made to other town centres;
- Low level of leisure based walking and cycling activity that occurs within/around Whitehill & Bordon;
- The inconsistent provision for both walking and cycling along the Green Grid / Green Loop routes;
- A325 severance which prevents trips by walking and cycling across the community;
- Personal Injury Accidents involving children;
- Permeability and legibility of existing walking and cycling routes;
- Crossing points that impact on the ability of a wider range of users to access walking and cycling networks;
- High traffic flows that deter other uses of the local road network and routes; and
- Topography which creates difficulties for those who are less mobile.

7.1.2 Further to these existing issues, key comments identified in relation to the draft walking and cycling strategy were as follows:

- Concerns over the impacts to the natural environment and biodiversity as a result of the proposals;
- Concerns over the potential urbanisation of existing areas as a result of proposals;
- There should be three categories of provision based upon commuter trips, routes between residential areas and services and leisure routes;
- A commuter route should be provided alongside the proposed inner relief road, linking into intersecting roads to employment areas;
- Concerns over routes attracting anti-social behaviour and motor-cyclists;
- Concerns over the archaeological impacts to Walldown monuments;
- Roads need to be made safe for cycling and cycling proficiency is essential; and
- Proposals for community hubs need to be clarified.

7.1.3 Taking account of these issues the final strategy contained within this report has been revised to provide a hierarchical approach to network provision that aims to minimise impacts to the natural environment and respect ecological designations, whilst also providing a continuous network of routes around the Eco-town for all users. As a

result, the recommended strategy has been developed into a series of phased improvements to address existing and future concerns through:

- The provision of a primary network of pedestrian and cycle routes that provides a continuous loop around the Eco-town for walking and cycling that links into major employment areas, proposed town centre, existing and proposed residential areas and Lindford;
- The provision of a secondary network of pedestrian routes that provides an attractive set of leisure routes and linkages through natural areas, proposed SANGs and the Deadwater Valley Local Nature Reserve. Proposals for these routes, which follow much of the proposed Masterplan Green Loop alignment, also aim to actively discourage use by cyclists/motorcyclists through the installation of kissing gates at external access points.
- New links to improve walking and cycling connectivity on the existing highway network around Whitehill & Bordon;
- A change in character for the A325 to encourage its use as a main route for walking and cycling;
- New crossing points to provide easier access across main routes;
- Dedicated route facilities to provide better signage, encourage their greater use and to provide rest points; and
- A consistent approach to walking and cycling networks across existing and proposed areas of the Whitehill & Bordon settlement areas.

7.1.4 The estimated total cost of implementing all the short, medium and long-term strategy recommendations included in this report is between £1,928,000 to £2,800,000.

Appendices, Figures & Tables

Appendix A ACCESSION Outputs and Walking and Cycling Catchment Matrices

INTRODUCTION

ACCESSION is a Geographical Information System based accessibility computer analysis tool which has the capability to measure journey distances and times for all modes of travel.

The programme was developed on behalf of the Department for Transport in response to their requirement for accessibility indicators to be included within the second round of Local Transport Plans. As such, ACCESSION is the national standard (in England), government approved tool for accessibility mapping.

The pedestrian and cycle linkages in and around Whitehill & Bordon were coded into ACCESSION as well as routes proposed in the Eco-town Masterplan. The outputs from the ACCESSION modelling have been used in conjunction with the gap analysis to understand and identify any missing or broken pedestrian and cycle links. Pedestrian and cycle ACCESSION modelling has been undertaken separately, and each are summarised in Appendix A.

ACCESSION MODELLING

To undertake the ACCESSION Modelling and on site observations, key origins and destinations throughout Whitehill & Bordon have been selected. The key origins and destinations throughout the town have been established as follows, with all residential areas being classified as origins and all other land uses as destinations.

- Origins (residential)
 - St Lucia Park
 - Chalet Hill / Forest Road
 - Hollybrook Park / Marsh Close
 - Conde Way / Forest Road
 - Western Residential Area
 - Station Road / Budds Lane
- Destinations (other land uses)
 - Northern Employment Area
 - Quebec Barracks
 - Secondary School / Sports Hub (western)
 - Conde Way / Forest Road
 - Primary School
 - Eco-Town Centre
 - Eco-Town Centre (office / leisure / culture)
 - Secondary School / Sports Hub (eastern)
 - Forest Centre
 - Viking Park

The origins and destinations listed above have been selected to ensure inclusion of a wide catchment of the entirety of the developed area of Whitehill & Bordon and a diverse selection of land uses.

ACCESSION MODELLING WALKING

Paragraph 75 of PPG13 states that: *“walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres.”*

Guidance given by the Institute of Highways and Transportation (IHT) in their publication ‘Guidelines for Providing for Journeys on Foot, 2000’ suggests that in terms of commuting, walking to school and recreational journeys, walk distances of up to 2,000 metres can be considered, with the desirable and acceptable distances being 500 metres and 1,000 metres respectively.

For non-commuter journeys the guidance suggests that walk distances of up to 1,200 metres can be considered, with the acceptable and desirable distances being 800 metres and 400 metres respectively.

Assuming a ‘typical’ walking speed of approximately 4.8 kmph (3mph), Table A1 below summarises the broad walk journey times that can be ‘considered’; are ‘acceptable’; and those that are ‘desirable’.

Table A1 Walk Journey Times

IHT Standard	Distance (m)		Walk Time (mins)	
	Commuting, Walking to School and Recreation	Other Non-commuter Journeys	Commuting, Walking to School and Recreation	Other Non-commuter Journeys
‘Desirable’	500	400	6.25	5
‘Acceptable’	1,000	800	12.5	10
‘Considered’	2,000	1,200	25	15

Source: IHT ‘Guidelines for Providing for Journeys on Foot’

In analysing the ACCESSION outputs it is important to consider the IHT Guidelines to determine the internal accessibility of Whitehill & Bordon. As detailed in Table A1 above, the IHT Guidelines state that a 25 minute walk is classified as ‘Considered’, with a 12.5 minute walk classified as ‘Acceptable’.

To ensure that the significant majority of walking routes between origins and destinations in Whitehill & Bordon are appropriate, a 20 minute walk time threshold has been considered in this analysis. The walking speed for the ACCESSION modelling is 4.8kmph / 3mph.

Full illustrative outputs from the ACCESSION modelling are included at Appendix A and Table A2 below provides a summary of the walk times between the various origins and destinations. These are actual walk times, rather than ‘as the crow flies’.

Table A2 Walking ACCESSION Output Summary

ACCESSION Modelling Walking Accessibility	Northern Employment Area	Quebec Barracks	Secondary School / Sports Hub (Eastern site)	Primary School	Town Centre	Town Centre (office / leisure / culture)	Secondary School / Sports Hub (Western site)	Forest Centre	Viking Park
St. Lucia Park (residential area)	Light Green	Green	Orange	Orange	Light Green	Yellow	Light Green	Orange	Red
Chalet Hill / Forest Road	Orange	Light Green	Light Green	Light Green	Green	Light Green	Yellow	Light Green	Yellow
Hollybrook Park / Marsh Close	Red	Orange	Light Green	Orange	Yellow	Orange	Orange	Light Green	Orange
Conde Way / Forest Road	Red	Orange	Orange	Yellow	Yellow	Orange	Orange	Light Green	Light Green
Western Residential Area	Yellow	Orange	Red	Green	Light Green	Light Green	Light Green	Orange	Orange
Station Road / Budds Lane	Light Green	Yellow	Red	Light Green	Light Green	Light Green	Light Green	Orange	Yellow

0 to 5 Minutes	6 to 10 Minutes	11 to 15 Minutes	16 to 20 Minutes	21 to 25 Minutes	26 to 30 Minutes	Over 30 Minutes
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The outputs included in Figure A1 and Table A2 above highlight the origins and destinations which are most accessible (i.e. under a 20 minute walk time from other origins and destinations) and least accessible (i.e. over a 20 minute walk time from other origins and destinations). The town centre is most accessible to all origins affording the (existing and future residents) with the impetus to walk and cycle to the town centre.

The origins and destinations which are least accessible (i.e. over a 20 minute walk time from other origins and destinations) are: Hollybrook Park / Marsh Close, Conde Way / Forest Road, Northern Employment Area, Secondary School / Sports Hub (eastern site) and Viking Park. It is of note that each of the origins / destinations which are least accessible are located on the periphery of Whitehill & Bordon. Each of these origins / destinations are considered in turn below in terms of their accessibility.

HOLLYBROOK PARK / MARSH CLOSE: ORIGIN

As shown on Figure A1, the residential origin of Hollybrook Park / Marsh Close is located in the south east parcel of Whitehill & Bordon, and forms the periphery to the existing residential area.

The destinations which cannot be accessed within a 20 minute walk from Hollybrook Park / Marsh Close are located to the west of the A325, namely the Northern Employment Area and Viking Park. Considering the ACCESSION output it is evident that

pedestrian linkages *through* the existing residential area need to be improved and introduced to allow permeability and access to areas west of the A325.

The majority of roads within the existing residential areas form culs-de-sac, which currently do not offer permeability. Permeability needs to be introduced to encourage alternative routes. The alternative routes must be visible to enable residents and visitors alike to negotiate the area with ease. These elements are considered and detailed further in Section 5 – Strategy Recommendations.

CONDE WAY / FOREST ROAD: ORIGIN

The residential origin of Conde Way / Forest Road junction is located in the south east parcel of Whitehill & Bordon, south west of Hollybrook Park / Marsh Close, as shown on Figure A1. The destinations which cannot be accessed within a 20 minute walk of Conde Way / Forest Road are the Northern Employment Area, the Secondary School / Sports Hub (western parcel), and the Eco-Town Centre community facilities.

Conde Way / Forest Road is on a direct route (via the A325) to each of these destinations. In this circumstance, it is prevalent to consider the composition of the land use parcels as opposed to encouraging walking through increasing linkages / crossing points etc. The Eco-Town Masterplan currently posits defined parcels of varying land uses e.g. Northern Employment Area, rather than peppering land uses across the Eco-Town. Peppering land uses encourages walking, and also cycling, to a greater extent as it allows pedestrians to reach a variety of destinations at any one time. These elements are considered and detailed further in Section 5 – Strategy Recommendations.

NORTHERN EMPLOYMENT AREA: DESTINATION

The Northern Employment Area destination is located in the north west parcel of Whitehill & Bordon as shown on Figure A1. The origins which cannot be accessed within a 20 minute walk of the Northern Employment Area are the residential origins of Hollybrook Park / Conde Way and Conde Way / Forest Road (as noted above), Lindford and the proposed residential area in the south west parcel of Whitehill & Bordon. It is evident that the points noted above in terms of permeability and peppering of land uses need to be considered and addressed for the Northern Employment Area. These elements are detailed further in Section 5 – Strategy Recommendations.

SECONDARY SCHOOL / SPORTS HUB (EASTERN SITE): DESTINATION

As shown on Figure A1, the Secondary School / Sports Hub (eastern site) is located in the south east parcel of Whitehill & Bordon, on the eastern periphery of the town. The site is one of two areas highlighted within the Eco-Town Masterplan to accommodate a Secondary School or Sports Hub. The origins which cannot be accessed within a 20 minute walk of the Secondary School / Sports Hub site are the majority of residential areas of Lindford, the proposed residential areas on the western side of the A325 and the existing residential areas in south Whitehill & Bordon.

Whilst it is evident that pedestrian linkages to the Secondary School / Sports Hub (eastern site) could be improved as part of the Walking and Cycling Strategy, it is anticipated that this will not reduce walk times significantly. The nature of the Secondary School / Sports Hub (eastern site) dictates that it should ideally be located at the heart of the community to ensure that it is accessible to the majority of local residents. These elements are detailed further in Section 5 – Strategy Recommendations.

VIKING PARK: DESTINATION

Viking Park is located in the south west parcel of Whitehill & Bordon adjacent to the A325, as shown on Figure A1. The origins which cannot be accessed within a 20 minute walk of Viking Park include Lindford, sections of the residential areas to the east of the A325 and existing residential areas in the northern section of Whitehill & Bordon.

It is evident that the residential origins considered in the above paragraphs, account for the inaccessibility of employment pockets such as Viking Park. Key issues to be addressed to improve pedestrian linkages include introducing additional linkages to encourage permeability and peppering land uses. As noted above, these elements are detailed further in Section 5 – Strategy Recommendations.

ACCESSION MODELLING CYCLING

Paragraph 78 of PPG13 states that: *“cycling ...has potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport.”* The catchment of Whitehill & Bordon ensures that all origins and destinations are within a 5km cycle ride.

Full illustrative outputs from the ACCESSION modelling are included in Figure A2 and Table A3 below provides a summary. The cycle times are shown from each of the key locations and are based on a cycling speed of 16km/hour (10mph). Typically ACCESSION modelling assessments consider cycling speeds to be 18km/hour (11mph). A manual reduction in the typical speed has been applied to take account of the topography across Whitehill & Bordon, resulting in a more ‘realistic’ cycling speed.

Table A3 Cycling ACCESSION Output Summary

ACCESSION Modelling Cycling Accessibility	Northern Employment Area	Quebec Barracks	Secondary School /Sports Hub (Eastern site)	Primary School	Town Centre	Town Centre (office / leisure / culture)	Secondary School / Sports Hub (Western site)	Forest Centre	Viking Park
St. Lucia Park (residential area)									
Chalet Hill / Forest Road									
Hollybrook Park / Marsh Close									
Conde Way / Forest Road									
Western Residential Area									
Station Road / Budds Lane									

0 to 5 Minutes	6 to 10 Minutes	11 to 15 Minutes	16 to 20 Minutes	21 to 25 Minutes	26 to 30 Minutes	Over 30 Minutes
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As can be seen from Table A3 above, all of the origins and destinations within Whitehill & Bordon can currently be accessed within a maximum of a 10 minute cycle ride. However, the ACCESSION modelling is based upon linkages, and does not take into account the user experience i.e. topography and environment of a walk or cycle route. The current user experience could be attributed to the low levels of cycling in Whitehill & Bordon.

Notwithstanding this, it is evident from Table A3 above that the internal accessibility of Whitehill & Bordon provides an excellent foundation for developing a Cycling Strategy, concentrating on infrastructure - for example, secure storage for cycles at origins and destinations.

ACCESSION MODELLING SUMMARY

In summary it is evident from the ACCESSION Modelling that the key elements to be addressed in terms of walking and cycling are:

ACCESSION MODELLING: SUMMARY

Walking

- Permeability
 - Dead-end impact of culs-de-sac needs to be countered.
 - Ensure routes are visible in terms of signage
- Location and composition of key land uses
 - Composition of destinations needs to be considered
 - Location of destinations needs to be considered to ensure community land uses are equidistant from residential areas.

Cycling

- Topography
- Environment

As noted above, the ACCESSION modelling is based upon key linkages, and does not take into account the topography and environment of a walk or cycle route. In addition to undertaking the quantitative ACCESSION analysis, it is therefore appropriate to consider a qualitative assessment in tandem. The on-site observations and route audits detailed below consider the origins and destinations in this respect.

Appendix B Personal Injury Accident Data

PEDESTRIAN ACCIDENTS

During the study period, a total of 21 PIAs involved pedestrians, of which four were classified as serious and 17 as slight. All of the accidents are summarised below, regarding each of the key links on the local highway network within the study area.

A325

On the A325 there have been eight accidents involving a pedestrian, six of which were classified as slight and two as serious. These accidents are set out in detail in the following paragraphs.

One of the slight accidents occurred when a pedestrian, aged 11, crossed the A325 Petersfield Road adjacent to Whitcomb Terrace. The pedestrian was crossing at the signalised crossing when a car collided with them.

A further slight accident occurred when a pedestrian attempted to cross the A325 High Street and was struck by a car. The pedestrian was crossing between stationary vehicles and was not seen by the car turning right into Highview Business Centre from the A325.

A car travelling north along the A325 High Street utilised a lay-by adjacent to Highview Business Centre to perform a U-turn, a pedestrian crossing the road walked into the nearside of the car, resulting in the accident being classified as slight.

A further slight accident occurred when a van, turning west into the Royal Mail yard from the A325 Camp Road, struck a pedestrian, aged four, who was running along the footway. The accident occurred in daylight hours.

A 10 year old pedestrian was struck by a car on the A325 Camp Road. The car was travelling southbound when the pedestrian and another child ran into the road from the nearside. The accident was classified as slight.

The sixth slight accident occurred when a car was turning right out of Lloyds TSB car park to travel south along the A325 Camp Road. A pedestrian pushing a buggy, who was walking along the footway, adjacent to Camp Road was struck by the car.

One of the serious accidents occurred when a motorcyclist was travelling north along the A325 High Street approaching the junction with Chalet Hill in the offside lane. The motorcyclist struck a pedestrian, aged six, crossing at the signal junction.

The second serious accident occurred on the A325 Camp Road between St Lucia Park and the Post Office. A car was travelling south along the road when two pedestrians ran into the road from an offside direction. The car struck one pedestrian, aged 12.

STATION ROAD

A serious accident occurred on Station Road when a child, aged 10, ran onto Station Road after a ball near Louisburg Barracks and was struck by a car which was travelling east along the road.

CHALET HILL

An accident, classified as slight, occurred when a van travelling northeast along Chalet Hill, negotiated a stationary bus. A 14 year old pedestrian ran out into the carriageway in front of the stationary bus and was struck by the van.

A collision, classified as slight, between a pedestrian and a car occurred at the junction of Chalet Hill and Forest Road. The car was turning into Forest Road from Chalet Hill as the pedestrian was crossing Forest Road resulting in a collision.

CONDE WAY

A serious accident occurred outside the Fire Station, on Conde Way. A pedestrian ran into the road from the wooded area south of the road and was struck by a car travelling west along Conde Way.

OTHER LOCATIONS

In other locations within Whitehill & Bordon there have been nine accidents involving pedestrians, all resulting in slight injuries. These accidents are discussed in detail in the following paragraphs.

There was a slight accident involving a van and a nine year old pedestrian at the junction of Mornington Road and Cypress Road. The van was travelling north along Cypress Road and struck a nine year old pedestrian who ran into the carriageway under cover of a parked ice cream van.

A five year old pedestrian, on a scooter, was crossing Firgrove Road near to the junction with Fir Grove. The pedestrian failed to check the road was clear and collided with a car travelling west along Firgrove Road.

Due to a lack of footway along Lynton Road a pedestrian was walking north in the carriageway. A motorcyclist, also travelling north, struck the pedestrians shoulder as they passed.

An altercation happened on Park Street when a car had parked across the driveway of a house. The owner of the house asked driver to move the car. As the car drove off, it struck the homeowner.

A van was travelling west along Heathcote Road when a pedestrian, aged 11, stepped into the carriageway from the north side of the road and was struck by the van.

A slight severity accident occurred on Heathcote Road when a car and a pedestrian collided. The pedestrian, aged three, ran into the road from the nearside and was struck by a car travelling west along the road.

A car was travelling west along Pinehill Road when it collided with a pedestrian, aged seven, who had run into the road.

A pedestrian, aged nine, was struck by a vehicle on Hollybrook Park when they ran out in front of vehicle from the driver's nearside.

A collision occurred between a car and a pedestrian on Mill Chase Road. The car was travelling in a south-westerly direction when the pedestrian stepped out its path.

CYCLIST ACCIDENTS

During the study period, a total of 15 PIAs involved cyclist, four of which were classified as serious and 11 were classified as slight.

A325

On the A325 there have been four accidents involving cyclists, two were classified as slight and two as serious. These accidents are discussed in detail in the following paragraphs.

One of the accidents classified as slight occurred when a cyclist was negotiating the A325 Petersfield Road/Liphook Road/Firgrove Road roundabout, travelling in a westerly direction. The cyclist was struck by a car travelling north from Petersfield Road.

A cyclist, without lights, was stationary facing north, waiting to turn right into Bordon Inclosure from A325 Camp Road. The cyclist was struck from behind by a car travelling north along A325 Camp Road.

A serious accident involving a cyclist occurred at the A325 Petersfield Road/Woolmer Way roundabout. A car travelling northeast along A325 Petersfield Road failed to give-way to a cyclist travelling round the roundabout from A325 High Street, resulting in the cyclist being struck.

There was a serious accident involving a 14 year old cyclist and a car at the junction of A325 Camp Road and B3002 Station Road. The car was travelling northbound and it had priority at the signalised junction. A bus was in the right hand filter lane, waiting to turn right but held by oncoming traffic. The cyclist was travelling westwards from Lindford Road and rode in front of the bus, into the path of the car.

BUDDS LANE

An accident, classified as slight, occurred at the junction of Budds Lane and Hampshire Road. A 16 year old cyclist was riding eastbound along B3002 Budds Lane, past the junction with Hampshire Road. A car pulled out of Hampshire Road to turn right striking the cyclist.

CHALET HILL

An accident occurred at the junction of Chalet Hill and Somerset Avenue. A cyclist was travelling north along Somerset Avenue, lost their balance due to a heavy rucksack and collided with the rear of a car travelling northwest along Chalet Hill.

An accident occurred at the junction of Chalet Hill and the entrance to Hollybrook Court flats. A car was exiting the Hollybrook Court flats intending to turn left onto Chalet Hill when it collided with a cyclist, aged 14, who was riding along the footway which crossed the junction.

LINDFORD

There were three PIAs involving cyclists within Lindford, two of which were classified as slight and two as serious. These are discussed in the paragraphs below.

At the junction of Broxhead Farm Road and Lindford Road there was an accident, classified as slight, involving a cyclist and a car. The cyclist was waiting to cross Broxhead Farm Road to reach Broxhead Trading Estate when a car travelling northwest towards Sleaford struck the front wheel of the cycle. The cyclist was knocked from their cycle onto the verge.

An accident, classified as serious, occurred at the junction of Liphook Road and Mount Pleasant Road. The cyclist, aged nine, crossed Mount Pleasant Road and was struck by a car travelling along Liphook Road.

A second accident classified as serious, occurred when a car travelling northwest along Hadley Road lost control, mounted the footway and collided with two cyclists.

OTHER LOCATIONS

There were five incidents involving cyclists within other locations in Whitehill & Bordon, all of which resulted in slight injuries. These are discussed in the paragraphs below.

An accident occurred when a cyclist, aged four, was travelling along Gorsedown Close. At the junction with Fernlea the cyclist failed to notice a car travelling east and was subsequently struck.

A car travelling east along Woolmer Way failed to give way and moved off from the side of the carriageway. The car subsequently struck a cyclist who was travelling north along Woolmer Way.

An accident involving a cyclist occurred at the junction of Devon Road and Monica Close. The cyclist, aged seven, was travelling west along Devon Road and attempted to overtake a parked van but they misjudged the position resulting in a collision.

A cyclist, aged nine, crossed Loweswater Gardens from Buttermere Close without looking for oncoming traffic. The cyclist rode into an ice cream van which was travelling south along Loweswater Gardens.

7.1.5 A cyclist was struck by a van on Heathcote Road causing the cyclist slight injury. The circumstances were unknown.

GREEN GRID OFF ROAD ROUTES

With regards the Green Grid, as the routes are off-road there were no accidents recorded on any of the routes. There are however several points where the route intersects with the highway network. There have been incidents involving pedestrians and cyclists in the vicinity of where the Green Grid / Loop intersects with the existing network. However the incidents observed were attributable to error of driver or pedestrian / cyclist.

Appendix C Public Consultation Responses

AMEC RESPONSE

Summary of Consultation Comment	WSP Response
<p>It is AMECs opinion that any cycle / pedestrian route should fall into one of three categories. These are: A commuter route; A domestic route; and A leisure route.</p>	<p>The Walking and Cycling Strategy has been revised in order to recognise and provide for different types of usage and environment, categorising parts of the proposed Green Loop and Green Grid into a primary and secondary network of routes. As part of this hierarchical approach it will be possible to provide a comprehensive network that not only provides pedestrian and cycle links to the major Eco-town land-uses but also provides attractive leisure routes. In all cases the proposals for each route will reflect the surrounding natural environment and any ecological designations which may be present in each area.</p>
<p>It is considered that the strategy as presented does not provide the greatest opportunity to encourage the use of walking and cycling as a realistic alternative to the car for local commuters. The routes suggested seem to predominately consist of upgrades to existing facilities where available, whether they serve a specific purpose or not, and leisure routes.</p>	<p>The proposed strategy is based upon the Green Loop and Green Grid outlined in the 2012 Masterplan. However, this network, alongside proposed street enhancements, provides a comprehensive network of routes between land-uses of the Eco-town.</p>
<p>It is AMECs opinion that the majority of the leisure routes highlighted represent the basis for a sensible leisure strategy, but that these should be supported by greater connectivity to the major new employment area to the north of the development.</p>	
<p>The commuter led strategy, as described, would then be supplemented by the leisure routes which should predominately utilise the green infrastructure (such as the new SANGs) and connections between the areas where either commuter or domestic routes do not exist.</p>	
<p>Figure 7 of the report highlight that significant amount of the proposed links are not within the development site and potentially predominately support the existing residents of Bordon and Whitehill. The question is therefore should the development fund these elements of the strategy?</p>	<p>The aim of the Walking and Cycling Strategy is to provide a comprehensive and cohesive network of pedestrian and cycle links and facilities in Whitehill & Bordon (and Lindford). This includes links to existing residential areas.</p>

LINDFORD PARISH COUNCIL

Summary of Consultation Comment	WSP Response
<p>At present use of the B3004 and B3002 is seen as unpleasant and not without risk of injury. Cycling on the A325 has very little appeal to those of sound mind.</p>	<p>The B3002 and B3004 are not included in the Green Loop or Green Grid. Street enhancements to the A325 will increase the attractiveness of this route for pedestrians and cyclists. The primary network provides alternative routes to the B3002 and B3004 for routes to Lindford.</p>
<p>The development of off road cycle routes is highly desirable, provided due regard is taken for the environment - creation of wide tarmac paths through woodlands can be damaging, and might lead to use by motor cyclists or even cars unless measures are taken to prevent this.</p>	<p>The revised strategy has been updated to reflect environmental and ecological designations of areas surrounding the Eco-town.</p> <p>The revised strategy now proposes the installation of Kissing Gates at all external access points to the secondary network.</p> <p>For the primary network Sustrans and DfT recommend that barriers are only introduced if a definite need has been established.</p>
<p>4.5.15 mentions the Washford Lane footpath and bridge which links Lindford and Bordon. This is a vital link for many residents, including school children. It needs better and more regular maintenance.</p>	<p style="text-align: center;">Noted</p>
<p>There is a lack of cycling links between Lindford and Bordon. But cyclists have long used the Headley Mill and Washford Lane paths without causing problems</p>	<p style="text-align: center;">Noted</p>
<p>5.8: If cyclists and pedestrians are to be encouraged to use the A325, e.g. by wider footways and cycle lanes there must be adequate measures to reduce traffic volumes and speeds. Currently use of this road is dangerous and unhealthy.</p>	<p>A325 traffic management measures and the proposed relief road aim to significantly reduce traffic flows on the A325. These measures will make the route more attractive to pedestrians and cyclists.</p>

WHITEHILL TOWN COUNCIL

Summary of Consultation Comment	WSP Response
Should have included Firgrove Road, Hogmoor Road, Liphook Road, Forest Road (Whitehill), Forest Road (Whitehill), Hollywater Road as dedicated routes as part of the Green Loop/Green Grid	The strategy is based upon the Green Loop and Green Grid contained in the 2012 Masterplan. Existing parts of the highway network included in the Green Loop or Green Grid are Station Road, Mill Chase Road and Chalet Hill, Conde Way, Hollybrook Park, Forest Road, Apollo Drive, Pinehill Road and Devon Road.
Cycle routes should lead to schools such as Atholl Road and Mill Chase Road.	
It is dangerous to have shared use of roads with cars with cycling and walking.	Only shared-use paths are included in the revised proposal, rather than 'shared-space' carriageway schemes. Therefore only pedestrians and cyclists will be using the same path.
20 mph zones have already been implemented outside of all schools, but should be introduced outside Chase Hospital, shopping centres and roads such as cul de sacs for shared space provision.	Where routes from part of the Green Loop or Green Grid proposals have been included in strategy to improve provision for walking and cycling.
Strongly oppose to any cycling routes on any local nature reserves, including Deadwater Valley Nature Reserve, Alexandra Park, Bordon Inclosure, Walldown Scheduled Ancient Monument because it will encourage erosion and disturbance to wildlife from motor bikes and mini motor bikes/off road vehicles. Walldown Monument is now on English Heritage at risk register.	The strategy has now been revised to promote only pedestrian use in Deadwater Valley Local Nature Reserve, Alexandra Park and Bordon Inclosure. This also includes the area of Walldown Ancient Monument.
Do not want hard surfacing of footpaths in local nature reserves due to damage of heathland habitats and rare invertebrate species. Limestone must not be used on sand.	The strategy has now been revised to promote unbound paths on these areas.
Road safety education should be No 1 priority and should include cycle proficiency schemes.	Road safety education has been identified as a key recommendation in the short, medium and long-term.
Cycling storage does not always work unless it is secure and has CCTV.	Noted - this will be given due consideration as part of detailed design and implementation of proposals
Cycle ways need to be clearly marked and segregated from roads and kept separate from footings and pavements to avoid clashes with parents with buggies, the elderly and the disabled	Segregated paths would require further widening of pathways through woodland etc. Design guidance (Sustrans and Department for Transport) states that the recommended width for a shared use path is 3m.
There is no provision in this strategy for bridleways	As there are no bridleways contained in the Masterplan area these have not been included in the walking and cycling strategy. It is considered more appropriate to encourage horse-riders to use facilities outside of Whitehill & Bordon where other routes are available and provide a connected longer distance journey.
There is insufficient consideration of linking walking and cycling routes to the wider countryside and the South Downs national Park.	The strategy is based upon the Green Loop and Green Grid contained in the 2012 Masterplan but Figure 4.2 of the report shows how this provision will link into existing footpaths and bridleways, including Shipwrights Way.
Careful consideration should be given to all footpaths and cycle ways due to the perennial problem of mini motor bikes and ante social behaviour.	Kissing gates to proposed for all external access points to the secondary network to prevent miss-use. For the primary network Sustrans and DfT recommend that barriers are only introduced if a definite need has been established.

HEADLEY PARISH COUNCIL

Summary of Consultation Comment	WSP Response
<p>The report does not seem clear who it is trying to serve. 1.1.4 references Whitehill, Bordon & Lindford but not Standford. 3.3.1. references a network of cycle routes connecting Whitehill & Bordon with surrounding villages & stations. No further references are made to surrounding villages in the report. EHDC produced a cycling strategy in May 2003. A cycling strategy for Whitehill & Bordon should be linked to the relevant parts of that reports recommendations. 3.4.5 talks about taking cycles on trains but plans for a local station have been shelved. 4.5 discusses N-East cycle routes (within W-B). The key link for Headley into Whitehill Bordon (see 3.3.1) across Headley Mill Ford is not discussed. At the moment there is only pedestrian or vehicular access and cycling across the mill is technically illegal. 4.7 discusses Standford despite the omission in 1.4.4.</p>	<p>The strategy is based upon the Green Loop and Green Grid contained in the 2012 Masterplan, but Figure 4.2 of the report shows how this provision will link into existing footpaths and bridleways, including Shipwrights Way.</p>
<p>The report is very detailed in its proposals for walking & cycling links throughout the Eco Town. The aims of this are laudable. When reviewing the report consideration has been taken in respect to Headley Parish and not the detailed routes.</p>	

DEADWATER VALLEY LOCAL NATURE RESERVE

Summary of Consultation Comment	WSP Response
The Trust are very concerned to read in the Walking and Cycling Strategy references to draining. [4.5.8, p 26; 4.5.9, p27; p40 and 4.11.7, p54]. Draining of any part of the Reserve is unnecessary and is not required and will be detrimental to the nature of the Reserve. Possible problems of access or movement through the Reserve associated with wet or boggy areas should be addressed by boardwalks or bridges	References to draining of the Local Nature Reserve are to be removed from the revised strategy. Instead, boardwalks (with timber piles) will be proposed where this is a problem.
There are already areas within the Reserve where wet or boggy ground conditions detract from easy walking. For one of these the Trust is alarmed to see the suggestion of a diagonal path from Knox's Pond to Condé Way. This is one path the Trust deliberately does not manage and seeks to discourage its use and does not welcome the suggestion of the Strategy.	This path has been removed from the revised strategy.
Furthermore, the Walking and Cycling Strategy has not incorporated the necessary restrictions for the boardwalk in Bordon Inclosure, necessarily supported on untreated timber piles. It is absolutely wrong in this habitat to suggest the use of concrete piles [para 5.3.31, p 62].	All boardwalks now proposed to include untreated timber piles rather than concrete.
Where it may be appropriate to add to the surface of any trackway to facilitate the passage of walkers, in the sandy geology of the Folkstone and Sandgate Beds of the region it is almost criminal to suggest the use of limestone dust as a surface medium [para 5.3.11, p 59; diagram 5.2, p 59].	All references to limestone paths have been removed from proposed strategy.
Widespread felling of trees along pathways of over two kilometres in length [Table 5.7, p 69] is unnecessary and entirely inappropriate to a Nature Reserve. The Trust cannot support the concept of clearance as advocated in this Strategy.	All references to felling of trees in Deadwater Valley Local Nature Reserve have been removed from the proposed strategy. Instead the strategy aims to leave existing paths unaltered except where they are hazardous or difficult to negotiate.
Specifically the Trust cannot support the suggestion of more than one path through the small patch of woodland to the east of the River Deadwater and bordering Hollywater Road. In this instance the woodland would be irrevocably fragmented to the detriment of wildlife corridors.	Noted. Only one path is proposed to run through the Local Nature Reserve to Hollywater Road. The northern path will run along the southern boundary of Mill Chase Community College.
The fact that in a few places the track may be reduced to 1.0 metre wide does not prevent access nor passage. The bordering vegetation is regularly trimmed during Reserve maintenance in order to maintain a width of up to 2.0 metres	Noted. Proposals aims to leave existing paths unaltered.
The Trust notices with grave concern the use of the phrases 'at present' and 'currently' in relation to the Bye Laws for the Deadwater Valley LNR. The Trust sees in these phrases an implicit threat to the continuation of these Bye Laws. These Bye Laws were not obtained as a whim but to try and ensure that the peace and tranquillity of the LNR could be preserved, if necessary by force of law.	Such references will be removed from the revised strategy
The illegal use of motorbikes and quad-bikes within the	Access proposals now include the installation

Reserve will also be enhanced or encouraged by the access policy proposed in the Walking and Cycling Strategy [para 5.3.5, p 58].	of kissing gates at all external access points to the Local Nature Reserve in order to actively discourage its use by cyclists, motorbikes and quad-bikes.
The Trust cannot support the concept of unrestricted 3 metre wide access points at any point on the Reserve. In addition, such 3 metre wide access points would not only encourage further fly-tipping (n ongoing Reserve problem) but also facilitate the dumping of even greater quantities of rubbish 'on the fly' than we get at present.	As above
The Trust is also concerned that the 'meandering' routes through the Reserve are seen as only suitable for 'leisure purposes'. Indeed, the Trust maintains that is exactly what the Reserve is there for, a leisure facility for the community managed for wildlife as an LNR.	Noted. The revised strategy now includes Deadwater Valley Local Nature Reserve as part of the Secondary Network which will be used primarily for leisure purposes.
The quotation 'Lighting, □ Given that this is a nature reserve, there is no lighting provided along this route' [Table 4.8, p 41] can be interpreted as meaning that there should be lighting provided on routes within the Nature Reserve. The Trust strongly objects to any such an interpretation.	This statement is included as justification for not proposing lighting. Overall design criteria in the revised strategy has been amended to reflect that lighting should not be provided on any parts of the secondary network.
The suggested provision of seating at 500 metre intervals throughout the Green Loop [para 5.3.17, p 60] fails to appreciate the two problems that the Trust has had with seating within the Reserve (littering and vandalism).	Noted. Reference to seating has now been removed from revised strategy.
The Deadwater Valley Local Nature Reserve should certainly not be 'urbanised' in this way and the important ecological value of the Reserve should not be damaged by imposition of this Walking and Cycling Strategy.	The revised strategy aims to mitigate these concerns through provision of strategy which reflects the local environment of the Nature Reserve.
There are two statements in the Strategy which are not understood by the Trust. 1. Alpine Road is north of Woodlea School. What fencing is indicated in 22 Table 5.5] 2. Where is the stile from the Reserve onto Chalet Hill? [23, Table 5.5].	Point 22 refers to the existing fencing on the western side of the path where it runs parallel to Woodlea Primary School. As this fence is in need of repair the strategy aims to replace and relocate it on the other side of the path where it slopes downhill towards the school. Point 23 should refer to Conde Way rather than Chalet Hill. The stile is located just south of the junction with Apollo Drive.
The Trust welcomes suggestions for improvements to bridges and the provisions of suitable boardwalks in the Reserve (with appropriate piling supports) and suggestions for interpretation and signage.	Noted.

HCC ARHCEOLOGICAL COMMENTS

Summary of Consultation Comment	WSP Response
<p>I note that the strategy involves the upgrading of existing routes as well as the creation of new ones and that there will be some woodland clearance in order to achieve this. There are a number of archaeological sites within the area of the proposed Eco-town and the proposed Green Loop and Grid has the potential to impact upon these. In particular it appears that part of the Green Loop and Grid goes through the Scheduled Monument of Walldown Enclosures. Works in this area will need to secure Scheduled Monument consent and will need to take care not to adversely affect the monument or its setting, some archaeological mitigation may be required.</p>	<p>The Walking and Cycling Strategy has been revised In order to recognise and provide for different types of usage and environment, categorising parts of the proposed Green Loop and Green Grid into a primary and secondary network of routes. As part of this hierarchical approach it will be possible to provide a comprehensive network that not only provides pedestrian and cycle links to the major Eco-town land-uses but also provides attractive leisure routes. In all cases the proposals for each route will reflect the surrounding natural environment and any ecological designations which may be present in each area.</p> <p>Detailed design of all route proposals will include appropriate archaeological assessment.</p>
<p>Elsewhere, particularly in areas of woodland or open heath there is considerable potential for previously unidentified monuments to be present that could be adversely affected by new or expanded routes. We are already aware of a number of earthworks relating to early 20th century or possibly late 19th century military training activities as well as the presence of Bronze age burial mounds in the area, some of which should be considered to be of national significance. The area has not yet been subject to archaeological survey and as such we cannot be certain whether further features are present within areas that might be affected by the routes</p>	
<p>In addition to the possible negative impacts of the proposed strategy it also provides an excellent opportunity to promote and present the cultural history of the area with interpretation panels and guided routes. The history of the area is important to the sense of place and identity of the new town and increasing awareness of it and using opportunities such as this to promote and present it to the community is an ideal way to strengthen that identity</p>	<p>It is proposed to install information boards and access points to the secondary route network. These could be expanded to include interpretation panels or guided routes as the network develops.</p>

LOCAL RESIDENT COMMENTS

Summary of Consultation Comment	WSP Response
<p>Basically, cyclists need the whole road network to be safe and suitable for their use. It is hard to comment at this stage on individual sections of proposed routes within the town area because so many things will change if and when the new town centre is developed. What is lacking is a strategy to provide access to neighbouring settlements such as Liphook and Liss, which would allow onward links via rail or Liss/Petersfield cycle route.</p>	<p>The strategy is based upon the Green Loop and Green Grid contained in the 2012 Masterplan, but Figure 4.2 of the report shows how this provision will link into existing footpaths and bridleways, including Shipwrights Way.</p>
<p>On page 14 the Strategy refers to: "The enhancement and extension of cycle route networks connecting Whitehill & Bordon to the National Cycle Network". What is really needed is provision of a cycle route network connecting Whitehill and Bordon to neighbouring settlements such as Liss and Liphook. The National Cycle Network is fairly irrelevant in this context.</p>	
<p>I am totally opposed to introducing any form of hard surfacing within the Sincs or Sangs, particularly of anything which changes the acidity of heathland. This will damage or destroy the Fauna & Flora which is currently established. No lighting should be introduced in any of the Sincs or Sangs or where there is established woodland. This again will seriously affect the established wildlife of those areas. What is being considered I believe is a city park solution to a rural town and will induce people onto the protected areas surrounding the town.</p>	<p>The strategy has now been revised to propose Hoggin or unbound surfacing in all SINC or SANG areas without lighting.</p>
<p>Walking and Cycling Strategy - Walking, Cycling, Parking and Traffic Management cannot be considered in isolation. -The thrust of this report looks at routes on plan, reviewing their accessibility, safety, permeability, personal security, rest points and so on, from the point of view of an outsider, rather than considering their effect, design and use by residents in different parts of the town.</p>	<p>The proposed strategy has been based upon extensive site visits and surveys of the existing area and existing routes. The strategy aims to provide an attractive and continuous network of walking and cycling routes. The Green Loop and Green Grid outlined in the 2012 masterplan link existing and proposed residential areas to the existing and proposed town centre, Woolmer Trading estate and other employment or community uses.</p>
<p>It is disappointing to find that many cycling routes are simply existing footpaths rather than dedicated cycleways.</p>	<p>The proposals in the strategy are primarily based upon the Green Loop and Green Grid outlined in the 2012 masterplan.</p>
<p>There is little evidence in the Green Grid and Green Loop Strategy Recommendations plan that cycle routes are designed to enable people to cycle to work. Neither Louisburg, Woolmer trading estate or the proposed new shopping centre are well served, while Standford Grange Farm is riddled with cycleways.</p>	<p>The Green Loop and Green Grid outlined in the 2012 masterplan and proposed street enhancements link existing and proposed residential areas to the existing and proposed town centre, Woolmer Trading estate and other employment or community uses.</p>
<p>It is disappointing to find that these reports have been compiled without regard to wildlife issues. Masterplan ambitions state that the "Eco-town will put the outstanding natural environment at the heart of the regeneration."...."Protecting the town's</p>	<p>The Walking and Cycling Strategy has been revised In order to recognise and provide for different types of usage and environment, categorising parts of the proposed Green Loop and Green Grid into a primary and secondary network of routes. As part</p>

<p>heritage." "We aim to achieve a net increase in wildlife biodiversity and to safeguard protected sites." In what way do these three reports address those concerns, and not only avoid damage to the environment - but increase biodiversity?</p>	<p>of this hierarchical approach it will be possible to provide a comprehensive network that not only provides pedestrian and cycle links to the major Eco-town land-uses but also provides attractive leisure routes. In all cases the proposals for each route will reflect the surrounding natural environment and any ecological designations which may be present in each area.</p>
<p>The Target of 50% non-car trips rising to 60%, originating in the "eco-town" is a piece of social engineering which will be very hard to attain if this is not also applied across the whole district. How in any case will this be monitored and assessed?</p> <p>Similarly how will the aim of increasing the mode share of walking trips from 20% to 25% and the mode share of cycling trips from 2% to 12% be monitored and assessed?</p> <p>Where is the baseline data against which any progress could be judged? Without this, these aspirations are meaningless.</p>	<p>Targets for walking and cycling form part of the Masterplan rather than the walking and cycling strategy.</p> <p>Future mode share of walking and cycling would be monitored as part of the Travel Plan that would accompany the development of the Eco-town. A Travel Plan would monitor how journeys are made on a regular basis (potentially every 1-2 years) as the Eco-town is being constructed. Data is usually collected via residential or workplace travel surveys.</p>
<p>Why does a pedestrian path need to be 2m (6'6") wide? Why does a 'shared use' path need to be 3m (9'9") wide?</p> <p>This presupposes that paths will be so busy that the width is necessary to avoid pedestrian/ cyclist collisions. If these are a serious risk, the only practical answer is surely to restrict use to walking or cycling, not both. -How can cyclists be prevented from using a dedicated footpath?</p>	<p>The proposed strategy has followed national guidance provided by Sustrans and the Department for Transport in relation to width of pedestrian and shared-use paths.</p>
<p>What is to stop motorbikes or even cars from using a 3m wide, shared use path?</p>	<p>The revised strategy now proposes the installation of Kissing Gates at all external access points to the secondary network.</p> <p>For the primary network Sustrans and DfT recommend that barriers are only introduced if a definite need has been established.</p>
<p>- 5.1.13 In Hogmoor Inclosure it is suggested that to facilitate horse-riding "a 2m wide equestrian route is provided adjacent to the pedestrian/cyclist shared path, with a 1m separation in between."</p> <p>Which becomes a 6m wide swathe, cut through the landscape. Given that land in Hogmoor is already planned to be used for other purposes, this is clearly an unsustainable. -These kind of measures in Hogmoor Inclosure will similarly urbanise this relic - a heritage - of the heathland which once ran from Kingsley through Woolmer Forest to Greatham and beyond, and turn it into an urban park - objected to by many people.</p>	<p>References to provision for horse-riding have now been removed from the strategy to reduce the width of the route through Hogmoor Inclosure.</p> <p>It is considered more appropriate for horse riders to travel outside of Whitehill & Bordon for such use.</p>

<p>Hardened paths are unsympathetic both to the rural environment and to wildlife. Hogmoor is designated as a SINC - Site of Interest for Nature Conservation. In what possible way will these measures conserve - let alone "increase biodiversity" as the "eco-town" ambition states?</p> <p>-Increased lighting is a pervasive factor in destroying countryside. Its effects are far ranging, from disturbing wildlife and promoting an urban atmosphere, to creating light pollution and destroying dark skies.</p> <p>Efficient carefully shaded street lighting could make this possible if there is a will to do it - surely this is appropriate in an "eco-town".</p> <p>Suitable Alternative Natural Greenspace has to be natural. There is nothing natural about hardened footpaths, benches, handrails, boardwalks and lighting.</p>	<p>The strategy has now been revised to proposed Hoggin or unbound surfacing in all SINC or SANG areas without lighting.</p>
<p>The Green Grid and Green Loop Strategy Recommendations plan, shows twelve 'Staffed Community Hubs' apparently located at random across the town, none of these correspond to the "Eco-station" which has also been designated as a "community hub". The text does little to explain these. What are they and how will their staffing be funded?</p>	<p>Proposals for community hubs have been updated as part of the revised strategy to better take account of proposed Eco-stations and existing community facilities.</p> <p>It is recommended that these Community Hubs would provide information and maps of local Green Loop and Green Grid routes.</p>
<p>I can see how these (measures) might be useful, but in the short term, many of the measures are unnecessary and costly, eg. resting posts, the smart phone application. Also, lower speed limits in the local area have only increased driver aggravation and therefore careless driving.</p>	<p>All measures contained within the strategy are considered useful tools to encourage walking and cycling around the Eco-town.</p>
<p>As a lay person reading the strategies, it is difficult to pick out exactly what provisions are planned for where. I can only hope that what is done on the ground is more effective than current cycling provisions. Shared cycling and walking paths are undesirable, as pedestrians tend to block the cycle routes, and are generally oblivious to approaching cyclists, making collisions possible. The cycling provisions on the Whitehill roundabouts are unrealistic, expecting cyclists to pull off the road, stop and dismount, which is completely unnecessary because the roundabouts are small. The on-road cycle lane in Whitehill is too narrow, full of slippery paint lines, and often blocked by parked cars. All of the current cycle provision is a mere gesture, appearing and disappearing at whim. All cycle lanes must begin and end somewhere specific, not halfway up a hill on a busy road.</p>	<p>Provision of shared-use paths are appropriate for the Green Loop and Green Grid when considering the volumes of pedestrians and cyclists. Segregation would increase widths of routes and increase strategy costs. Street enhancements propose on-street provision (cycle-lanes etc) where required.</p> <p>Overall the strategy aims to provide an attractive and continuous network of routes which should overcome existing concerns relating to discontinuity of provision.</p>

<p>This is a totally misconceived document dealing almost exclusively with proposals in respect of the proposed development of new areas of land to build some 4000 new dwellings. It contains no proposal in respect of the existing community areas. It is a pipe dream and totally ignores the fact that this is a rural area not an urban one. People living here like the rural nature of their surroundings.</p>	<p>The strategy is based upon the Green Loop and Green Grid contained in the 2012 Masterplan, but Figure 4.2 of the report shows how this provision will link into existing footpaths and bridleways, including Shipwrights Way.</p>
<p>Street lighting, benches at regular rest points, hard surfaced paths, designated cycle tracks, "safe areas" and similar items are totally inappropriate and incompatible with a rural area. Street lighting and hard surfaced paths have a seriously adverse effect on wildlife and biodiversity, chalk or limestone surfacing in an area of acid soils, and the heathland in particular, will destroy the flora for which this area is special and protected.</p>	<p>The Walking and Cycling Strategy has been revised in order to recognise and provide for different types of usage and environment, categorising parts of the proposed Green Loop and Green Grid into a primary and secondary network of routes. As part of this hierarchical approach it will be possible to provide a comprehensive network that not only provides pedestrian and cycle links to the major Eco-town land-uses but also provides attractive leisure routes. In all cases the proposals for each route will reflect the surrounding natural environment and any ecological designations which may be present in each area.</p>
<p>Although walking and cycling are good for the environment and residents it also has to be borne in mind that the adoption of walking and cycling within the town will have an adverse effect upon the use of good local public transport</p>	<p>Noted</p>
<p>The general design concern for cycle and pathways to avoid "seclusion", uneven ground, undergrowth, wet ground and darkness - through the the provision of, drainage, lighting, signs and benches on hardened footpaths, point to a relentless urbanisation</p>	<p>The strategy has now been revised to take better take account of environmental surroundings and ecological designations.</p>
<p>Concerns over proposals for a shared-use path on Station Road - Actual loss of both deciduous & coniferous trees will occur. Air pollution will be increased as a result of the removal of trees for path widening. Reduce path to 1.5 to 2m. Or re-locate the cycle-path along northern edge of sports fields</p>	<p>The strategy revised to propose a 3m path only where this can be installed without felling of existing trees.</p>
<p>East to west path north of Saville Crescent - This is only a public footpath as far to Park Street to the west c 100m. It should not be officially extended into the Deadwater Valley Trust land via and onto the local desire path in their land. This will open up the land to inappropriate motorcycle scrambling.</p>	<p>This path is no longer being promoted as part of the revised walking and cycling strategy.</p>
<p>North to south through Alexandra - Following the existing route with a hard surfaced unbound path will result in the death of all the insects that nest in this sandy path situated in the Alexandra Park SINC. Use of Limestone is entirely the wrong ph in any case for acid heathland and mires as here and all proposals involving limestone and any type of surfacing here should be withdrawn.</p>	<p>The strategy has been revised to incorporate only access and signage improvements. The existing path will not be altered from its existing width of surfacing.</p>
<p>Items 9 to 16 of Draft Report – Jubilee Park, Trenchard Park, north of Quebec Barracks, Lindford</p>	<p>The path through Jubilee Park has been relocated to the western side of the park to avoid existing</p>

<p>Farm and south of Canes Lane, between Washford Lane and Headley Mill.</p> <p>If any of these proposals are carried out, particularly 10 to 16 they will result in the loss of the mature and large trees such as of beech and oak or dead and moribund trees that occur in Bordon Inclosure and the Deadwater Valley</p> <p>All proposed 3m paths in this are too wide and will result in un-necessary removal of trees. Proposed routes should either be reduced to 2m wide or withdrawn altogether. I have no objection to the surfacing in these areas where it passes over an existing hard surfaced track passing through shaded ground but all routes must follow existing routes and must not be straightened or drained or have lighted bollards.</p>	<p>trees and the paths through Alexandra Park will not be altered from the existing provision.</p> <p>Through Bordon Inclosure it is proposed to provide a 3m path only where this is possible without removal of existing trees.</p> <p>References to drainage have been removed from the revised strategy.</p>
<p>North to South main route through Hogmoor Inclosure - This proposal is urbanisation gone mad. It is entirely inappropriate to this countryside area to install illuminated bollards. It is very likely they will be vandalised within 3 months in any case but such structures are inappropriate to heathland and woodland.</p>	<p>The revised strategy has been updated to reflect the designation of Hogmoor Inclosure as a SANG – it is now proposed to install a 3m Hoggin path with route signage at appropriate points. No lighting is proposed.</p>
<p>East – west links through Hogmoor Inclosure - This area is a proposed SANG which stands for Suitable Alternative Natural Greenspace. It certainly won't be this if it has illuminated bollards. These are inappropriate in a SINC.</p> <p>Too many E-W tracks are proposed to be surfaced. Limestone should not be used in any case in an acid heathland situation.</p>	<p>The revised strategy has been updated to reflect the designation of Hogmoor Inclosure as a SANG – it is now proposed to install a 3m Hoggin path on parts of the primary network without lighting. For the secondary network, paths will not be changed from the existing width of surface.</p>
<p>Items 21 to 23 of the Draft Report – Deadwater Valley Local Nature Reserve.</p> <p>The Deadwater Trust land is supposed to be a nature reserve. All of these proposals are inappropriate, it is not a commuter route. Only the signage is acceptable.</p>	<p>Please see response to Deadwater Valley Trust</p>
<p>Items 25 and 26 of the Draft Report – Deadwater Valley Local Nature Reserve</p> <p>All this woodland loss in what is supposed to be a nature reserve, plus inappropriate surfacing to the tracks is wrong and these proposals must be rejected.</p>	
<p>Cycle infrastructure to be introduced along A325 and green grid and green loop.</p>	<p>Proposed locations for walking an cycling infrastructure have now been revised to better reflect areas and tie in with community facilities and SANG proposals.</p>

<p>Walking infrastructure to be introduced along A325 and green grid and green loop</p> <p>On the green grid and green loop where these pass through registered SINC land and the Deadwater Trust Nature Reserve land all these elements are inappropriate and do not belong in these habitats.</p>	
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