VOLUME 5 ASSESSMENT AND PREPARATION OF ROAD SCHEMES
SECTION 2 PREPARATION AND IMPLEMENTATION

PART 5

HD 42/05

NON-MOTORISED USER AUDITS

SUMMARY

This document describes the requirements for Non-Motorised User Audit for all trunk road schemes including motorways. It describes the stages at which NMU audits must be carried out and the procedures to be followed, and gives guidance on the issues of possible concern to non-motorised users.

INSTRUCTIONS FOR USE

This is a new document to be inserted into the manual.

1. Remove Contents pages from Volume 5.

2. Insert new Contents page for Volume 5 dated February 2005.

3. Insert HD 42/05 into Volume 5, Section 2.

4. Please archive this sheet as appropriate.

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THE HIGHWAYS AGENCY

SCOTTISH EXECUTIVE

WELSH ASSEMBLY GOVERNMENT
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THE DEPARTMENT FOR REGIONAL DEVELOPMENT
NORTHERN IRELAND

Non-Motorised User Audits

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Contents

1. INTRODUCTION

General

1.1 The objective of this standard is to encourage consideration of the needs of non-motorised users (NMUs) in all Highway Schemes.

1.2 Government policy encourages consideration of the needs of NMUs and supports efforts to increase safety and accessibility by non-motorised modes.

1.3 This Standard sets out the requirements for conducting NMU Audits on schemes affecting trunk roads and motorways.

1.4 NMU Audit is defined as:

A systematic process applied to Highway Schemes, by which the Design Team identifies scheme objectives for NMUs, documents the design decisions affecting NMUs, and reviews designs and construction to assess how well objectives have been achieved.

1.5 NMUs are considered to be pedestrians, cyclists and equestrians. NMU Audits require particular consideration to be given to the needs of disabled people, who may use any of these modes or other equipment such as wheelchairs.

1.6 For the purposes of this standard, users of electrically assisted pedal cycles or powered wheelchairs that conform with current Department for Transport regulations, and may legally be used on pedestrian or cycle facilities, are also considered to be NMUs.

1.7 NMU Audits should promote consideration of NMU interests, and dialogue between the Project Sponsor and the Design Team in order to achieve optimum provision for NMUs within the constraints faced by the Design Team. Its objectives are to:

- encourage the Design Team to take all reasonable opportunities to improve the service offered to NMUs;
- prevent conditions for NMUs being worsened by the introduction of Highway Schemes;
- document design decisions that affect NMUs.

1.8 NMU Audit is not intended to add significant work to the design process. Rather, it is a means of documenting design decisions in a formal and consistent manner. The extent of work required to carry out the NMU Audit process will vary depending on the scale and type of scheme under consideration.

Mandatory Sections

1.9 Mandatory sections of this document are contained in boxes. The Design Organisation must comply with these sections or obtain agreement to a Departure from Standard from the Overseeing Organisation. The remainder of the document contains advice and explanation which is commended to users for their consideration.

Exemption

1.10 If it is considered unnecessary for this Standard to be applied to a particular highway scheme, approval for Departure from Standards must be obtained from the Overseeing Organisation. The Departure application must clearly state why this Standard should not be applied.

Scope

1.11 Unless exemption has been agreed as described above, this Standard must apply to all Highway Schemes on trunk roads, including motorways, for which the Highways Agency, Welsh Assembly Government or the Department for Regional Development Northern Ireland is the highway authority. This Standard does not apply in Scotland.

1.12 The scope must include work carried out under agreement with the Overseeing Organisation resulting from developments alongside or affecting the trunk road.

Implementation

1.13 This Standard should be used forthwith for the planning and design of all new all-purpose trunk roads and Highway Schemes currently being prepared, provided that in the opinion of the Overseeing Organisation this would not result in unreasonable expense or delay to the progress of the scheme. If it is considered that this Standard should not be applied to schemes currently in preparation due to the unreasonable expense or delay that would result, approval for Departure from Standards should be obtained from the Overseeing Organisation.

1.14 This Standard gives some general guidance on the specific requirements of NMUs. However, reference should also be made to TA 90 (DMRB 6.3.5) and TA 91 (DMRB 5.2.4) for further information. In addition supplementary (non-DMRB) guidance that may be of assistance includes the Department for Transport Inclusive Mobility guidelines (DfT, 2002), Cycling By Design (Scottish Executive, 1999), Cycle Audit and Cycle Review Guidelines (IHT, 1998), the Cycle-Friendly Infrastructure guidelines (IHT, 1996) and Guidelines for Providing for Journeys on Foot (IHT, 2000).

Definitions

1.15 **Highway Schemes:** All works that involve construction of new highway or permanent change to the existing highway layout or features. This includes changes to road layout, kerbs, signs and markings, lighting, signalling, drainage, landscaping and installation of roadside equipment. Maintenance works that solely involve a like-for-like replacement or refurbishment of existing highway features are excluded from NMU Audit. However, this Standard does apply to Highway Schemes that are constructed as part of the same procurement package as maintenance works.

1.16 **Overseeing Organisation:** The highway authority responsible for the highway to be audited.

1.17 **Design Organisation:** The organisation(s) commissioned to undertake the various phases of scheme preparation.

1.18 **Design Team:** The group within the Design Organisation undertaking the various phases of scheme preparation. All members of the Design Team should contribute to the NMU Audit.

1.19 **Project Sponsor:** A person within the Overseeing Organisation responsible for ensuring the progression of a scheme in accordance with the policy and procedures of the Overseeing Organisation, and ensuring compliance with the requirements of this Standard.

1.20 **Design Team Leader:** A person within the Design Team responsible for managing the scheme design and coordinating the input of the various design disciplines.

1.21 **NMU Audit Leader:** A member of the Design Team, with the appropriate training, skills and experience, who has responsibility for overseeing the NMU Audit process and for liaison with the Project Sponsor and Design Team Leader.

1.22 **NMU Context Report:** The first stage of NMU Audit. The NMU Context Report is a simple statement of background information on current or potential NMU issues relevant to the scheme. The NMU Context Report should ensure that the Design Team have the necessary information to take appropriate decisions on design elements that may affect NMUs.

1.23 **NMU Audit Report:** An NMU Audit Report is produced for each relevant design stage of a scheme, as agreed by the Project Sponsor. The NMU Audit Report sets out the objectives of the scheme for NMUs, and the objectives of the design stage. It also documents the decisions taken in relation to providing for NMU needs during the design stage, and notes any failures to meet objectives and considerations for subsequent design stages.

2. NMU CHARACTERISTICS

2.1 Scheme designs should reflect the principle that people using a non-motorised mode have the same basic concerns as any transport user. For routes to be viable for NMUs they should:

- not give rise to road safety or personal safety concerns;
- directly facilitate the desired journey without undue deviation or difficulty;
- link origins and destinations;
- be attractive and comfortable to use;
- be accessible to disabled users and people with children and pushchairs;
- be continuous and not subject to severance or fragmentation.

2.2 There is a potential for conflict between some of the requirements described above. Decisions made by individual users will vary according to personal criteria, and users may be willing to trade-off advantages in one respect against disadvantages in another. For example, pedestrians may choose to climb safety barriers rather than divert from their desire line. Different individuals will also have different requirements; for example, an adult pedestrian's desire for a direct route might suggest an at-grade crossing, whereas the need for a safe crossing for child pedestrians in the same location may suggest the need for a grade-separated crossing.

2.3 An individual's transport needs may also vary depending on other factors such as journey purpose. For example, the desire for directness is likely to be much higher on a commuter trip than on a leisure trip. Moreover, in contrast with designing for motorised users, the designer cannot assume any given level of competence, recognition of signs or familiarity with traffic law and conventions on the part of the NMU.

2.4 While pedestrians, cyclists and equestrians share a number of characteristics, the optimum solutions for meeting their needs may vary significantly. For example, a cyclist's desire for speed may be in conflict with an equestrian's desire for a calm environment to keep horses under control. Therefore, in addition to variation between individuals, the designer must also consider variation between the types of user.

2.5 It is therefore important that designers have a clear understanding of the characteristics of different user types, and recognise the implications of their designs for each of those users' needs. The challenge for the Design Team is to attempt to balance these factors in a way that is likely to be acceptable to most users.

2.6 Particular consideration should be given to the needs of the most vulnerable representatives of each type of user. This includes those with sensory impairment, those with mobility difficulties as a result of physical disability or because of, for example, pushing pushchairs, and those who are particularly sensitive to personal security concerns, including older users, child users and women. To be aware of the needs of all possible users requires the exercise of judgement and understanding on the part of the Design Team. It is also important to enter into effective consultation with user group representatives at all stages of the design of a scheme (see Chapter 3).

2.7 A list of common problems experienced by NMUs is included in Annex A. Reference should also be made to TA 91 (DMRB 5.2.4).

3. THE NMU AUDIT PROCESS

Scope of NMU Audit

3.1 NMU Audit should be used as a design tool during scheme development to assist the Project Sponsor and Design Team in ensuring that the needs of all road users are met in scheme design. It is not a process applied by independent scrutineers.

3.2 NMU Audit should consider the implications of schemes for NMU accessibility, safety, comfort and convenience. It does not duplicate Road Safety Audit. While issues of both road safety and personal safety for NMUs should be included within NMU Audit, these should be balanced against consideration of all elements likely to affect NMU travel. NMU Audit is a continuous process, unlike Road Safety Audit which is staged, and should minimise NMU issues identified at Road Safety Audit.

3.3 NMU Audit is not a technical design check. Rather, it should be carried out from the user's perspective and offer an opportunity to assess the value of proposed designs to the end user.

3.4 NMU Audit must actively involve all members of the Design Team. The NMU Audit Leader must act as a focal point and be responsible for managing the process and quality of outputs.

Stages of NMU Audit

3.5 NMU Audit consists of two elements:

- the collation of background information of relevance to NMUs, and the presentation of that information in an NMU Context Report, leading to agreement on the design stages for which an NMU Audit Report is required;
- consideration of NMUs within the design process and following construction. This consideration is to be documented with an NMU Audit Report for each design stage that has been specified by the Project Sponsor.

3.6 The NMU Context Report must be produced at the earliest possible stage in a scheme, ideally where scheme objectives are defined and prior to preliminary design.

3.7 The most likely stages for completion of NMU Audit Reports (subject to the agreement of the Project Sponsor) are:

- **Preliminary Design:** During development of the preliminary design and prior to public consultation and the publication of draft orders (if required).
- **Detailed Design:** During development of the detailed design.
- **Completion of Construction:** Prior to, or shortly after, scheme opening.

3.8 For smaller schemes where design stages are combined, NMU Audit should be applied to the combined stage.

3.9 The NMU Audit Process for schemes for which no Exemption has been granted is represented in Figure 3.1.

Appointment of NMU Audit Leader

3.10 The NMU Audit Leader must have sufficient experience of NMU needs and scheme development to be able to exercise judgment reliably as to the effects of design proposals on NMUs. The Design Team Leader must propose an NMU Audit Leader to the Project Sponsor, including details of qualifications and experience relevant to the role.

3.11 The appointment of the NMU Audit Leader must be subject to the approval of the Project Sponsor. If it is necessary to change the NMU Audit Leader during the course of scheme development, the new appointment must be subject to the approval of the Project Sponsor.

3.12 The NMU Audit Leader must be responsible for ensuring that NMU Audit processes are carried out in accordance with this Standard. The NMU Audit Leader and the Design Team Leader may be the same person.

NMU Context Report

3.13 The NMU Context Report must provide a summary of all available information relevant to existing and potential patterns of use by NMUs within the design life of the scheme. The NMU Context Report must also set out the opportunities and objectives to improve conditions for NMUs.

3.14 Compilation of the NMU Context Report need not be an excessively time-consuming task, particularly for small schemes. The objective of the Context Report is to ensure that the Design Team and Project Sponsor have sufficient information to allow them to fully consider the interests of NMUs within the scheme design.

3.15 Information presented in the NMU Context Report may include, but not be confined to:

- flows of NMUs;
- flows and speeds of motorised traffic;
- existing and future land use;
- desire lines;
- Overseeing Organisation or other highway authority policies and strategic objectives for NMUs in the area affected by the scheme;
- trip generators;
- public rights of way and permissive routes;
- information from user groups on the routes that they use within the area;
- National Cycle Network routes and other routes provided for NMUs;
- transportation modelling (if appropriate);
- accident data;
- the views of relevant user groups, highway authorities, the police and public transport operators;
- regular events, e.g. time trials, that may increase flows of NMUs.

3.16 Much of the necessary information for an NMU Context Report may already be available, for example if an Environmental Assessment has been carried out as set out in DMRB 11.3.8. However it may be necessary in some cases to gather further information. It is recommended that the process described in the following sections should be carried out in compiling the NMU Context Report. For smaller schemes a less detailed approach may be appropriate.

3.17 **Step 1**: On a map or graphical representation of the study area, plot information pertaining to the existing situation. This may include data such as:

- peak and off-peak Motorised Vehicle (MV) flows along the trunk route;
- peak and off-peak MV flows across the trunk route;
- speeds of motor vehicles;
- peak and off-peak NMU flows along the trunk route;
- other peak and off-peak NMU flows in the area;
- NMU accident records, including all casualties and reports of non-injury accidents if available;
- potential routes and desire lines not currently used, e.g. due to personal safety or road safety fears.

3.18 **Step 2**: Consider the existing NMU and motorised traffic flows and speeds, and consider how these are expected to change over the design life of the Highway Scheme.

3.19 **Step 3**: Consider the strategic context of the area and any planned developments. On a map or graphical representation of the study area, plot such features as the:

- locations of relevant strategic NMU routes within the study area defined by the highway authority or user groups;

- locations of routes used by NMUs for which no reasonable alternative exists;
- locations of any known planned developments, changes to land use or other factors that may affect the flows of NMUs and/or motorised traffic within the study area during the design lifetime of the scheme (making reference to strategic and local planning documents);
- routes of public transport services and the location of interchanges.

3.20 **Step 4**: From the plotted data and other information, identify features such as:

- key NMU desire lines;
- locations of potential conflict;
- locations with high motorised traffic flows;
- locations with high NMU flows;
- local Rights of Way;
- National Cycle Network or local cycle routes.

3.21 **Step 5**: Make note of any information or data that may be significant to the project but is not available at this time.

3.22 **Step 6**: Propose the overall objectives for NMUs within the scheme as a whole.

3.23 Examples of NMU Context Reports are provided at Annex B.

3.24 The NMU Context Report must be submitted to the Project Sponsor for approval. If the Project Sponsor is unable to accept the report, or specifies that the scheme objectives for NMUs should be amended, the Project Sponsor may require the NMU Context Report to be re-submitted.

3.25 Scheme development must not proceed until the Project Sponsor has accepted the objectives for NMUs.

3.26 Following acceptance of the NMU Context Report, the Project Sponsor must specify which design stages of the Highway Scheme should be subject to an NMU Audit Report.

3.27 If no issues and no objectives for NMUs are identified within the NMU Context Report, then no NMU Audit Reports are required.

3.28 The validity of the NMU Context Report should be monitored as the scheme design progresses and, if conditions have changed, the report should be updated and re-submitted to the Project Sponsor for approval.

NMU Audit Report

3.29 An NMU Audit Report must be produced at each design stage specified by the Project Sponsor.

3.30 NMU Audit should promote a continuous assessment of NMU needs at all appropriate stages of the design process, leading to a documentation of decisions in an NMU Audit Report at each specified design stage. This must describe the issues for NMUs considered during the design stage and the actions taken to resolve those issues.

3.31 The NMU Audit Report must:

- note any material changes to the information in the NMU Context Report since its publication;
- confirm scheme objectives for NMUs set out in the NMU Context Report and design objectives specific to the stage being audited;
- include a statement of how design objectives have been satisfied. Reasons for failure to achieve objectives must be explained. There must also be a list of issues identified and actions taken to resolve them.

3.32 An example of an NMU Audit Report is provided at Annex C.

3.33 In identifying possible issues, the lists of audit prompts included at Annex A may be used. However, they should not be regarded as exhaustive.

Acceptance of NMU Audit Report

3.34 The NMU Audit Report must be produced at the conclusion of each design stage specified by the Project Sponsor. It must be submitted by the NMU Audit Leader to the Project Sponsor for approval.

3.35 The project must not proceed to Road Safety Audit and the next design stage until the Project Sponsor has accepted the NMU Audit Report for the current stage.

3.36 If the Project Sponsor requires modifications to the scheme design in order to be able to accept the NMU Audit Report, the Project Sponsor may require the NMU Audit Report to be updated and reissued. Where modifications are minor, the Project Sponsor may choose to accept the NMU Audit Report but include a note of modifications on the project file.

3.37 All NMU Context and Audit Reports produced must be signed by the NMU Audit Leader and the Design Team Leader.

Consultation and Site Visits

3.38 It is important that the NMU Audit process is based on a combination of desk assessment combined with site visits and consultation.

3.39 Consultation with interested parties, particularly local authorities, user groups, residents' groups and the police, is valuable in assisting in identifying issues and opportunities for NMUs. These stakeholders can contribute to the quality of the scheme design and should be consulted as early as is practical in the development of designs.

3.40 User groups can contribute significant information, particularly in cases where use of a mode, or the needs of people with certain disabilities, are not within the direct experience of those undertaking the design. It is recommended that such groups are consulted at every appropriate stage of the design process in order that the Design Team is aware of their views as designs are progressed. Local representatives should be contacted where possible. These may be affiliated to national groups (details included in Annex D) and may initially be contacted via those organisations. The local authority may also be able to assist with contacts.

3.41 Such consultation may also be useful in validation of any collected data.

3.42 It is desirable that site visits take place in a range of weather and lighting conditions, particularly at those times of day when it is anticipated that NMU flows are likely to be highest. The location of the scheme and of nearby trip generators such as schools will assist in anticipating both the type and time of use, e.g. commuter, leisure, education; and the nature of the user and, hence, the most appropriate times to conduct site visits.

3.43 An NMU Audit at Completion of Construction must, as a minimum, include site visits during daylight and after dark.

3.44 When conducting a site visit, the member of the Design Team should walk any NMU routes to be affected by the scheme. Where appropriate the route should also be cycled and if practicable ridden by an experienced horse rider (who may not necessarily be a member of the Design Team). It is recommended that only when this opportunity to observe and exercise judgement has been taken should detailed notes be made using the Audit prompts in Annex A.

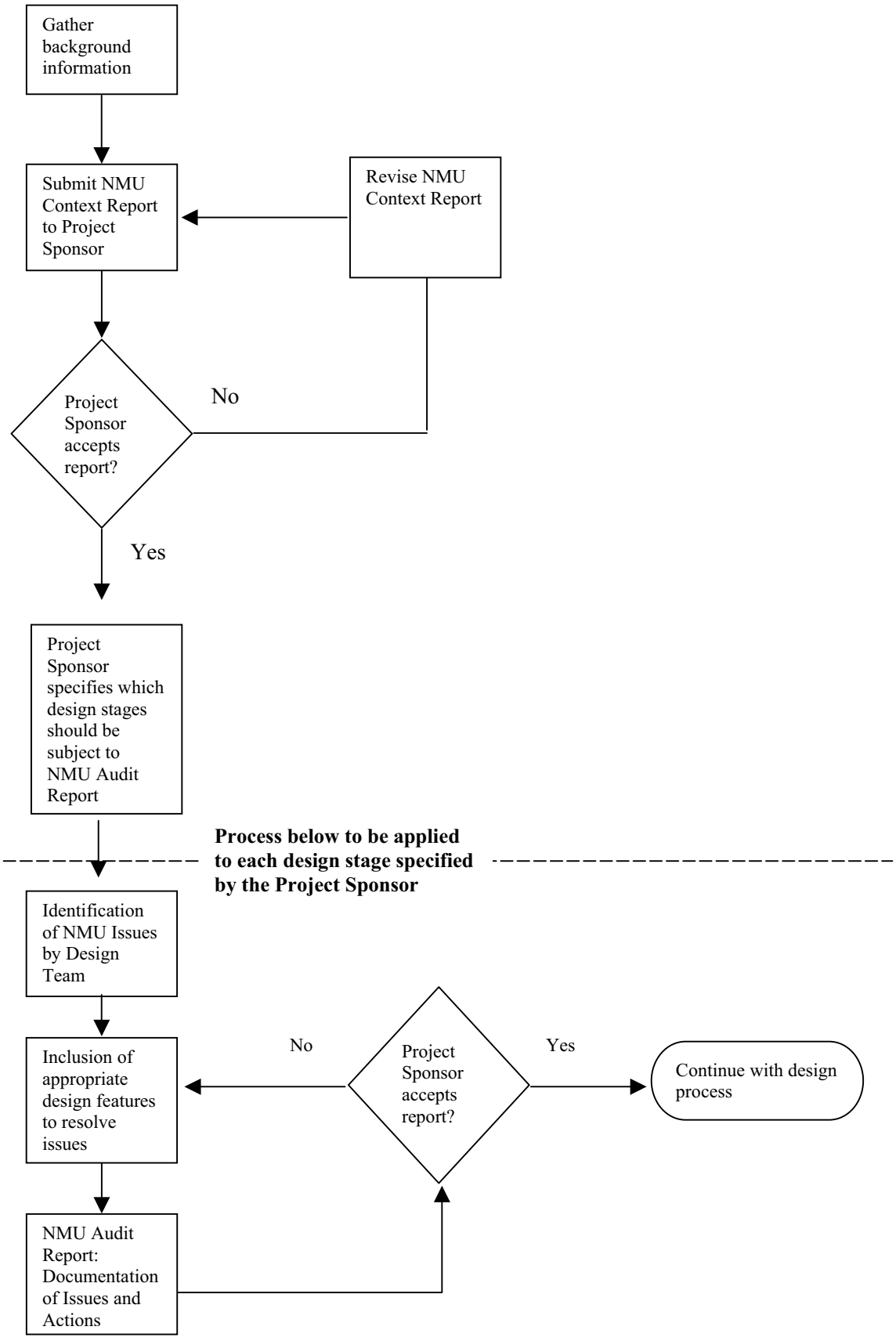

Figure 3.1 Summary of the NMU Audit Process

4. REFERENCES

1. TA 90 (DMRB 6.3.5) The Geometric Design of Pedestrian, Cycle and Equestrian Routes

2. TA 91 (DMRB 5.2.4) Provision for Non-Motorised Users

3. Inclusive Mobility – A guide to best practice on access to pedestrian and transport infrastructure (DfT, 2002)

4. Cycle-Friendly Infrastructure: Guidelines for Planning and Design (IHT/Bicycle Association/ CTC/DfT, 1996)

5. Cycling By Design – A Consultation Paper (Scottish Executive, 1999), in use in Scotland

6. Guidelines for Cycle Audit and Cycle Review (DETR/IHT/The Scottish Office/Department of Environment for Northern Ireland, 1998)

7. Guidelines for Providing Journeys on Foot (IHT, 2000)

5. ENQUIRIES

All technical enquiries or comments on this Standard should be sent in writing as appropriate to:

Chief Highway Engineer
The Highways Agency
123 Buckingham Palace Road
London
SW1W 9HA

G CLARKE
Chief Highway Engineer

Chief Road Engineer
Scottish Executive
Victoria Quay
Edinburgh
EH6 6QQ

J HOWISON
Chief Road Engineer

Chief Highway Engineer
Transport Directorate
Welsh Assembly Government
Llywodraeth Cynulliad Cymru
Crown Buildings
Cardiff
CF10 3NQ

M J A PARKER
Chief Highway Engineer
Transport Directorate

Director of Engineering
The Department for Regional Development
Roads Service
Clarence Court
10-18 Adelaide Street
Belfast BT2 8GB

G W ALLISTER
Director of Engineering

ANNEX A GUIDANCE AND PROMPTS

This Annex gives examples of some of the problems that can occur within scheme design that affect NMUs. It follows with prompts suitable for consideration during the application of NMU Audit. The prompts should not be considered exhaustive nor used as a checklist. They should be used to identify issues which should be documented within the NMU Audit report along with the design solutions determined by the Design Team.

Frequent Problems

Examples of difficulties that may arise for NMUs within scheme design include:

A. Issues common to more than one group of NMUs:

1. Inadequate provision of separate routes/tracks
2. Lack of continuity of routes
3. Inadequate crossing facilities
4. Crossing facilities not sufficiently responsive
5. Inadequate crossing times
6. Fear of 'stranger danger'
7. Fear of motorised traffic danger
8. Inconsistent width of routes
9. Inconsistent width of routes through crossing facilities
10. Lack of segregation of different NMUs
11. Inadequate headroom
12. Inadequate width
13. Obstruction of routes by:
    - overgrown trees, hedges and low branches
    - insufficient headroom under signs, subways, structures etc.
    - motor vehicles parked/loading
    - wheelie bins, rubbish awaiting collection
    - shop display boards, canopies and furniture
    - street furniture
    - temporary street furniture and roadworks
14. Inadequate turning radius for cycles, pushchairs, wheelchair users
15. Designs that do not support effective maintenance, e.g. leading to poor cleaning, sunken gully grates, graffiti etc.
16. Trip and slip hazards, e.g. drain gullies, pot holes, slippery surfaces (when wet) including chamber and inspection covers
17. Dropped kerbs missing or insufficiently low.
18. Gullies located in crossing areas
19. Water ponding in channels at crossing points
20. Routes and crossings away from desire lines
21. Schemes requiring additional NMU deviation from desire lines in comparison to existing routes
22. Poor access to public transport and poor design of bus stops
23. Poor lighting
24. Dazzle by vehicle headlights
25. Lack of NMU direction signs or maps, particularly at complex junctions
26. Poor signing (information, warning and regulatory) along routes
27. Inadequate inter-visibility with other users for personal safety
28. Scheme features or vegetation obscuring NMUs from general view or provide potential hiding places for assailants, giving rise to personal security concerns

29. Subway designs that promote personal security concerns
30. Sensitivity to environmental elements such as graffiti
31. Potential conflicts between different NMU groups, e.g. cyclists and pedestrians
32. See-through for NMU signal displays at staggered crossings
33. Inadequate height of bridge parapets
34. Inadequate height of fencing on approach to bridges
35. Requirement to negotiate steps on the route
36. Gradients too steep

B. Additional Issues for Pedestrians

37. Particular sensitivity to additional distance
38. Crossing facilities at junctions not provided for all movements
39. Crossing layout too complicated for some users
40. Crossing layout leaves pedestrians 'stranded' between motorised traffic streams
41. Inadequate segregation from other modes
42. Inadequate segregation from cyclists and equestrians
43. Guardrailing obstructs inter-visibility between drivers and young pedestrians

C. Additional issues for cyclists

44. Gullies acting as wheel traps on or off highway
45. Facilities provided inadequate (on-carriageway and off-carriageway) for all the different types and numbers of cycle users
46. Poor detailing of design – designer hasn't visited or cycled the route
47. Provision for crossing of side roads inadequate
48. Interruption of routes where private accesses are given priority within a scheme
49. Dropped kerbs not at suitable level
50. Narrow motorised traffic lanes
51. Narrow cycle lanes
52. Speed and volume of motor traffic
53. Poor detailing where cyclists move from on-carriageway to off-carriageway and vice versa
54. Signing and lining incorrect or misleading
55. Inadequate routes through traffic calming features/schemes
56. Inadequate width at refuge crossings
57. Inadequate capacity of refuges serving substantial generators, e.g. schools
58. Pinch points at refuges/parking or where kerb lines change
59. Failure to provide Advanced Stop Lines where they would be beneficial and lawful
60. Roundabout layouts that do not restrict motorised traffic entry and circulatory speeds
61. Lack of provision of wheeling ramps at steps
62. Lack of provision of facilities at junctions
63. Lack of secure and convenient cycle parking
64. Discontinuity of routes
65. Inadequate skid resistance of surfaces, particularly in the approach to points of potential conflict
66. Failure to sign available alternative routes
67. Accumulation of debris in facilities
68. Cycle lanes passing in front of bus stops, parking bays or loading bays, leading to conflicts
69. Incorrect approach angle of facilities for road crossings

D. Additional Issues for Visually Impaired People

70. Absence of tactile information or inappropriate tactile information

71. Particular sensitivity to poor surfacing and trip hazards

72. Inadequate colour and tone contrast between tactile paving and surrounding surfaces

73. Inadequate colour and tone contrast between street furniture and surrounding area

74. Inadequate definition of kerb edge

75. Inadequate warning of steps and changes of level

76. Sudden changes in lighting levels

77. Reflective surfaces, e.g. stainless steel handrails, leading to glare

78. Poor location and orientation of push button units at signal controlled crossing points

79. Step nosings lacking non-slip edges and colour contrast

80. Lack of provision of audible bleeper/rotating cones at signal controlled crossings

81. Lack of notification of changes to disability/ access officer and local groups representing blind and partially sighted people

82. Inadequate segregation from cyclists and equestrians

E. Additional Issues for Wheelchair and Pushchair Users/Mobility Impaired People

83. Gradients of footways, including crossfall, too steep

84. Gullies acting as wheel traps at crossing points

85. Kerbs not dropped sufficiently

86. Features or vegetation obscuring user on approach to conflict points

87. Lack of provision of ramps as alternative to steps

88. Inadequate provision of rest platforms on ramps and of seating on rest platforms where required

89. Height of push buttons at signal controlled crossings

90. Consideration of turning circle of wheelchair and pusher or pushchair and pusher

91. Lack of notification of changes to disability/ access officer and local representative groups

92. Inadequate segregation from cyclists and equestrians

F. Additional Issues for Equestrians

93. Crossing of carriageways (particularly on dual carriageways)

94. Speed of motorised traffic where separate route is not provided

95. Gradients too steep

96. Push buttons too low and too close to carriageway at signal controlled crossings

97. Surface of routes/bridge decking unsuitable

98. Requirement to dismount/provision of mounting block

99. Inadequate height of bridge parapets

Audit Prompts

These prompts are intended to assist in the NMU Auditing of trunk road schemes. The prompts provided are not prescriptive but merely indicate a sample of the NMU issues that should be considered at each stage of a project. The prompts should be used to guide consideration of opportunities to improve conditions for NMUs and to highlight possible areas of difficulty for NMUs. In addition to these specific prompts, particular attention should be given to the problems which can arise for NMUs, listed above, and to the information and scheme objectives set out in the NMU Context Report. Detailed consideration should also be given to any particular issues that have emerged from consultation with stakeholders or user groups.

No detailed exposition is given of the significance of these factors for NMUs; for that information the Design Team should be familiar with, and refer to, the Overseeing Organisation's standards and advice notes as well as supplementary guidance relevant to specific modes.

Preliminary Design

A. Convenience

100. Where may existing or predicted NMU desire-lines be either disrupted or better served by the scheme?

101. Where may the NMUs be forced to deflect significantly from desire lines?

102. Where may direct and obvious connections between the NMU route and other nearby NMU routes need particular attention?

103. Where may direct and obvious connections between the NMU route, origins/destinations and NMU facilities need particular attention?

104. Where will NMUs have to give way to motorised traffic?

105. Where may the priority and safety of NMUs need particular attention?

B. Attractiveness and Environmental Quality

106. Where may the aesthetic qualities of the NMU route be inconsistent with the general standard of the route?

C. Public Transport

107. Where may direct and obvious connections between the NMU route and public transport services need particular attention?

D. Accessibility

108. Where may significant gradient/level changes occur?

109. Where are there vertical or lateral constraints that may affect the dimensions allowed for NMUs?

110. Where are the locations where significant manoeuvring or directional change may be required of NMUs?

111. Where are the locations where the special needs of vulnerable NMU groups may require particular consideration? Consider such vulnerable NMU groups as:

- People with mobility impairments.
- People with visual impairments.
- People with hearing impairments.
- Children and younger people.
- Older people.

E. Safety

112. Where are the locations where there is no segregation between different types of NMU? Consider such different types of NMU as:

- Pedestrians.
- Cyclists.
- Equestrians.

113. Where may inter-visibility between various types of NMU be insufficient?

114. Where are the locations where particular separation and protection from motorised traffic may be needed to ensure the safety of NMUs?

115. Where may raising the visibility of NMUs on the route to motorised traffic on the trunk road need particular attention?

116. Where may the personal security of NMUs need particular attention?

117. Where may the provision of sight lines for NMUs need particular attention?

F. Consistency

118. Where are the locations where the level of service provided to NMUs may be affected by changes in natural lighting levels? (Dawn, day, twilight, night...)

119. Where are the locations where the level of service provided to NMUs may be affected by weather? (Wind, dry, wet, hot, cold…)

Detailed Design

A. Convenience

120. How have NMU routes been designed to optimise the balance between safety and convenience?

121. How have NMU routes been designed to closely align with desire lines without deviation?

122. How have connections to other NMU routes been considered throughout the design of the NMU route?

123. How have connections to origins/destinations and NMU facilities been considered throughout the design of the NMU route?

124. What priority has been given to NMUs throughout the design of the NMU route?

125. Are widths along the whole route, including crossings, adequate for all classes of NMU, including wheelchair users, to be served?

126. Is adequate headroom available on all NMU routes?

127. Is tactile information provided at all appropriate points on pedestrian routes?

128. Are NMU routes given priority over private accesses?

129. Are cyclists and horse riders able to use the routes without dismounting?

B. Attractiveness and Environmental Quality

130. How have the aesthetic qualities of the NMU route been considered throughout its design?

C. Public Transport

131. How have direct and obvious connections to public transport services been considered throughout the design of the NMU route?

D. Accessibility

132. What maximum gradients have been allowed to ensure that NMUs can manoeuvre themselves throughout the route with ease, safety and control?

133. What surfacing textures and tones have been considered throughout the route, including non-slip surfaces and colour contrast at appropriate points?

134. What (lateral and vertical) clearances have been provided to ensure that NMUs can manoeuvre themselves through corners, dips and crests throughout the route?

135. Are dropped kerbs specified at all appropriate points on NMU routes?

136. Are appropriate rest-points provided for NMUs?

137. Are ramps provided as alternatives to steps?

138. How have the special needs of vulnerable NMU groups been considered throughout the design of the NMU route? Special provisions may have been included for vulnerable NMU groups such as:

- People with mobility impairments.
- People with visual impairments.
- People with hearing impairments.
- Children and younger people.
- Older people.
- Adults with young children.

139. How have the NMU facilities been designed and located to ensure that all different types of NMU may use them? Special provisions may have been made for different types of NMU such as:

- Pedestrians.
- Cyclists.
- Equestrians.

E. Safety

140. What (lateral and vertical) clearances have been provided to deliver conflict-free shared use along the non-segregated sections of the NMU route?

141. How has adequate inter-visibility between various types of NMU been provided?

142. How have NMUs been separated and protected from motorised traffic throughout the design of the NMU route?

143. How have NMUs on the route been made visible to the motorised traffic on the trunk road?

144. How have NMUs been protected from headlight glare?

145. How has personal security of NMUs been provided for throughout the design of the NMU route?

146. Is direction signing for NMUs adequate?

F. Consistency

147. What measures have been included to ensure the NMU route provides a consistent level of service regardless of changes in natural lighting levels? (Dawn, day, twilight, night…)

148. What measures have been included to ensure the NMU route provides a consistent level of service regardless of weather? (Wind, dry, wet, hot, cold…)

Completion of Construction

The completion of construction audit could be undertaken in consultation with users. This option should at least be considered at this stage and a decision regarding its suitability should be discussed.

For each of the prompts below, consideration should be given to the needs of vulnerable NMU groups such as:

- People with mobility impairments.
- People with visual impairments.
- People with hearing impairments.
- Children and younger people.
- Older people.

Also, consider your responses in terms of different types of NMU:

- Pedestrians.
- Cyclists.
- Equestrians.

A. Convenience

149. Should the scheme be reviewed by user groups?

150. Where may signing to origins/destinations and NMU facilities lack visibility, clarity or completeness?

151. How could signing to origins/destinations and NMU facilities be improved?

152. Can the time taken for an NMU to traverse a junction, including routes requiring multi-stage crossings, be reduced by adjusting signal timings?

153. Can NMUs, including vulnerable people, traverse crossings within the signal phase allowed?

154. Are buttons to activate crossings accessible to all potential users, including equestrians and wheelchair users?

B. Attractiveness and Environmental Quality

155. Where may environmental features (such as overhanging branches or bushes) obstruct the NMU route or reduce visibility unacceptably?

156. How could the aesthetic qualities of the NMU route be improved?

157. Does drainage of the NMU route need to be improved?

C. Public Transport

158. Where may signs to public transport services lack visibility, clarity or completeness?

159. How could signs to public transport services be improved?

D. Accessibility

160. Where may gradient changes require additional smoothing or kerbs need dropping further?

161. Where may changes in gradient and surfacing textures or tones create difficulties for NMUs?

162. Where may the location or conspicuity of features to assist vulnerable NMUs, such as tapping rails, handrails etc, be improved?

E. Safety

163. How may greater segregation between different types of NMUs be provided?

164. How may the awareness by NMUs of possible hazards be improved?

165. How can inter-visibility between various types of NMU be improved?

166. How may greater separation and protection from motorised traffic be provided to NMUs?

167. How may NMUs be made more visible to motorised traffic?

168. Where may the provision of lighting for NMUs be insufficient?

169. Is all information, including signing and tactile information, correct and compliant with TSRGD?

170. Are there hazards including steps and obstructions that should be fenced off and/or marked with coloured and tactile surfaces or other information?

171. What measures could be provided to improve personal security for NMUs?

172. Does the location or variety of soft landscaping need to be changed to prevent future problems of visibility or personal security?

173. Are there obstructions, including tapering obstructions, street furniture or parked vehicles, that should be removed from the route?

174. Are drainage facilities adequate to minimise route flooding? Do drainage gullies and gratings need to be repositioned away from NMU routes and crossings?

F. Consistency

175. What measures could be installed to further minimise the effects of changes in natural lighting levels on the level of service provided to NMUs? (Dawn, day, twilight, night…)

176. What measures could be installed to further minimise the effects of weather on the level of service provided to NMUs? (Wind, dry, wet, hot, cold…)

ANNEX B EXAMPLE NMU CONTEXT REPORTS

Example 1 - Context Report for a Small Scheme:

This NMU Context Report has been prepared at feasibility stage in relation to the prepared signing scheme for the A5001 at Jones Hall.

Scheme Description

Traffic visiting the National Trust property of Jones Hall is currently leaving the A5001 and travelling through the village of Spenthorpe, which is unsuitable for the volume of traffic generated. A more appropriate route would be for traffic to use the B2001, but currently it is signed along the Spenthorpe Road route. This signing scheme would remove the sign to Jones Hall from the A5001/Spenthorpe Road junction and install a new sign at the A5001/B2001 junction to encourage traffic to use the B2001.

NMU Activity

A shared cyclist and pedestrian footway runs along the A5001, although flows are unknown.

There is some evidence to suggest that the shared footway is also used by equestrians.

Complaints have been received from the Spenthorpe Equestrian School regarding the volume and speed of traffic on Spenthorpe Road.

There are no NMU trip generators on the B2001. Most NMUs travelling west from the A5001 use the Spenthorpe Road route.

NMU Objectives

Based on this background the objectives for this scheme for NMUs are:

- To encourage motorised traffic to use the B2001 route.
- To ensure that the new signs on the A5001 are located so as not to obstruct the shared pedestrian and cycle footway.
- Signs should be placed at sufficient height to not pose a hazard to equestrians.
- At the A5001/B2001 junction to include a cycle route sign directing cyclists/pedestrians travelling to Jones Hall to continue along the A5001 to the A5001/Spenthorpe Road junction. The distance of this route should be included in the signing.
- To change the existing signing at the A5001/ Spenthorpe Road junction to a cycle route direction sign.

NMU Audit

Based on these objectives it is proposed that NMU Audit should be carried out at Completion of Construction.

Example 2 - NMU Context Report for a More Significant Scheme:

This NMU Context Report has been prepared at feasibility stage in relation to the proposed improvement scheme at **A999, Anytown.**

Scheme Description

A new dual carriageway, running from Newbridge to the north of Anytown to Oldcross Roundabout, bypassing the existing A999 running through the centre of Anytown. The dual carriageway will be approximately 1.75km long and will pass 0.1km west from Anytown at the closest point. A new roundabout will be constructed at Newbridge.

The village of Eastfield, with its business park, lies approximately 1km to the north east of the proposed alignment of the scheme. The scheme will cross the Eastfield Road north east of Anytown.

Oldburg Castle, a popular tourist attraction, lies 1.5km to the east of Anytown. It is linked to Anytown by a bridleway.

An Environmental Impact Assessment has been completed and figures for vehicle and NMU flows are taken from this source.

The proposed scheme is shown on the schematic map in Figure 1.

Flows

Southbound motorised traffic through Newbridge and currently proceeding through Anytown is 16,000 vehicles per day. It is estimated that, following bypass construction, approximately 10,000 vehicles per day would divert onto the new bypass. Speeds approaching Newbridge from the north were around 54 mph (85 percentile) in 1998 (Anyshire County Council (ACC) survey).

Northbound motorised traffic using the Oldcross Roundabout is 14,000 vehicles per day. It is estimated that 7,000 of these would divert onto the new bypass. Speeds approaching Oldcross Roundabout from the south were approx 36mph (85 percentile) in 1998 (ACC Survey).

Public transport (bus services) operate from Anytown Centre to Newbridge and Eastfield, both to the north of Anytown.

ACC counts show around 150 cyclists per day at Oldcross Roundabout and 140 per day travelling between Newbridge and Anytown on the A999.

ACC figures suggest that the Green Lane to Eastfield is used by over 200 pedestrians, 15 equestrians and 50 cyclists per day on weekdays. It is used by 100 pedestrians, 40 equestrians and 45 cyclists per day at weekends.

The bridleway to Oldburg Castle experiences comparatively low flows of NMUs on weekdays; however, at weekends up to 300 walkers, 100 cyclists and 50 equestrians use the route per day.

Eastfield Road, linking Anytown to the Eastfield business park, carries 130 cyclists and 100 pedestrians per day on weekdays, and 100 cyclists, 30 pedestrians and 7 equestrians per day at weekends.

Desire Lines

Both the Green Lane link to Eastfield and Eastfield Road are strong desire lines for NMUs.

The bridleway to Oldburg Castle is a strong desire line at weekends. ACC's Access Officer has indicated that it is working with the National Trust to promote Oldburg Castle as a tourist attraction and has identified the bridleway as a route to recommend to NMUs as part of its green tourism initiative.

Southfield Road, running four miles due south from Anytown to Southfield, is also likely to be a desire line for NMUs, although no flows are available for this link. The proposed scheme will include an upgrading of Oldcross Roundabout and a new link to Southfield Roundabout. Southfield Road and the roundabout will form a key access link to the proposed housing south of the bypass, if it is built.

Strategic Objectives

Local Highway Authority is Anyshire County Council. Discussions were held with the pedestrian and cycling officer, Mr A Walker.

Relevant policies include:

- A target to quadruple current levels of cycling, in line with National Cycling Strategy.
- A target to increase walking by 20% by 2009, particularly for school trips.
- An aim to increase the number of major employers with travel plans.

ACC's Local Transport Plan (LTP) identifies a proposed strategic walking/cycling route, from Anytown to Ambridge (north of Anytown) which will pass through Newbridge.

ACC's LTP also identifies the existing public transport network and the proposed changes.

Trip Generators

There is a large residential area to the west of the proposed scheme. The village of Newbridge is approximately 1km to the north and a major employment site exists at Eastfield, approximately 1km away.

Anytown hospital is close to Oldcross roundabout at the south end of the scheme. Anytown secondary school is 800m from the proposed site of the Newbridge roundabout in the north. This suggests that the flows of users at these locations may be of more vulnerable NMUs.

Development Proposals of Relevance

Discussions with the local authority (Mr B Rider) confirmed the following proposals:

- Housing proposed south of new road (200 homes) – likely to be implemented by 2006.
- New employment development (approx 500 jobs) proposed north of proposed Newbridge roundabout – expected to be implemented by 2005.

Public Rights of Way Network

The scheme cuts across the Green Lane link between Anytown and Westfield.

The scheme cuts across the Oldburg bridleway.

The scheme cuts across Eastfield Road.

Accident Data

Newbridge junction: 11 slight and 4 serious accidents in 3 years. Five of these involved NMUs.

Oldcross junction: 7 slight and 3 serious accidents in 3 years. Three of these involved NMUs.

Existing A999 through Anytown: 14 slight and 2 serious accidents in 3 years. Four of these involved NMUs.

Views of User Groups

Anytown Ramblers, 12 The Street, Anytown (01333 333 444)

Comments were:

- Keen to ensure that link to Eastfield is not made less convenient by the scheme.
- Minor road link across scheme [Eastfield Road] is a useful walking route to nearby countryside. Strongly concerned to maintain accessibility of Oldburg Castle bridleway, which provides a link onto the Archers' Way long distance footpath.

Anytown Cyclists Touring Club Right to Ride representative, 14 High Street, Anytown (01333 999 888)

Comments were:

- Strong feeling for need for safer facilities at Newbridge roundabout – signalisation if possible.
- Problems of existing shared use path at south end of scheme. Concern that if the scheme eases congestion in Anytown it may lead to higher motorised traffic speeds in the town.

Anytown Horse Club, 20 The Ridings, Anytown (01333 777 444)

Comments were:

- Extreme difficulty experienced crossing the road at Southfield Roundabout. Offer to attend a site visit to demonstrate problems.

Conflict Points

Possible conflict points between NMUs and the proposed scheme are:

- At Newbridge where the proposed roundabout could increase hazards to NMUs if speeds are not brought down sufficiently.
- At the Green Lane in which an NMU desire line crosses the proposed road.
- At Eastfield Road, where NMUs will cross the scheme. Also motorised traffic from the scheme may enter and exit onto Eastfield Road.
- At Oldburg Castle bridleway, where it crosses the alignment of the scheme.
- At Southfield Roundabout, already the site of NMU casualties,where the new link to Oldcross roundabout will increase the complexity of the facility.

Scheme Objectives

Based on the above, the recommended key scheme objectives are to:

- Ensure continuity and convenience of route along the existing Green Lane to Eastfield, Oldburg Bridleway and the Eastfield Road link. Designs should require minimal diversion for NMUs.
- Ensure continuation of safe conditions on Eastfield Road, particularly where higher speed motorised traffic joining or leaving the bypass may cause risk to or intimidate NMUs.
- Introduce measures to improve cycle safety at Southfield and Oldcross roundabouts, possibly including signalisation.

- Improve safety for vulnerable NMUs at Newbridge. Design Newbridge roundabout to promote slower vehicle speeds.

- Discuss with highway authority their proposals for Anytown-Ambridge link and ensure that measures on proposed Newbridge roundabout are compatible.

- Review signing on current A999 to ensure drivers are alerted to the need for slower speeds. Discuss the possibility of a gateway treatment to north west of Southfield Roundabout with ACC.

- Provide an NMU route in parallel with the scheme.

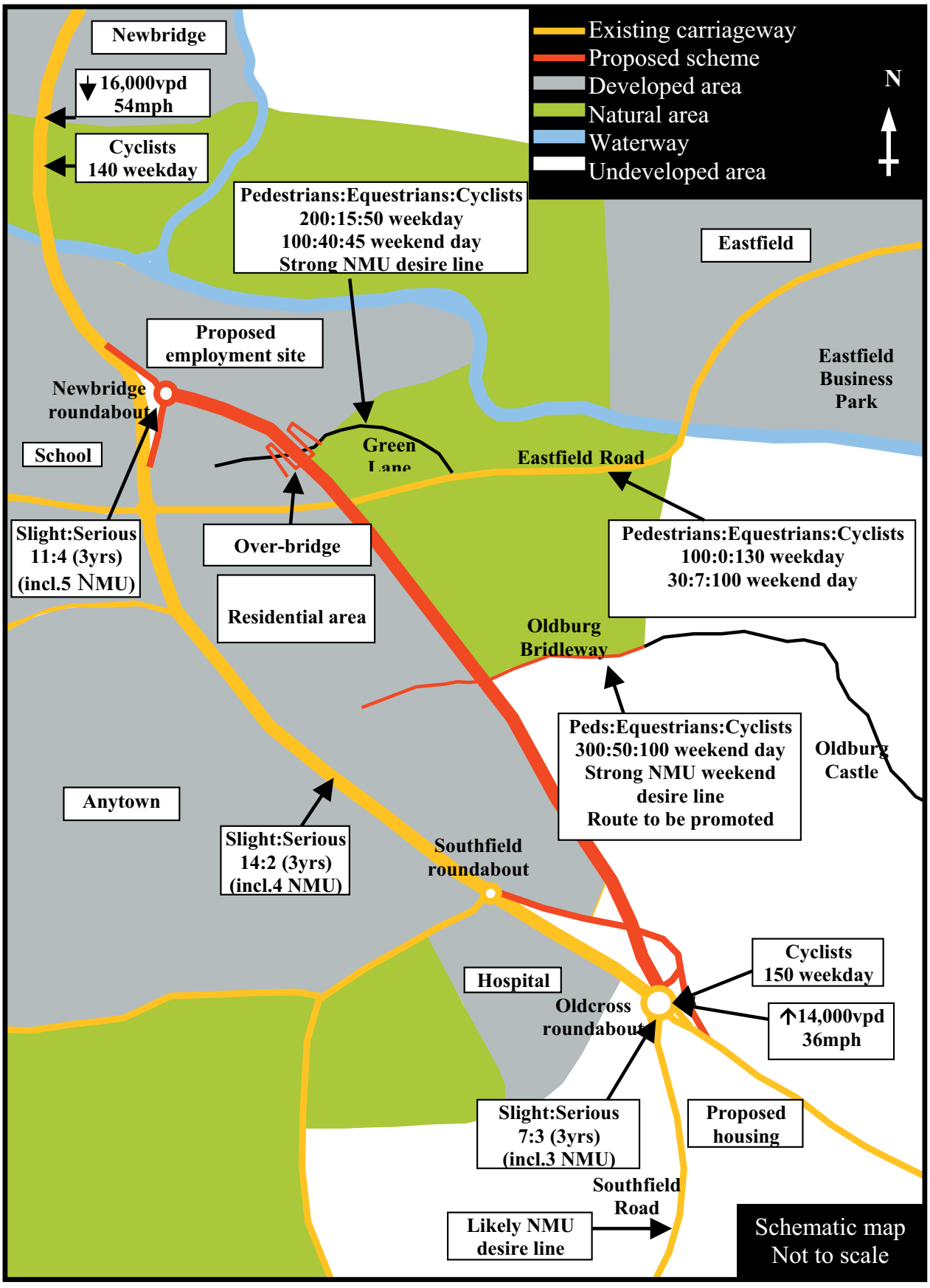

Figure 1: Schematic Map showing proposed scheme and contextual information

ANNEX C EXAMPLE OF NMU AUDIT REPORT

NMU AUDIT REPORT

A999 Anytown BY-PASS

PRELIMINARY DESIGN STAGE NMU AUDIT

1. Introduction

This report results from a Preliminary Design Stage Non-Motorised User Audit carried out on the A999 Anytown Bypass.

The Audit was carried out by the Design Team from May to August 2005 in accordance with HD 42 'NMU Audits'.

An NMU Context report was prepared in accordance with HD 42 by the Design Team in July 2004.

The Design Team comprised:

P Smith (NMU Audit Leader)	BSc, C.Eng, MICE
R Jones (Design Team Leader)	BSc, C.Eng, MICE
M Lewis	BA, MSc

The audit consisted of:
i. An examination of the 'Context' report prepared at feasibility stage. It was considered that this is still valid and no material changes have taken place since the compilation of the report.
ii. A continuous assessment of designs against the needs of NMUs.
iii. Meetings with the Anyshire County Council (ACC) Access Officer, the Anytown Cyclists Touring Club, the Anytown Access Group and the Anytown Horse Club. Correspondence was also received from the ACC Safe Routes to School Officer and the Anytown Pedestrian Society.
iv. M Lewis, a Principal Engineer and member of the Design Team, visited the scheme location on 3 occasions between 1st and 30th June. Inspections were carried out during the hours of darkness, in wet conditions on cycle as well as on foot.

Figure A shows a scheme layout plan with references to the locations of the issues identified in this report.

2. Objectives and Design Features

Seven key objectives were agreed for NMUs in the A999 Anytown Bypass Scheme. These, and the design features that have been incorporated to satisfy them, have been included in the Preliminary Design as described below.

Objective	**Design Feature**
Ensure continuity and convenience of route along the Green Lane link to Eastfield, Oldburg Bridleway and the Eastfield Road link. Designs should require minimal diversion for NMUs.	An overbridge for NMUs has been specified to ensure continuity of the Green Lane route. Some issues relating to the convenience of this feature have been identified and these have been dealt with as described in 3.3 and 3.6, below.
Ensure continuation of safe conditions on Eastfield Road, particularly where higher speed motorised traffic joining or leaving the bypass may cause risk to or intimidate NMUs.	A gateway feature is to be provided to alert motorised traffic turning onto Eastfield Road that a 30mph speed limit applies. Anyshire County Council have agreed to monitor speeds on Eastfield Road and review whether further action is necessary following opening of the bypass.

Introduce measures to improve cycle safety at Southfield and Oldcross roundabouts, possibly including signalisation.	Southfield Roundabout is to be signalised. A subway has been specified at Oldcross Roundabout. It is recognised that this may give rise to some concerns among users and these have been addressed as described in 3.7, below.
Improve safety for vulnerable NMUs at Newbridge. Design Newbridge Roundabout to promote slower vehicle speeds.	Newbridge Roundabout includes segregated provision for NMUs. At detailed design stage reduced entry flares, significant deflection for motorised traffic and signing and markings will be specified to encourage slow entry and exit speeds.
Discuss with highway authority their proposals for Anytown-Ambridge link, ensure that measures on proposed Newbridge Roundabout are compatible.	The Anytown-Ambridge link is unlikely to proceed during the current LTP period, however ACC would like to comment on the detailed design. This has been agreed.
Review signing on current A999 to ensure drivers are alerted to the need for slower speeds. Discuss the possibility of a gateway treatment to north west of Southfield Roundabout with ACC.	Signing review complete and new signing to be specified in detailed design. ACC are keen on the idea of a gateway from Southfield Roundabout onto old A999 and this will be specified in detailed design.
Provide an NMU route in parallel with the scheme.	A fully segregated NMU route will be provided for the length of the bypass. This will be on land owned by the Oldburg Estate, who have agreed to open a permissive route for NMUs.

3. Items raised in this Audit

3.1 Issue

It was not clear how equestrians would get access to the proposed equestrian route near the Southfield Roundabout.

Action Taken

A break in fencing and a pathway has been included in the design to provide an access route.

3.2 Issue

Pedestrians and cyclists may have been tempted to cross the dual carriageway near Oldcross Roundabout to access the route that runs along the bypass, rather than use the subway, because it is a shorter route.

Action Taken

The subway has been aligned as closely as possible to the pedestrian desire line in order to reduce the advantage to pedestrians of circumventing it. A central reserve barrier has been specified and a pedestrian prohibition will need to be made.

3.3 Issue

Access to the Green Lane overbridge for northbound NMUs from the pedestrian/cycle route was considered circuitous.

Action Taken

A link for northbound NMUs via the service road to the bridge ramps has been added to the scheme.

3.4 Issue

There were no footway/cycleway links to Anytown on the south side of the proposed Newbridge roundabout. Some pedestrians and cyclists were considered likely to cross the by-pass and use the verge/road rather than the longer route provided across the other three arms of the roundabout.

Action Taken

A shared footway/cycleway has been added to the scheme on the south side of the roundabout. Features to segregate users on this route should be specified at detailed design stage.

3.5 Issue

The width of the equestrian route at chainage 2,300 was initially shown as 2.7m but should be a minimum of 3m.

Action Taken

The route has been amended to allow 3m to be maintained along the entire route.

3.6 Issue

The gradients for the crossing at the Green Lane overbridge are approaching the limit of acceptability for wheelchair users.

Action Taken

A level rest point has been added to the ramp.

3.7 Issue

The initial design of the subway would lead to concerns over personal security due to its alignment, which could lead to NMUs crossing the dual carriageway at-grade.

Action Taken

The approaches and location of the subway have been designed to allow good through visibility. A high quality lighting system has been allowed for. Anti-vandal surfaces should be specified at detailed design stage.

The design should provide for adequate drainage of the subway to minimise flooding.

3.8 Issue

Pedestrians from the houses adjacent to the by-pass may be tempted to cross the dual carriageway between the Green Lane bridge and subway, where they would be in conflict with fast moving vehicles.

Action Taken

The two crossing points have been selected to satisfy the key desire lines identified by user groups.

3.9 Issue

Equestrians using the route between chainages 2,200-2,600 and 2,800-3,200 will not be visible to other road users. This leads to concerns over personal security.

Action Taken

Anytown Horse Club was consulted about this and expressed no concern; therefore no action was taken.

3.10 Issue

The possibility of NMUs not being segregated on the Oldburg Bridleway bridge led to concern among users about potential conflicts. The bridge was not sufficiently wide for all users.

Action Taken

The bridge has been increased in width by 0.75m in order to allow pedestrians to be segregated from cyclists and equestrians by a kerb level difference while still providing a route to standard width for all users.

3.11 Issue

The Southfield, Oldcross and proposed Newbridge Roundabouts continue to represent a source of hazard to NMUs.

Action Taken

The Newbridge and Oldcross Roundabouts are to be signalised. The geometry of the Southfield Roundabout will be changed to increase vehicle deflection and decrease flare on entry arms. Speed reduction features will be included on all approach arms to all three roundabouts.

3.12 Issue

NMUs and other traffic using Eastfield Road will be in conflict with motorised traffic using the bypass since the crossing is at-grade.

Action Taken

A signalised junction is to be provided. A recommendation has been made to ACC that Eastfield Road be subject to a 40mph speed limit (it is currently derestricted).

4. Audit Team Statement

We certify that we have examined the scheme details with the specific purpose of identifying any issues that could improve conditions for NMUs together with associated Actions Taken.

Audit Team Leader:

P Smith BSc, C.Eng, MICE

Signed …….
Date…….

Design Team Leader

R Jones BSc, C.Eng, MICE

Signed ……
Date ……..

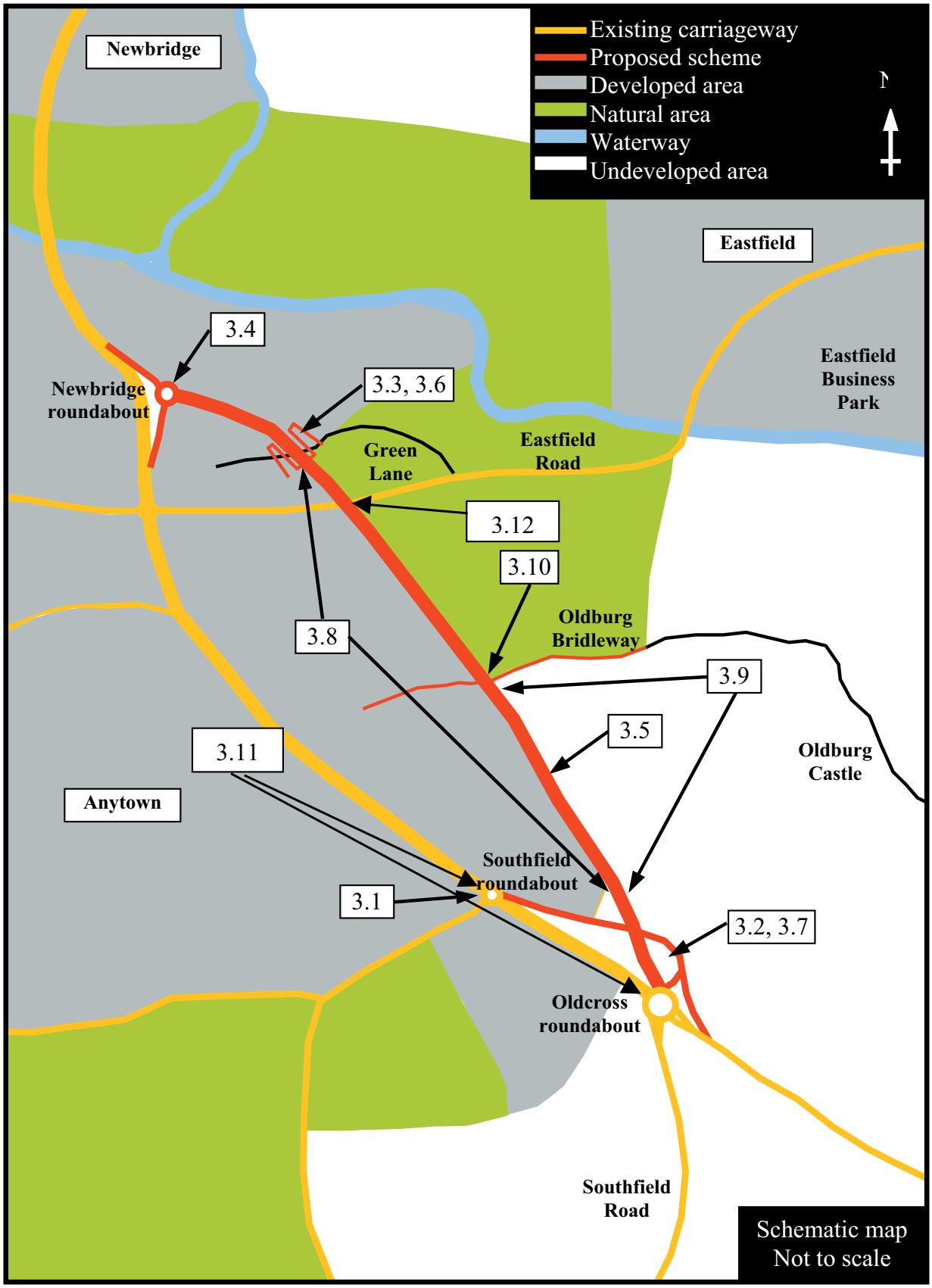

Figure A – Layout Plan with references to Issues/Actions Taken (NB numerical references refer to numbering in Section 3 of report)

ANNEX D STAKEHOLDER ORGANISATIONS

Walking:

Living Streets (Formerly the Pedestrians Association)
31-33 Bondway
London SW8 1SJ
Tel: 020 7820 1010
Fax: 020 7820 8208
info@livingstreets.org.uk

Ramblers Association
Ramblers' Association main office
2nd Floor Camelford House
87-90 Albert Embankment
London SE1 7TW
Tel: 020 7339 8500
Fax: 020 7339 8501
ramblers@london.ramblers.org.uk

Ramblers' Association Wales
Cymdeithas y Cerddwyr
Ty'r Cerddwyr, High Street, Gresford,
Wrexham LL12 8PT, UK
Ty'r Cerddwyr, Stryd Fawr, Gresffordd,
Wrecsam LL12 8PT, UK
Tel/ffôn: 01978 855148
Fax/ffacs: 01978 854445
cerddwyr@ramblers.org.uk

People with Disabilities:

The Royal National Institute for the Blind
105 Judd Street
London WC1H 9NE
Tel: 0207 388 1266
Fax: 0207 388 2034
helpline@rnib.org.uk

The Royal National Institute for Deaf People
19-23 Featherstone Street
London EC1Y 8SL
Tel: 020 7296 8000
Fax: 020 7296 8199
helpline@rnid.org.uk

Joint Mobility Unit Access Partnership
105 Judd Street
London WC1H 9NE
Tel: 020 7391 2002
Cardiff Tel: 029 2044 9590
Leeds Tel: 0113 214 4585
info@jmuaccess.org.uk

Disabled Peoples Transport Advisory Committee
Zone 1/14
Great Minster House
76 Marsham Street
London SW1P 4DR
Tel: 020 7944 8011
Fax: 020 7944 6998
dptac@dft.gov.uk

Cycling:

Cyclists' Touring Club
Cotterell House
69 Meadrow
Godalming
Surrey GU7 3HS
United Kingdom
Tel: 0870 873 0060
Fax: 0870 873 0064
cycling@ctc.org.uk

London Cycling Campaign
Unit 228
30 Great Guildford Street
London SE1 0HS
Tel: 020 7928 7220
Fax: 020 7928 2318
www.lcc.org.uk

Cycle Campaign Network
54-57 Allison Street, Digbeth,
Birmingham, B5 5TH, UK
ccn@cyclenetwork.org.uk

Sustrans
Sustrans Head Office
35 King Street
Bristol BS1 4DZ
Tel: 0117 926 8893
Fax: 0117 929 4173
www.sustrans.org.uk

Sustrans Northern Ireland
Marquis Building
89-91 Adelaide Street
Belfast BT2 8FE
Tel: 028 9043 4569
Fax: 028 9043 4556

Sustrans Cymru
Suite 3, Bay Chambers
West Bute Street
Cardiff CF10 5BB
Tel: 02920 650601/2
Fax: 02920 650603

British Cycling
National Cycling Centre
Stuart Street
Manchester M11 4DQ
Tel: 0870 871 2000
Fax: 0870 871 2001
www.bcf.uk.com

Cycling Time Trials
77 Arlington Drive
Pennington
Leigh
Lancashire WN7 3QP
Tel: 01942 603976
Fax: 01942 262326
Phil.heaton@cyclingtimetrials.org.uk

Equestrians:

British Horse Society
The British Horse Society
Stoneleigh Deer Park, Kenilworth
Warwickshire. CV8 2XZ
Tel: 08701 202244
Fax:01926 707800
www.bhs.org.uk

British Driving Society
BDS Executive Secretary
27 Dugard Place
Barford
Warwick
CV35 8DX
UNITED KINGDOM
Tel: 01926 624420
Fax: 01926 624633
email@britishdrivingsociety.co.uk

Others:

The Countryside Agency
John Dower House
Crescent Place
Cheltenham
Glos
GL50 3RA
Tel: 01242 521381
info@countryside.gov.uk

Countryside Council for Wales
Maes-y-Ffynnon
Penrhosgarnedd
Bangor
Gwynedd LL57 2DW
Tel: 0845 1306229
www.ccw.gov.uk