

Consultation document - considering the effects of the maintaining, improving and operating the strategic network on national and local wellbeing

Introduction

It has long been argued that the progress of the country should not be measured by looking just at growth in Gross Domestic Product (GDP). For a full picture of how a country is doing we need to look at wider measures of economic and social progress, including the impact on the environment.

On 25 November 2010 the Prime Minister asked the Office of National statistics to develop measures of national well-being and progress. Since there has been intensive development work of new measures of well-being that include - but go beyond - measures of economic performance such as GDP.

In the Highways Agency we have long understood the role our network plays in supporting national well being by connecting people to places of work and leisure and facilitating the movement of goods around the country. Our strategic plan 2010-2015 reflects that:

“Our road network must function smoothly to support national economic recovery, we must meet the diverse needs of all our customers to promote national wellbeing, and we must continue to develop our sustainable approach.”

We are also clear that impacts from our network can have detrimental effect on the well being of individuals and sometimes whole communities. It is important that we manage our impacts to take a holistic view of our contribution to national wellbeing.

This guidance would provide a framework for project managers and planners within the Agency to ensure the well being of local communities is a core part of decision making alongside the benefits to wider society of an efficient and well connected network.

Purpose of this consultation

This is an internal consultation to understand the views of key stakeholders in the Agency on the following:

- Is there a need for internal guidance on considering the impacts of our network on individual and community well being?
- Would implementing this proposed guidance impose an unacceptable additional burden on resources and costs?
- Could this guidance be linked with existing processes to deliver more efficient and cost effective results.
- Is there a better way to address wellbeing?
- Are the factors identified in this document relevant to the Highways Agency?
- Is there anything that needs to be added to the document?

Background to the Highways Agency position on wellbeing

For the purposes of this guidance, we define wellbeing as a positive physical, mental and social state experienced by an individual or community, which is shaped by:

- The ability to access key facilities and services;
- Standards of physical and mental health;
- Safety and security;
- Equality and inclusion
- Social and cultural interactions; and
- Quality of living conditions (including local environmental quality).

Roads have the potential to influence each of these through the ways in which they are designed, operated and maintained, and the facilities or amenity features that they provide. For example,

- Roads provide essential links by which people can move between destinations and reach key facilities. The mobility needs of all travellers should be considered when designing road infrastructure, to ensure that motorised and non-motorised users are able to travel safely, regardless of age, disability etc.;
- Where a road alignment runs in close proximity to housing, the impacts of noise or vehicle emissions may present physical and mental health risks for neighbouring residents
- Where infrastructure includes poorly lit or unsupervised areas (e.g. underpasses, alleyways), this may present a security risk to non-motorised travellers and may give rise to fear of crime in the local area, which can compromise quality of life;
- If a road alignment bisects a community area or causes the severance from community facilities (e.g. parkland, recreation centres, schools, libraries, healthcare facilities etc.) from their users, social cohesion in the local area could be detrimentally affected. Where opportunities for interaction are reduced, this can reduce people's feelings of satisfaction with their local community and can lead to feelings of loneliness or isolation and exclusion; or
- Roads and associated infrastructure form key aesthetic features within local environments. Their design can influence the physical identity of an area, either positively (e.g. where local landscapes and townscapes are taken into account) or negatively (e.g. where hard engineered elements are introduced into a soft landscape). The design approach can therefore contribute to the quality of living conditions for surrounding neighbourhoods.

Wellbeing is intrinsically linked to a person or community's quality of life. Through the Environmental Impact Assessment (EIA) Directive, the European Union (EU) requires the assessment of a project's effects on human health and protection of the environment in order to support quality of life. In the Highways Agency we have well established processes for environmental impact assessment. The approach is described in the design manual for roads and bridges, volume 11. It is important when considering the effects on wellbeing of a new intervention on the network to avoid duplication of effort and to draw on the findings of the EIA for as much data as possible.

Additional focus is given to Wellbeing through the Equality Act 2010, which brings protected characteristics within a single piece of legislation (protected characteristics being; gender, race, disability, age, sexual orientation, religion/belief, pregnancy/maternity, gender reassignment, marriage and civil partnerships). Although not explicit in the Act it is good practice to consider reducing socio-economic inequalities through all strategic decisions. The Act puts a new integrated Equality Duty on public bodies to consider the needs of people with protected characteristics when designing and delivering services; and encourages the use of public procurement to improve equality. The Agency and its supply chain must respond to these duties through its role in the design, delivery and operation of the trunk road network; ensuring that the network provides equitably for the needs of all people and community groups. The Agency has documented its public sector equality objectives to 2016.

There are a number of directives and regulations in place, which establish environmental exceedances, thresholds and targets relating to environmental influences on human Wellbeing. For example, the European Directive 2002/49/EC of June 2002 on Environmental Noise provides a basis for managing ambient noise. The Directive stipulates the use of noise maps to monitor noise arising from major roads and other infrastructure, and the assessment of the number of people experiencing annoyance or sleep disturbance due to noise. The Directive states that noise management plans must be adopted where required. Likewise, the Air Quality (England) Regulations 2000 establish national air quality objectives and exceedance levels for specific substances, with the aim of protecting people's health and the environment.

Purpose of a guidance note on Wellbeing

The provision of this guidance sits within a context of increasing public and Government interest in health and wellbeing, quality of life, and sustainable communities. The Agency will need to respond to this growing impetus.

This document therefore provides guidance to HA project and performance managers, designers and asset support contractors on how to consider wellbeing impacts associated with operation, maintenance, improvement and new-build projects, covering the effects for both individuals and communities.

The wellbeing guidance provided here offers guidance on how to approach key wellbeing issues. It does not aim to be an exhaustive account of all topics connected with road projects, nor does it put forward a prescriptive impact assessment methodology. Instead, it is an approach to facilitate consideration of Wellbeing issues: identifying impacts, reporting and mitigation. The guidance should raise awareness of the potential Wellbeing impacts arising from road projects, and help all those involved in the decision-making process to develop their understanding and use this to inform design and management options wherever possible. Reporting on Wellbeing issues will help to demonstrate to decision makers and others that a robust approach has been taken. Other best practice guidelines such as transport appraisal guidance on social and distributional impacts (WebTAG Unit 3.17) may be used to complement or instead of this guidance as appropriate.

Scope of this guidance

We have identified the following topics as particularly relevant to the consideration of effects associated with roads:

- **Physical health, stress and anxiety** impacts arising from a road, for example due to the effects of changes to air quality, ambient noise, and access to facilities for physical recreation;
- **Safety and security** risks arising due to the design and operation of a road scheme. This may include road safety risks associated with increased traffic volumes or speeds, or risks to the security of people or property due to poor surveillance in the area surrounding roads;
- **Life satisfaction** impacts of road design and operation associated with quality of living conditions and equity between community groups; individuals' identification with and valuation of their surroundings; and the stability and functionality of social networks, in terms of how a road may sever or displace cohesive community groups or impede their access to key social facilities (e.g. park, place of worship, recreation centre), and essential services such as hospitals, surgeries and schools.

This guidance concentrates on the specific topics that are relevant to roads and which may be measured using existing metrics. It is likely that the breadth of coverage will increase as understanding and application of the topic improves. In particular, as the Office for National Statistics publishes new indicators of national wellbeing.

Relationship with other Guidance

Social and environmental systems necessarily interact. Deterioration of environmental quality can negatively affect wellbeing. There is therefore substantial interaction between wellbeing and the environmental impacts covered by DMRB Volume 11. Topic areas such as Air Quality (Vol. 11, Part 1, HA 207/07); Landscape Effects (Vol. 11, Part 5); Cultural Heritage (Vol. 11, Part 2, HA 208/07); and Noise and Vibration (Vol. 11, Part 7, HA 213/08) are most likely to be relevant. A consideration of wellbeing should take into account the outputs of these assessments in light of how environmental impacts might affect the physical health, stress and anxiety; safety and security; or life satisfaction of people and communities. Whilst the existing environmental assessments provide rigorous methods for determining environmental impacts, consideration of wellbeing should include the effects of environmental change for people and where possible to broaden this to include psychological impacts of transport infrastructure.

Similarly guidance intended to inform design is very important in this context. Such as TA 91/05 – Provision for non-motorised users and TA 42/05 the Non-Motorised User (NMU) Audit, HD 19/03 Road Safety Audit etc.

What is a community?

A 'community' is considered to be the cumulative grouping of all people who live, work, play and travel through the area surrounding a road, along with the community groups that form it. A 'community group' is defined as a sub-group of people within a community, having similar characteristics or common life circumstances (e.g. older people, ethnic or cultural minorities, etc.). Equal focus should be placed on the consideration of a project's impact on the various majority and minority groups that make up a community, in addition to individuals who will be directly or indirectly affected. In some circumstances, individuals may stand alone from a geographically identifiable 'community'. Such individuals may include land- or homeowners who do not

have neighbours in the immediate vicinity. The wellbeing of all individuals should be central to the consideration of route design, operation and management in any case where they are likely to be affected.

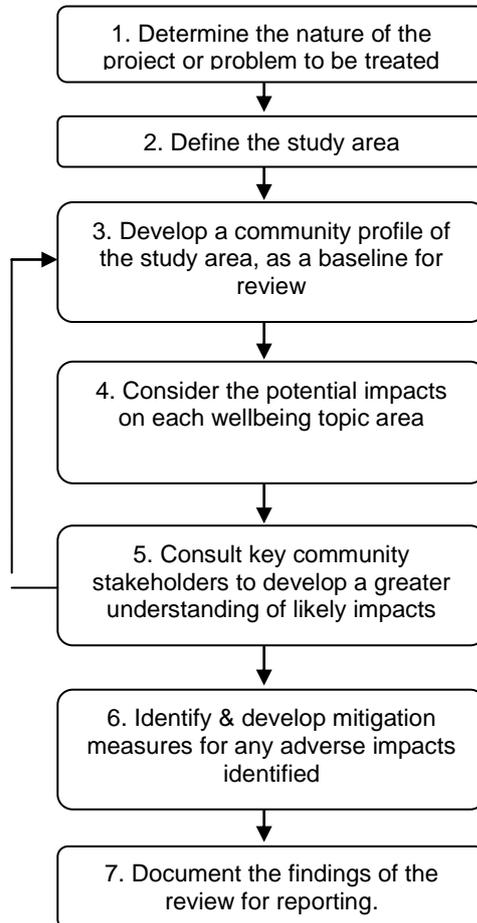
Disproportionate impacts

The impacts of a road on different individuals or community groups should be taken into account, as the wellbeing of certain people may be disproportionately affected by the implementation of a project, compared with the effect on the community as a whole. Alternatively, the wellbeing of a whole community may be disproportionately affected compared with that of other similar communities. For example, high health risk groups (e.g. elderly people or young children) may be worse affected by a change in air quality which could affect respiratory capacity. Likewise, more vulnerable groups (e.g. females or ethnic minorities) may experience greater levels of anxiety associated with personal safety due to the introduction of an underpass as the only option for crossing a busy road. Disproportionate impacts of a road on the wellbeing of different people should therefore be taken into account at all times.

Overview

The process described here comprises a high-level approach to reviewing key topic areas and ensuring that they are considered alongside other project assessment processes. Figure 3.1 outlines a suggested methodology.

Fig. 3.1: Personal & Community Wellbeing Methodology



Scoping

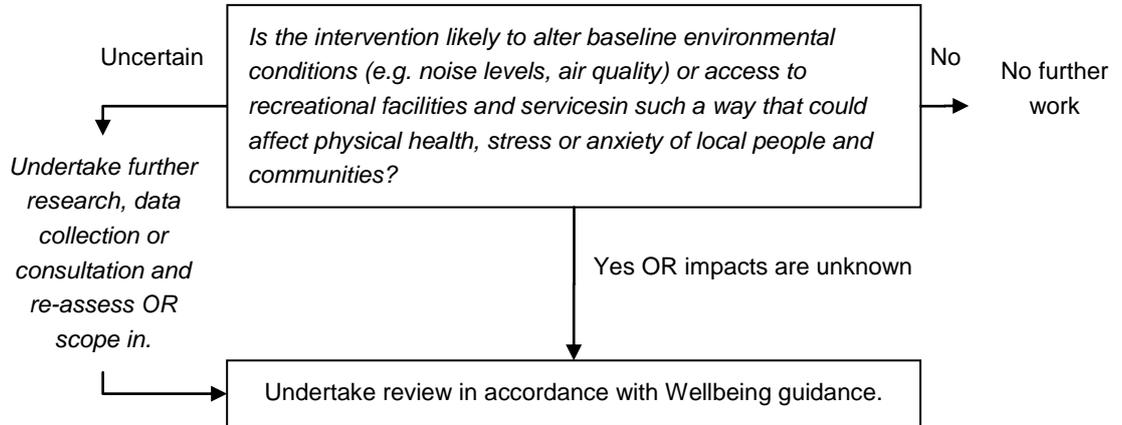
It would usually be worthwhile spending a little time to undertake a scoping exercise to determine the need to consider the impacts of a road or project on wellbeing.

Scoping would be a desk-based exercise drawing on readily available data and information, including high-level demographic statistics (e.g. age, gender, ethnic and socio-economic profile of the community, available from census data) and baseline geographical data (e.g. spatial characteristics of the transport network, location of community and residential buildings or land, landscape and heritage features, etc., available from Ordnance Survey mapping) for the area surrounding the road or project. Existing traffic flow data for local routes should also be reviewed to determine potential changes.

This baseline data should be used to establish whether the road or project is likely to affect the wellbeing of local people. The following questions should be used to decide the sub-topic components to be included or excluded from the exercise. The questions

should start from the assumption that all sub-topics are relevant unless the question responses suggest they may be excluded.

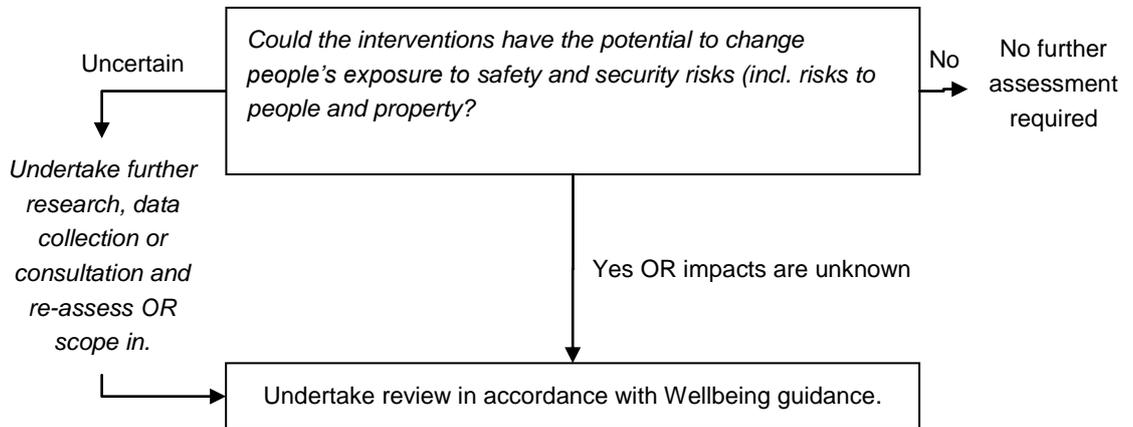
Physical Health, Stress and Anxiety



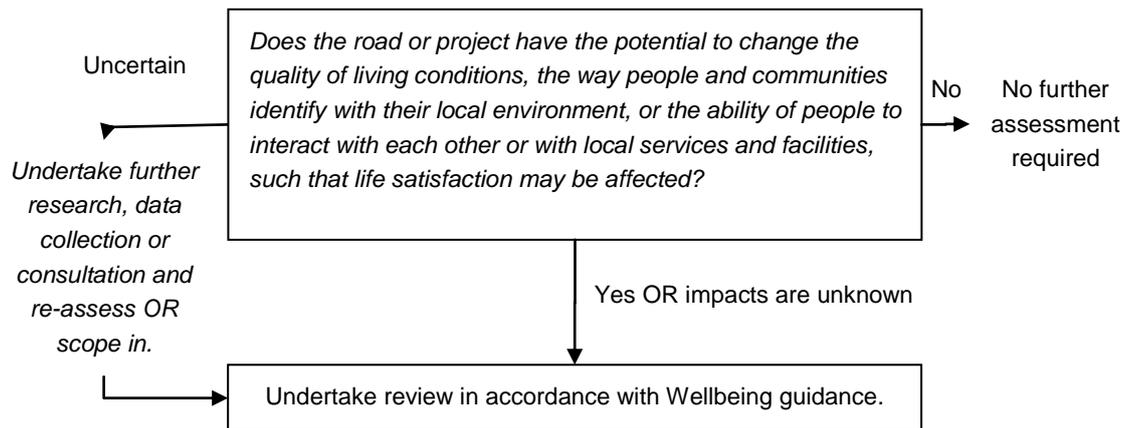
It is likely that when air quality and noise & vibration are identified as an issue for environmental assessment, physical health, stress & anxiety should also be considered, particularly where a zone of poor air quality or high noise level lies in close proximity to a vulnerable community group.

Where air quality and noise & vibration are not identified as an issue, it will be a matter of judgement as to whether there are other relevant factors which may affect the physical or mental health of people and communities. For example, where a scheme reduces accessibility to facilities for physical recreation and sport there may be a case for considering health effects.

Safety and Security



Consideration should be given to whether the road or project presents concerns for safety and security.



It is likely that whenever landscape effects or cultural heritage are identified as issues for the environmental assessment, life satisfaction should be considered.

Overall consideration

The outcome of scoping should:

- Inform option ,design and planning decisions;
- Be appropriate to the level of risk,
- Provide transparent and accessible reporting, reflecting the work done; and
- Identify what further work is needed

In most cases, a simple desk based process is likely to be sufficient for assessing wellbeing impacts. This will draw predominantly on readily available desk-based information to determine the nature and scale of impacts on wellbeing. On occasions a site visit may be helpful to confirm assumptions, and build additional understanding.

If it is considered that this level of data collection is insufficient to properly understand the potential wellbeing impacts, further work may be required, such as consultation with key community representatives.

Study area

It will be important to set a boundary within which effects on wellbeing will be considered. This will need to be defined on a case-by-case basis, reflecting the communities and surrounding environment over which significant effects can reasonably be thought to have the potential to occur.

The study area for baseline data collection and review should reflect the community (or communities) that the road or project could potentially affect. In most cases, the study area will relate to the community spatially surrounding the road. In some cases, however, potential impacts may be identified across a wider geography. This could arise, for example from indirect effects of changed traffic volumes on nearby routes, leading to changes in air quality and noise levels.

The extent of the study area will depend on the nature of the topic being analysed, but may be informed by the area defined for related environmental assessment topics, or the specific characteristics of an area.

As more data is gathered about local conditions, it is possible that the extent of the study area will need to be amended to take into account emerging issues.

Community Profile

The process for considering wellbeing should be underpinned by baseline social and demographic data for the study area. This helps to generate an understanding of the essential characteristics of the community.

A community profile should not be onerous to complete and should provide a simple inventory of elements, features and interactions which characterise the community. Developing a community profile involves a review of social, environmental and economic conditions and trends in the study area, and identification of any notable features or significant issues. Baseline data sources are likely to include:

Figure 3.5: Baseline Data Sources

Data Requirements	Sources
<p>Demographic trends</p> <p>Including age groups, gender profile, disability patterns, ethnicity, faith, household tenure, household income, economic activity, car ownership, deprivation, household structure (marital status/cohabiting/divorced/lone parent, etc.), households with dependent children, educational qualifications, benefit claimants, urban/rural character or population density.</p>	<p>Census dataⁱ</p> <p>Neighbourhood statisticsⁱⁱ</p> <p>Nomis Labour Force Surveyⁱⁱⁱ</p> <p>Index of Multiple Deprivation^{iv}</p> <p>English Indices of Deprivation^v</p> <p>Department for Work and Pensions^{vi}</p> <p>Housing Office & Economic Development Department of Local Council(s)</p> <p>Consultation with representatives of local authorities, parish councils, etc.</p>
<p>Project information</p> <p>Including spatial footprint and specific components of all permanent and temporary works.</p>	<p>Project design and planning information</p>
<p>Background geographic & spatial information</p> <p>Including location of key community and private buildings and land, existing route alignments, historic or landscape features, etc.</p>	<p>Ordnance Survey mapping</p> <p>Ariel photography</p> <p>Site visit</p>
<p>Traffic flow data</p>	<p>Highways Agency traffic models</p>
<p>DMRB Volume 11 Environmental Assessment Data</p>	<p>Air Quality</p> <p>Noise & Vibration</p> <p>Landscape Effects</p> <p>Cultural Heritage</p>

This baseline profile will be used to inform scoping at the start of the process. As the review proceeds, the profile will be developed using data specific to each sub-topic.



This may draw on existing data available from related environmental assessment procedures, in addition to data from external sources.

Detailed guidance is available separately on establishing baseline characteristics for each topic, but a definition of each topic is provided below also.

Definition

This sub-topic considers the potential role of a road or project in contributing to physical health, stress and anxiety trends within the local community.

The health characteristics of a population are strongly correlated with the quality of the surrounding environment. Where local environmental quality is high and pollution is scarce, positive health outcomes are more achievable than in areas of deteriorating environmental quality (notwithstanding other influences, such as socio-economic status of the population).

For the purposes of this guidance, physical health, stress and anxiety impacts have been defined in terms of three factors. Table 4.1 defines these factors and their likely relation to road scheme design and delivery.

Table 4.1: Components and factors of Physical Health, Stress & Anxiety related to roads

Component	Factor	Example impact of road design/delivery
Physical health, stress & anxiety	Air quality and health	Increases in vehicle emissions close to a community due to a new project or improvement may impact negatively on the respiratory health of local people. Children and elderly people may be particularly affected, in addition to individuals with existing respiratory conditions.
	Noise levels and health	Increases in ambient noise levels in a community due to a road development or expansion may disrupt sleep patterns, which can affect physical health, stress and anxiety, and lead to negative impacts on child development. Increased sound levels may cause loss of concentration and productivity at school or work ^{vii} .
	Access to facilities for physical activity (e.g. footpaths, cycleways, green spaces).	Severance of a community from its recreation facilities or displacement of facilities due to a road development may impact negatively on the frequency with which people participate in physical activity, with consequences for health conditions such as heart disease and obesity ^{viii} . Increased traffic flows along a road or removal of footpaths, cycleways and bridleways can deter individuals from participating in physical forms of travel, contributing to reduced levels of fitness and having consequences for health.

A review of physical health, stress and anxiety impacts arising from a proposed road scheme should consider the degree to which each factor contributes to the health of the local community, and the extent to which the proposed scheme may alter the baseline conditions associated with each factor.

Safety and security

Definition

This component considers the potential impact of a road development or maintenance programme on levels of safety and security within the surrounding area. Real or perceived road safety risks and crime rates in the community neighbouring a road are influenced by the quality and style of infrastructure design, and can contribute to feelings of stress and anxiety in the local community.

Real and perceived rates of criminal activity and security risks to people or property may be increased by design which provides inadequate natural surveillance of certain areas.

For the purposes of this guidance, safety and security impacts have been defined in terms of two factors. Figure 5.1 defines these factors and their likely relation to roads.

Fig. 5.1: Components and factors of Personal Safety & Security related to road schemes

Component	Factor	Example impact of road design/delivery
Safety & security	Incidence of personal & property crime (e.g. robbery, mugging, vandalism, burglary).	Lack of appropriate lighting surrounding a road (including in lay-bys and service areas) and manifestation of hidden corners or isolated areas through road design (e.g. underpasses, pedestrian alleyways, lay-bys) may provide areas of reduced surveillance in which crime or fear of crime may flourish. Security risks may be felt disproportionately by vulnerable groups, such as women, elderly or disabled people, and ethnic minorities.
	Rates of road-related accident or injury affecting local community members.	Where busy roads are located in close proximity to communities, local people may be exposed to increased safety risks. Safety risks may be experienced disproportionately by children, elderly and disabled people in an area.

A review of personal safety and security impacts arising from the interaction of a road with a community should consider the degree to which each factor contributes to actual or perceived risks in the local community.

Definition

This component considers the potential impact of a road on levels of life satisfaction experienced by individuals, communities and community groups living in the surrounding area.

Life satisfaction is considered to resonate well as a means of measuring wellbeing and includes a package of issues including financial security, relationships, accommodation, day-to-day activities and achievement of goals^{ix}. For the purposes of this guidance, which is focused on the relationship of life satisfaction to roads, the topic has been defined in terms of two factors that replicate aspects of Defra's approach to this theme.

Figure 6.1 defines the two factors covered by this chapter, and their likely relation to road scheme design and delivery.

Fig. 6.1: Components and factors of Life Satisfaction related to road schemes

Component	Factor	Example impact of road scheme design/delivery
Life satisfaction	Environmental justice	<p>The development of a road scheme may cause a relative decrease in environmental quality in the surrounding area (e.g. reduced aesthetic quality, air quality, increased dirt and dust, etc.), which may cause a decline in the standard of living conditions for residents and dissatisfaction with their local area. This may affect a whole community, or specific groups within the community.</p> <p>People that have historically had less political "voice" to object to environmental deterioration may be particularly vulnerable to environmental injustices. This may include those of lower socio-economic status and ethnic minorities.</p>
	Sense of belonging (social networks)	<p>Where a road bisects a cohesive community possessing a specific social identity it is possible that the road may compromise individuals' ability to participate in social networks or access social and community facilities (e.g. community halls, pubs, libraries, places of worship, etc.), possibly leading to a sense of isolation and a decreased sense of belonging.</p>

A review of life satisfaction impacts should consider the degree to which each factor contributes to life satisfaction in the study area, and the extent to which the road or project may alter the baseline conditions associated with each factor.

Design objectives should be agreed at an early stage of a project, but they should be reviewed as understanding of the baseline community characteristics evolves, in order that the scheme responds to specific community priorities. Design objectives are therefore likely to become more detailed as the scheme progresses and should embrace the desired wellbeing outcomes of the project.

Design objectives might include commitments to progress outcomes against the current UK Government Sustainable Development indicators^x.

Design objectives should integrate national and local policy relating to wellbeing, in addition to guidance provided by advisory bodies such as the Commission for Architecture and the Built Environment. Suggested guidance documents have been flagged throughout this document, although the state of the art in this field is continually progressing and it is advisable to stay abreast of emerging thinking.

Mitigation hierarchy

Mitigation is essential to managing the impacts of any proposed project. Suitable mitigation measures allow the project design or plans to be amended as far as possible to avoid or reduce effects on people as part of an iterative design process.

The design objectives for a project provide an ongoing benchmark to reflect on the possible impacts on wellbeing arising from the project as it develops. Where it becomes evident that detrimental effects may result, there is an opportunity to implement amendments to mitigate, avoid or reduce these effects as part of an iterative design process. It is possible that some adverse impacts may be avoided through consideration of wellbeing in the initial formulation of the project and selection of alternatives. Other impacts will need to be addressed once the preferred project has been identified and all site-specific issues can be reviewed.

There are four primary methods of mitigating impacts through project design, as identified through hierarchy illustrated in Figure 7.1.

Fig. 7.1: Mitigation Hierarchy

Most preferred

1. **Avoidance**, i.e. alignment of the road scheme such that it avoids disruption to surrounding communities and social activity, e.g.,
 - Amending a road alignment to avoid changes in the baseline air quality experienced by local residents;
 - Amending an alignment to avoid severing a cohesive community group.
2. **Minimisation**, i.e. modification of a scheme or project to minimise the severity of an impact on a community, e.g.
 - Amending scheme design and layout to minimise the potential for road accidents due to reduced visibility;
 - Using noise barriers to minimise ambient noise

experienced by local residents;

- Providing adequate lighting and surveillance to minimise the potential for crime in the area surrounding a road scheme.

3. Mitigation, i.e. action to alleviate or offset an impact or to replace a lost resource/service, e.g.

- Relocating a community facility which is no longer accessible to its users;
- Creating new routes for non-motorised travellers, to facilitate safe movement along and/or across a road traversing a residential area;
- Introducing traffic calming measures to reduce the risk of road accidents.

Less preferred

Enhancement, i.e. provision of enhancements to a scheme or project to encourage its integration into the community, e.g.

- Incorporating landscaping or streetscaping into scheme design, in order that the scheme fits more consistently with its surroundings;
- Providing specific facilities within communities populated by people with common characteristics, such as textured surfaces and audible pedestrian crossings in the vicinity of residents with visual impairments;
- Providing safer and easier access into open space for recreational activity.

By understanding the baseline conditions and reviewing likely impacts, it should be possible to identify possible mitigation mechanisms.

Reporting

There is no mandatory requirement to report explicitly on wellbeing. However, where wellbeing issues exist it would be good practice to report.

Scoping report

It would be good practice to report the results of the scoping exercise. This could be a report outlining a summary of the work undertaken to date, whether there is a need for further consideration of wellbeing and, if so, the sub-topics to be assessed. The scoping report could contain information relating to:

- Nature, extent and scale of the proposed project;
- Design objectives of the project;
- The study area considered;



- Internal and external data sources reviewed and information obtained;
- Details of any consultation undertaken, including names of consultees, summary of responses (by protected characteristics), and issues identified;
- Community groups, public and private facilities, existing and proposed transportation routes and rights of way, and natural and built features identified in the study area;
- Potential impacts identified and
- Summary of scoping decision, including which sub-topics and components are scoped in and which are scoped out, and the reasons why further consideration of a sub topic or component is needed

Final report

The final report should document the findings of the review and provide a brief summary of the outputs of the scoping exercise, including the components considered as part of the exercise.

For each component the report should clearly identify the work that was done and the methodology adopted to arrive at a conclusion. The report could be structured as follows:

- Introduction/Overview – information on the project background, context and design objectives;
- Methodology – a summary of information sources, methods adopted for data gathering, evaluation, review of impacts, and mitigation;
- Regulatory and Policy Framework – a summary of the relevant legislation and policy, including local policy, plans and legislations (by-laws) if applicable;
- Study Area – A description of the area with which the review was conducted;
- Baseline Data – a brief summary of the community profile, including a brief description of the community elements, features and interactions identified within the study area(s), type and location of community groups, and summary of consultation findings. Where data is used from other sources relating to development of a project, this should be referenced accordingly;
- Impact Review – summary of likely or anticipated impacts, This should identify any community groups likely to experience disproportionate impacts. This should also reference where applicable relevant results from The EIA or EqIA;
- Summary – summary table of anticipated change, group experiencing change, and any agreed mitigation (a proposed structure is provided at table 8.1 in annex C); and
- Assumptions or uncertainties arising during the work.

Interaction of wellbeing with Environmental impact Assessment

It is likely that cross-referencing and close collaboration will be needed with a number of topics in DMRB Volume 11, to ensure that the review of wellbeing issues takes full account of related issues arising within a project. Volume 11, Section 3 – Environmental Assessment Techniques provides specific guidance on specialist topics, of which the following are of prime importance to the review of Wellbeing impacts. The guidance provided in this document should be informed by the following chapters

- Part 1 - Air Quality, which includes guidance on the environmental thresholds associated with emissions related to road schemes and guides air quality modelling as part of the environmental assessment process. This element of environmental assessment yields results that can be interpreted to determine impacts on physical health for people and communities.
- Part 2 – Cultural Heritage and Part 5 – Landscape Effects, which include guidance on the preservation, conservation and enhancement of historically, culturally and aesthetically important elements in the natural and built environment. This aspect of environmental assessment can be interpreted to help understand likely impacts on life satisfaction for local people, in terms of their identification with and valuation of their local environment.
- Part 7 – Noise and Vibration, provides guidance on the environmental thresholds associated with noise and vibration related to road schemes, and guides the process of noise modelling as part of the environmental assessment. This yields results that can be interpreted to determine impacts on physical health, stress and anxiety for people and communities.
- Part 8 – People and Communities, which includes guidance on the assessment of community impacts relating to sense of place; preservation of private and community assets; and journey quality and mobility for different traveller groups. The sub-topic components of People and Communities cover impacts on local environmental quality, and safety and crime (see Sense of Place). The guidance also provides guidance on the development of a community profile to understand local demographics. The results of the procedures outlined in Part 8 will be valuable to understand potential Wellbeing impacts associated with Safety and Security and Life Satisfaction.

The review of Wellbeing impacts should be informed by the outputs of the assessments undertaken for each of these related DMRB topics. While these assessments consider the impact of environmental changes on overall *environmental quality*, this guidance should draw on those findings to determine the impacts of environmental changes on *people*. Technical specialists working on each related topic should be engaged in the Wellbeing review to ensure that their expertise underpins a robust and mutually supportive approach.

Stakeholder consultation

For the majority of cases, a desk-based study will be sufficient to consider effects on wellbeing. However, in some cases stakeholder consultation may be used. Consultation will help to build a better understanding of community functioning in the study area and the practical interactions between the physical environment and human wellbeing (e.g. to what extent a recreation ground is used by local people and therefore contributes to their physical health and life satisfaction; or, to what extent the elderly people in a care home beside a busy road are in fact affected by noise arising from the road). These relationships are likely to differ on a case by case basis, and the true nature of interactions may only come to light through conversation. This will also help demonstrate compliance with the three aspects of the equality act.

It is advised that consultation should be considered particularly for roads or projects which:

- Constitute a major change in infrastructure close to people or communities;
- Imply the loss or displacement of key private or community assets;
- Present substantial uncertainties as to the likely impacts on wellbeing.

The aim of consultation is to build on desk-based data collection to gain an understanding of potential community issues, anticipated impacts and their significance. Where required, consultation should engage a broad spectrum of the community. Consultees may include health practitioners, local elected officials (e.g. local councillors, Members of Parliament), community or neighbourhood association representatives, and police officers, among others. This can be helpful in understanding the less tangible elements of wellbeing, such as the functioning of social networks within a community.

Where possible, the inclusive consultation process required to review wellbeing should be undertaken in tandem with consultation activities for other elements of the project cycle.

Stakeholder consultation can take many forms, including questionnaire surveys, targeted interviews and focus groups. The method selected should be appropriate to the nature of the project, the community or individuals affected. The Highways Agency provides guidance on consultation and this should be followed.

^{vii} World Health Organisation Regional Health Office for Europe. See <http://www.euro.who.int/Noise> (07.04.10).

^{viii} The World Health Organisation estimates that, worldwide, 1.9million deaths annually are attributable to physical inactivity.

^{ix} *Sustainable Development Indicators in your Pocket 2009*. Defra (2009).

^x See <http://www.defra.gov.uk/sustainable/government/progress/national/68.htm> (04.06.10).

Table 8.1: Summary of Findings

Components	Factors	Anticipated Change, e.g. impact type and extent, number of people affected, proximity of people to source of impact, etc. [may be 'no change']	Community Group Experiencing Change	Mitigation
Physical Health, Stress and Anxiety	Air quality & health			
	Noise levels & health			
	Access to facilities for physical activity			
Personal Safety and Security	Incidence of personal or property crime			
	Rates of road-related accident or injury			
Life Satisfaction	Environmental justice			
	Sense of belonging			
Review of Impacts				
<p>It is important to consider the following questions:</p> <ul style="list-style-type: none"> • Are there any components/factors which are negatively affected? • Are there any opportunities to improve the baseline conditions? • Are any community groups disproportionately affected by the proposals (positively or negatively)? • What further mitigation measures should be considered? 				