



A6 to Manchester Airport Relief Road

Sustainability Statement

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SEMMS

**A6 to Manchester Airport
Relief Road**

Sustainability Statement

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1.0 Introduction

1.1 Scheme Overview

1.1.1 The A6 to Manchester Airport Relief Road will improve surface access to Manchester Airport and provide better connectivity along the south Manchester corridor, to assist Greater Manchester and Cheshire East in meeting their aspirations for economic growth. It directly supports the Government's objective to provide major transport infrastructure that will deliver economic growth, a fact acknowledged by the announcement on prioritisation for funding in the Chancellor's Autumn Statement in November 2011. The scheme will provide congestion relief to local communities and generate wider benefits to business through improved journey time reliability on the local and strategic highway network. Detailed assessment/modelling has been carried out and is contained within the Traffic Assessment and Environmental Statement, which provides evidence of the congestion relief to local communities. These documents have been submitted as part of the planning applications.

1.1.2 The scheme is an integral component of the wider South East Manchester Multi-Modal Strategy (SEMMMS), which has delivered benefits to local communities across south-east Manchester through a range of public transport and sustainable transport measures over the past ten years. It is widely recognised that the A6 to Manchester Airport Relief Road is critical to delivering the long-term objectives of the SEMMMS strategy, and to meet national objectives for growth, employment and connectivity

1.1.3 The lead designer for the scheme is the SEMMMS Project Team based in Stockport Metropolitan Borough Council (SMBC). The three local authorities SMBC, Manchester City Council (MCC) and Cheshire East council (CEC) all have a duty to promote and incorporate sustainability as part of their local policy documents, and as such sustainability has been considered from the conception of the scheme. As evidence and justification of the sustainability of the scheme, it was put forward for CEEQUAL assessment, which is discussed in further detail in section 2.0.

1.2 Purpose of Document

1.2.1 This Sustainability Statement has been prepared in support of the three planning applications for the SEMMMS A6 to Manchester Airport scheme. This Statement demonstrates the applicants' adherence to sustainability principles, including through the application and reward of CEEQUAL accreditation, as well as adherence to the local planning authorities planning policy guidance on sustainable design. It also provides an indicative baseline of the potential Total Carbon Equivalent (tCO₂e) of the material resources that will be required for the construction of the A6MARR, i.e. an element of the schemes 'carbon footprint'. This Sustainability Statement should be read in conjunction with all other supporting documentation for the planning applications.

1.2.2 This document identifies the guidance that is produced by the relevant local planning authorities on sustainability and the steps that were taken by the applicants to ensure a sustainable scheme. The A6MARR falls within three local authority areas, consisting of Stockport Metropolitan Borough Council (SMBC), Cheshire East Council (CEC) and Manchester City Council (MCC), therefore it has been necessary to consider the sustainability

policies of all three planning authorities. Each of these is introduced in turn below. Much of this guidance is aimed at built development applications such as for housing or employment and is therefore not applicable to an application for construction of a road and associated infrastructure. However the guidance that is applicable has been carefully considered and applied during the preliminary design of the scheme.

1.2.3 Guidance on sustainability is provided by SMBC on their website, this consists of:-

- Sustainable Design and Construction SPD (Supplementary Planning Document), which includes guidance for filling out the Sustainability Checklist.
- Sustainability Checklist, which provides the designer/developer with an easy-to-complete checklist detailing all the requirements to provide a sustainable scheme. The designer/developer provides yes/no answers against a number of questions which are then analysed to provide a score for the scheme. The score is then used to evaluate the sustainability of scheme, which can be awarded a gold, silver or bronze standard of sustainability.

1.2.4 Several of the points that are discussed within SMBCs Sustainability Checklist and SPD were not applicable for the road scheme, which caused the evaluation of the scheme, and therefore the classification standard, to be redundant. The guidelines were still applied where possible so that the scheme could be designed to be as sustainable as possible, and those points will be the basis of section 4.0 this report.

1.2.5 The guidance currently provided by CEC consists of the Integrated Appraisal Toolkit, which contains information on sustainability and a series of questions about the proposed scheme which allows the user to identify areas where improvements can be made. These questions have been replicated and answered within this report. Unlike the SMBC Sustainability Checklist, this document aims only to identify areas of potential improvement to the user, no standards or classifications are attained through the completion of this document.

1.2.6 The guidance provided by MCC consists of their Environmental Standards document which forms part of their Guide to Development in Manchester - Supplementary Planning Document and Planning Guidance Adopted April 2007. This document contains guidance for developers on several key aspects of environmental policies in accordance with MCC's Unitary Development Plan and is informed by the latest national planning and building control requirements. The aim of the document is to improve general understanding and to promote transparency and consistency in achieving sustainable developments by providing general guidance under key headings, unlike the guidance provided by SMBC and CEC which contains a question/answer format for the developer. The dedicated section in this document addresses the requirements of MCC by outlining the scheme proposals in response to the key headings provided.

1.2.7 Although the guidelines address mainly sustainability and planning in buildings (particularly housing developments), they can be interpreted and adjusted to suit any scheme in the construction industry, as generally the attitudes and good practice that is encouraged can be universally applied.

1.3 Sustainable Development as defined by the NPPF

1.3.1 The National Planning Policy Framework (NPPF) articulates the government's national guidance on planning policy and sustainable development.

1.3.2 Generally, sustainable development is conceptualised as having three dimensions, these dimensions are considered to work in unison, with each dimension having no negative affect on the other. These dimensions are considered to be as follows:-

- Environmental – Contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy. The Proposed Scheme has benefits and dis-benefits for the environment. Mitigation and enhancement measures have been designed and committed to, which will, where possible, reduce and increase the magnitude of negative and positive effects respectively such as the introduction of additional ecological ponds and the replacement/ introduction of additional flora.
- Social – Supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being. The scheme overall has a positive effect on the affected communities by improving transport links and improving journey times through reduction in traffic on local roads (as detailed in the Traffic Assessment and Environmental Statement, which have been submitted as part of the planning applications). The reduction in traffic on local roads also inherently improves the air quality in those areas and therefore provides health improvements. The introduction of the footway/cycleway along the length of the scheme promotes physical activity and therefore health and wellbeing.
- Economic – Contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure. The scheme overall has a positive effect on the local economy by making substantial savings with journey times and also through agglomeration, labour market impacts through the creation of jobs and increased productivity.

1.3.3 The key environmental, social and economic impacts of the scheme are discussed in further detail in table 4.3 of the Major Scheme Business Case (refer to Appendix A). The impacts are given a quantitative, a qualitative (ranging from **large adverse** to **large beneficial**) and a monetary assessment.

2.0 CEEQUAL Assessment Summary

- 2.1 CEEQUAL, the evidence-based sustainability assessment and rating award, is being undertaken. The results of which will indicate where high environmental and social performance have been achieved through the management, design and construction stages of the Proposed Scheme. The Proposed Scheme aspires to achieve the standard of CEEQUAL Excellent.
- 2.2 CEEQUAL rewards the project and contract teams that go beyond the legal, environmental and social regulatory requirements to achieve distinctive environmental and social performance for a Proposed Scheme. The CEEQUAL process aims to deliver improved sustainability of the specification, design and construction of the Proposed Scheme.
- 2.3 The type of assessment being undertaken for the Proposed Scheme is the *Sustainability Strategy & Performance Assessment* which assesses the project against all sections of the Version 5 CEEQUAL Assessment Manual. The type of award which is being sought through the assessment is *The Whole Team Award*; which has been applied for by the SEMMMS Project Team on behalf of the three local authorities and the contractor (when appointed).
- 2.4 In addition to the main *Whole Team Award* an *Interim Client and Design Award* has been sought which has enabled the project team to include a verified Assessment of the design stage as part of the *Whole Team Award*. The SEMMMS Project Team has identified that in support of the Planning Application and this Sustainability Statement the *Interim Client and Design Award* has been undertaken at this stage and to ensure that sustainability issues are considered in a systematic way and incorporated into the project as it progressed. The aim being that that the SEMMMS Project Team can secure recognition that the strategy and design of the Proposed Scheme, at this early stage, is being managed in such a way that CEEQUAL and Sustainability objectives are being met. The Proposed Scheme aspires to gain a ratified *Interim Client and Design Award Score*, and subsequently a *Whole Team Award Score*, of *Excellent*, which equates to gaining 75% of available CEEQUAL points. The *Interim Award* is superseded once the project is finished and the *Whole Team Award* completed.
- 2.5 The *Whole Team Award* and the *Interim Client and Design Award* is scored for 9 Sections: these comprise:

2.5.1 Project Strategy

This section assesses how the project team has related and will relate the proposed scheme to the wider sustainability agenda and the contribution of the proposed scheme to 'sustainable development', this is recorded in various documents which have been produced throughout the development of the SEMMMS Strategy, for example; the Major Scheme Business Case, Economic Assessment, Environmental Assessments and Statement and Social Distributional Impacts Assessment. These documents have been produced in order that the three pillars of sustainable development; economy, environment and social aspects can be appropriately balanced in the context of three promoting authorities' policies and objectives.

2.5.2 Project Management

This section considers how sustainability issues are being incorporated into the overall management of the proposed scheme. It covers a number of issues ranging from environmental management systems and training through to how the procurement processes consider environmental and social performance. Early integration of environmental management and social issues into the overall philosophy of the proposed scheme and enhanced environmental and social performance are key indicators for the development of the proposed scheme. The mechanisms which have been integrated into the project management of the proposed scheme include but are not limited to;

- the CEEQUAL award
- inter disciplinary technical working groups
- environmental, social and economic risk assessments
- a dedicated consultee response team receiving emails and telephone call from members of the public
- early engagement of statutory authorities inform construction programming

2.5.3 People and Communities

This section brings together elements of the CEEQUAL Award concerned with the people affected by the Proposed Scheme and its potential effects on neighbours, both positive and negative, and the important actions of consultation and engagement with stakeholders in the project. The section is called 'People and Communities' because it assesses effects and benefits at the level of individual citizens and at the community level. The proposed scheme has consulted in two phases to consider both stakeholder opinions on options and an emerging preferred scheme; these comprised but were not limited to:

- stakeholder forums; historical, environmental, ecological and vulnerable user groups
- public exhibitions
- local liaison forums for groups of stakeholder that were considered potentially 'most affected' by the proposed scheme.
- Health Impact Assessment (HIA) forums

The HIA indicated that generally there would be key and positive benefits to the local economy/ employment and improved accessibility / connectivity due to the decrease in local traffic and the upgrades to the PRow network. Further the assessment indicated that a positive / negative impact of the scheme is on traffic and associated pollution (dependant on location) and a key negative impact was the loss of land.

2.5.4 Land Use and Landscape

This section assesses both the appropriateness of the chosen location and the design concept. The proposed scheme is examined in relation to brownfield and greenfield land-use, management and treatment of land and land-use efficiency. Location and land-use decisions in relation to flood risks, local amenity and soil or mineral resource preservation are also covered.

Various surveys including, landscape character assessment, historical landscape character assessment, flood risk assessment, land use assessment and agricultural impact assessment address the appropriateness of the scheme location and land-use efficiency. The above

influenced consultations with landowners to address concerns regarding landtake as a result of the proposed scheme.

The proposed scheme will be predominately built on agricultural greenbelt. As a result the project team where possible have tried to identify areas of agricultural hand back and will continue to discuss options with both landowners and contractors to reduce the impact on the land resource.

The amenity value of the predominately greenfield landscape as a recreation, cycling, (dog) walking area has informed the integration of the proposed scheme within the existing landscape character and footpath network. The impact on amenity has been mitigated through, but not limited to, the net increase in higher value planting to replace, for example, poorly maintained hedges and ponds.

2.5.5 Historic Environment

This section assesses the proposed scheme on gaining an understanding of the following areas; have the baseline conditions of the historic environment been properly assessed and documented, combined with effective consultation and application for consents, has the design fully incorporated the constraints and opportunities, has a mitigation strategy been prepared and consulted on, has the mitigation been successfully implemented and monitored and have the results of any mitigation works and monitoring been fully reported on, disseminated for public access and archived. The assessment on Cultural Heritage was undertaken for the production of the ES. Archaeological and cultural heritage assets within a 600m wide study area centred on the proposed scheme alignment were identified. A suite of mitigation was recommended for agreement with the county archaeologists which include, but are not limited to:

- planting of landscape feature to reduce impacts on setting of heritage assets
- geophysical survey
- excavation of significant remains
- watching brief
- trial trenching

The assessments have demonstrated that:

- all but one of the known and potential assets of archaeological interest considered will be subject to impacts which will be no greater than slight.
- the proposed scheme will not involve direct impacts on any listed buildings or buildings identified as being of historical or architectural importance
- that impacts related to historic landscape types associated with the proposed scheme corridor will be no greater than slight

2.5.6 Ecology and Biodiversity

This section covers impacts on sites of high ecological value, protected species, surveys associated with and conservation enhancement, habitat creation measures, monitoring and maintenance incorporated into the Proposed Scheme. Desk studies and surveys have been undertaken to identify flora, fauna and water bodies in order that the impact of the

proposed scheme could be addressed through the Environmental Statement, these comprised:

- Statutorily and non statutorily designated sites
- semi-natural broad-leaved woodland
- semi-improved grassland
- open water (ponds)
- running water
- hedgerows
- Schedule 9 plants
- Badger
- Bats
- Otter
- Hedgehog
- Brown hare
- Amphibians
- Common toad
- Common reptiles
- Kingfisher
- Breeding birds

Where required committed mitigation measures to reduce and negate significant impacts are detailed in the Environmental Statement; for example bat hop overs and mammal tunnels. Mitigation works will comply with the relevant species licenses from Natural England. The impact to the ancient woodland at Norbury Brook SBI is recognised as significant at a local level and cannot be mitigated.

Further to proposed mitigation measures the scheme strategy developed to ensure that there is a net increase in higher value habitats such as broadleaved woodland and species rich hedgerows; in order that corridors of these habitat types are compensated for, maintained and in some locations enhanced. The SEMMMS Project Team committed to ensuring that where one pond is destroyed by the scheme (regardless of its biodiversity value) two new ponds designed to provide habitat for great crested newts will be created.

Local Biological Records centres will also benefit from the proposed scheme as all of the data within the road corridor can be made available. This represents species and habitat surveys from both 2010 and 2013.

2.5.7 Water Environment

This section assesses the impacts on water resources, impacts on and of flood risk, protection and enhancement of the water environment, impacts and opportunities associated with water consumption and compliance with legal requirements. Through desk studies, surveys and environmental assessment, impacts and mitigation measures have been identified such as the use of SuDS and river bank erosion protection to be used to reduce the impact upon the water environment.

During construction the commitment to attain a CEEQUAL excellent score will require contractors to address water as a resource and to identify opportunities to reduce consumption or increase re-use. In addition the project team aspires to undertake a water-footprinting exercise to identify specific areas which can be targeted for efficient resource use.

2.5.8 Physical Resources Use and Management

This section assesses the impacts of using the very wide range of physical resources needed for construction of the proposed scheme and was used to frame part of the requirements in the contractors' contract documentation with regard to sustainability. Resource management will be addressed further, where relevant and appropriate, during the construction of the proposed scheme. Further this section of CEEQUAL provides the project team with the framework with which to potentially address the following:

- life-cycle analysis,
- energy and carbon emissions in use,
- energy and carbon performance on site,
- minimising material use and waste,
- responsible sourcing of materials including selection of timber,
- using re-used and/or recycled materials,
- minimising use and impacts of hazardous materials,
- durability and maintenance,
- future de-construction or disassembly,
- design for waste minimisation,
- legal requirements,
- waste from site preparation,
- minimising water consumption and embodied water,
- policies and targets for resource efficiency and on-site waste management.

The use of the Transport for Scotland Carbon Tool allowed for the total CO₂ emitted to be calculated and identify where potential reduction in resource use could be realised. This tool or something similar will facilitate a 'live' document approach to understand where further CO₂ savings can be made on appointment of a contractor.

2.5.9 Transport

This section assesses the location of the Proposed Scheme in relation to transport infrastructure, minimising traffic impacts of a project, construction transport and minimising workforce travel. Questions assess the Proposed Scheme's relationship to transport infrastructure, access for pedestrian and cyclists, need for additional transport infrastructure, resilience of the network, and performance for non-motorised users.

Surveys and environmental assessment identified impacts to motorised and non-motorised users during both construction and operation. Through consultation the needs of potentially affected users have resulted in committed mitigation and enhancements measures to reduce the adverse and increase the beneficial effects of the proposed scheme

on the non motorised user network. The east west shared use route linking the existing NMU network is considered a significant and beneficial effect of the proposed scheme. A suite of upgrades of existing footpaths to bridleways is proposed and will significantly improve connectivity and accessibility for all non motorised users of the existing PRow network; this should also encourage new users of the network and is considered a significant and beneficial impact of the proposed scheme.

As a road scheme the relationship of the project to existing transport infrastructure and construction traffic has been the focus of detailed analysis through traffic modelling and transport assessment. A number of complimentary and mitigation measures have been proposed throughout the proposed scheme corridor and there are multiple benefits predicted for users of the local road network as traffic is re-directed from these onto the proposed scheme. There are locations where traffic will increase and these, where appropriate, are subject to further studies with the intention of mitigating and reducing adverse impacts.

It is of note that through the DfT pre and post monitoring requirements for Local Major Scheme Evaluation reporting SMBC will go beyond compliance and have committed to further monitoring and modelling than is required. This report will address multiple environmental aspects of the proposed scheme such as noise, air quality, greenhouse gases and health impacts. Modelling will be undertaken as close to construction as possible, one year post construction, five years post construction and SMBC has committed to a further fifteen year monitoring review.

2.6 CEEQUAL Assessment Scores

The verified score, i.e. the percentage of available points awarded, for each section at *Interim Client and Design stage* are indicated below:

UAL Award Section	Percentage Score
Act Strategy	93%
Act Management	76%
People and Communities	100%
Use and Landscape	87%
Natural Environment	96%
Biodiversity and Ecology	58%
Water Environment	100%
Cultural Resources Use and Management	90%
Support	95%

Therefore, the verified CEEQUAL score based on the award for the *Interim Client and Design* stage is Excellent; 89% of all available points scored. Accompanying this statement is the email verifying the Award Score at *Interim Client and Design* stage. Refer to Appendix B for CEEQUAL Verification Letter.

3.0 Carbon Tool Summary

- 3.1 The Transport Scotland Carbon Management System (CMS) has been utilised to provide an indicative baseline of the potential *Total Carbon Equivalent (tCO₂e)* of the Material Resources required for the construction of the Proposed Scheme. The main objective for undertaking this process is to understand which material resources have the highest tCO₂e and to present opportunities for the designer and contractor to implement changes in order to reduce the overall impact of the Proposed Scheme's tCO₂e and its Carbon Footprint.
- 3.2 Road projects consume a wide range of construction materials from a wide variety of sources. These material resources will have been through a number of processes, including extraction, processing and product manufacture, all of which will have environmental impacts. For material resource use, the potential environmental impacts are associated with the extraction, processing and transport of material resources, the manufacture of construction products and their subsequent transport to, and use on, construction sites.
- 3.3 Impacts associated with the use of materials resource occur off site and potentially outside the UK. These can include the depletion of non-renewable resources and local environmental impacts (for example; noise, dust, traffic, ecological impacts) as a result of, for example; a mining and quarrying operation. Similar impacts can occur as a result of the processing of materials and the manufacture of construction products.
- 3.4 It is possible to quantify the use of materials, for example, tonnes of primary aggregate or concrete or steel required and therefore material resources through the calculation of the embodied carbon dioxide associated with specific materials or construction products. This facilitates the comparison of different materials and different construction options where different materials might be required (e.g. steel vs. concrete for constructing a bridge).
- 3.5 The embodied carbon dioxide emissions of material resources are the total carbon dioxide equivalent emissions released prior to it leaving the factory gate. 'Carbon' is used as short hand to refer to the basket of six greenhouse gases (GHGs) recognised by the Kyoto Protocol. GHGs are converted to carbon dioxide equivalents (CO₂e) based on their global warming potential per unit as compared to one unit of CO₂. This would normally include extraction or harvesting, the manufacturing process and any pre-distribution transportation. Using this method material resources required for the Proposed Scheme have been given a tCO₂e.
- 3.6 For the purposes of calculating the tCO₂e of the Propose Scheme through the CMS tool material resources encompass the materials and construction products required for construction and maintenance. Material Resources include raw materials such as aggregates and minerals from primary, secondary or recycled sources, and manufactured construction products.
- 3.7 Manufactured construction products can include the materials required for the construction of the road surface, pre-cast elements for the construction of structures such as bridges, gantries and signage, barriers, lighting and fencing. Material resources will originate off site and arise on site. These might include excavated soils and sub-strata

which can be used for engineering or landscaping purposes and road planings, which will, if appropriate, be re-used and recycled for use in construction of the Proposed Scheme. The CMS tool gives the designer and contractor the opportunity to input both materials produced off site and site won materials to understand the benefits of utilising as much site won materials as possible to reduce the tCO₂e of the Proposed Scheme.

- 3.8 The tCO₂e of the Proposed Scheme is 64,200. This CMS tool indicates that over 25% of the total tCO₂e of the Proposed Scheme will be produced through the construction of the Road Pavements and over 10% through both the Structural Concrete and the Structural Steel Required. The CMS tool indicates that the total avoided tCO₂e through the use of site won materials is 40,269. As indicated above the purpose of completing the CMS tool was not to draw conclusions in regard to the impact of the Proposed Scheme on Material Resources but the CMS tool does provide an indicative baseline of the detailed design from which both designers and contractors can work to reduce the overall Carbon Footprint of the Proposed Scheme.

4.0 SMBC Sustainability Checklist

4.1 Location and Transport

4.1.1 Are Issues of sustainability being considered at the inception, feasibility or outline proposal stages?

YES

The issues of sustainability have been considered from the inception and throughout the preliminary design of the scheme. The scheme is part funded by central government and with sustainability being a key issue that they are trying to address it is imperative that sustainability plays a key role in the scheme design.

One of the core objectives of the South East Manchester Multi Modal Study was environmentally sustainable economic growth, and so sustainability was a key part of the initial investigation not just for SMBC, but for all three local authorities.

A key part of the evidence presented within the business case for funding was the need to demonstrate that the long term strategy has taken due account of the policies and priorities of Central Government, particularly in relation to the key areas of environmental sustainability.

The preliminary design as developed for the planning application has been subject to a CEEQUAL assessment. The Scheme provides a rigorous and comprehensive sustainability rating system for project and contract teams, celebrating the commitment – and demonstration – of the civil engineering industry to achieving high environmental, economic and social performance. CEEQUAL will be continued throughout the project lifecycle to assess how well the scheme is achieving its sustainability aspirations. CEEQUAL has been discussed further in section 2.0.

4.1.2 Does the development take either of the following into consideration?

Flood Risk? **YES**

The scheme has had a Flood Risk Assessment carried out as part of the preliminary design which is updated at regular intervals as the scheme progresses. The majority of the proposed scheme is within Flood Zone 1 with only small elements within Flood Zone 2, and therefore the scheme passes the sequential test.

Permeable Paving? **NO**

The use of permeable paving would not be suitable for a scheme of this nature, however, other sustainable drainage techniques have been utilised (refer to 4.6.1).

4.1.3 Is the development designed to Building for Life Standard?

N/A

4.1.4 Is the development on a brownfield site?

NO

The route for the relief road has been protected for several decades.

4.1.5 Does the developer bring back into use an existing building that is derelict or have been vacant for over a year?

N/A

4.1.6 Does the project have long term flexibility designed in to allow for changes of use in the future?

N/A

4.1.7 Does the development take Urban Heat Island effects into account?

N/A

Although the scheme does not take urban heat island effects into account, it is envisaged that the landscaping, when established, will provide some amount of shade for pedestrians/cyclists in some locations.

4.1.8 Has a Travel Plan been undertaken?

N/A

4.1.9 Are public transport improvements required and/or provided by the development?

YES

As a consequence of the scheme, due to reduced traffic in local areas, it is expected that bus services will become more reliable with shorter journey times. Provisions have also been made to improve accessibility for buses with the potential to introduce bus lanes etc. as part of the complementary and mitigating measures of the A6MARR scheme. Further details are available in the Transport Assessment, which has been submitted as part of the planning applications.

4.1.10 Are options for integrated sustainable transport networks included in the development?

YES

One of the main objectives of the scheme is to provide a pedestrian and cycle route along the full length of the proposed relief road and retrofitted to the existing A555 with controlled crossing facilities provided.

The proposed development is an integral component of the wider South East Manchester Multi-Modal Strategy (SEMMMS), a twenty year integrated transport strategy for the study area aimed at addressing transport problems in the area (chiefly congestion) on a multi-modal basis. It was recommended that, amongst a package of other measures, including investment in the public transport network (bus and rail, including Metrolink), the study

area local authorities develop smaller and more appropriate scale road proposals along the protected alignments.

4.1.11 Does the development include the provision of adequate and safe cycle parking facilities?

N/A

4.1.12 Are showering and clothes drying facilities for cyclists and pedestrians included in the design?

N/A

4.2 Site Layout and Scheme Design

4.2.1 Does the design take any of the following into account?

Passive Solar Design? **N/A**

Natural Daylight? **N/A**

Natural Ventilation? **N/A**

4.2.2 Are Sustainable Building Standards being used for design and delivery of the project?

Code for Sustainable Homes? **N/A**

Lifetime Homes? **N/A**

BREEAM? **N/A**

CEEQUAL? **YES**

The scheme is being designed with current CEEQUAL objectives borne in mind. Refer to Section 1 for a summary of the CEEQUAL Assessment for the scheme.

4.2.3 Are green roofs and/or living walls integrated into the development?

N/A

4.2.4 Are flexible and adaptable ICT opportunities reflected in the design?

Central management systems have been specified for both lighting columns and traffic signals which allows remote control and monitoring and therefore reduces the need for physical inspections and associated energy consumption.

4.2.5 Does the development have long term flexibility designed in to allow for changes of use in the future?

N/A

4.2.6 Do housing developments include work space within the dwelling design?

N/A

4.3 Materials

4.3.1 Does the contractor selection process take into account Environmental Performance Assessments or proven environmental performance?

YES

As part of the Pre-Qualification Questionnaire the contractor is required to demonstrate their environmental performance via a number of questions on their environmental management as follows:-

- *Environmental Management: What environmental management systems do you have in place for contracts of this nature? (ISO 14001, EMAS or BS8555 or equivalent)*
- *Environmental Management: How does the firm consider environmental life cycle impacts in scheme design and procurement?*
- *Environmental Management: How does the firm consider the social and economic impacts of its design and in its choice of key suppliers?*
- *Environmental Management: Explain how the firm will apply lean management techniques and lean construction techniques in waste management*

4.3.2 Will the development use Life Cycle Assessment processes to assess proposed materials?

NO

The SEMMMS Project Team has not committed to the use of Life Cycle Assessment processes.

4.3.3 Are any of the following material going to be re-used/recycled from the site?

Aggregates? **YES**

Masonry Products? **YES**

Timber? **YES**

Other? **YES**

Where possible all waste materials that arise through the construction of the scheme are to be re-used elsewhere. The majority of the material that is expected to arise as part of the scheme is the existing ground, as most of the road is in cutting. The use of earth bunds as a mitigation against noise, allows the re-use of a large amount of the existing material.

4.3.4 Are any of the following materials going to be re-used/recycled entirely from another source within 50km?

Aggregates? **See Below**

Masonry Products? **See Below**

Timber? **See Below**

Other? **See Below**

It was requested that the contractor use local materials within the tender documents on sustainability grounds.

- 4.3.5 Are any of the following new 'virgin' materials going to be derived entirely from local sources (within 50km)?

Aggregates? **See Below**

Masonry Products? **See Below**

Timber? **See Below**

Other? **See Below**

It was requested that the contractor use local materials within the tender documents on sustainability grounds.

- 4.3.6 Do the materials used take into account the likely refurbishment cycle?

YES

The design of the scheme has taken into to account the predicted maintenance requirements of all aspects of the scheme, with attention paid to the chosen material types.

- 4.3.7 Will soil be re-used and/or prepared to BS Top Soil Standard?

YES

The top soil throughout the scheme will be placed and prepared in accordance with current standards including any areas that may become damaged due to the storage of equipment or the presence of the contractor i.e. at site compounds.

4.4 Waste

- 4.4.1 Has a Site Waste Management Plan been prepared?

YES

A Site Waste Management Plan has been prepared in line with current legislation, it looks to identify all the waste materials on site and propose whether they will be re-used or disposed of.

- 4.4.2 Project includes segregation and storage zones for collection of recyclable wastes?

During Construction? **YES**

It is expected that during the construction of the scheme the contractor will take all the appropriate measures, including the provision of segregation/storage zones, to ensure that materials are recycled where possible, as stipulated within the SWMP and the Code of Construction Practice (CoCP). It is stated that a target of 70% of construction waste is to be recycled by the contractor within the CoCP, as required by the Waste Regulations 2011.

In Use? **N/A**

4.4.3 Have composting facilities been included in the design?

N/A

4.5 Energy

4.5.1 Which energy measures have been included in the design?

Establish or connect to district heating? **N/A**

Insulation levels above building regulations requirements? **N/A**

Designed to Passivhaus standard? **N/A**

Designed to Active House standard? **N/A**

Energy efficient options for lighting? **YES**

To reduce the amount of energy that will be consumed by the site, the lighting design for the scheme has restricted lighting columns to junctions only for the majority of the scheme. The product specification for the lighting columns makes use of energy efficient components and the use of a central management system to allow remote control and monitoring.

Energy efficient options for heating/cooling? **N/A**

Energy efficient options for ventilation? **N/A**

Combined Heat & Power Provision? **N/A**

4.5.2 Are Renewable or Low Carbon Energy options included in the development?

Biomass? **N/A**

Solar Photovoltaics? **N/A**

Solar Thermal Hot Water? **N/A**

Wind? **N/A**

Hydro? **N/A**

Heat Pumps? **N/A**

Note – Although renewable/low-carbon energy options have not been incorporated into the design, the lighting for the scheme has been designed with energy efficiency in mind as per 4.5.1 above.

4.5.3 Have minimum AAA rated White Goods been specified for the development?

N/A

4.5.4 Has a green tariff energy supply been selected from a supplier for at least 12 months?

N/A

4.5.5 Has Smart Metering been included in the design?

N/A

4.5.6 Has a Building Management System been included in the design?

YES

Central management systems have been specified for both lighting columns and traffic signals which allows remote control and monitoring and therefore reduces the need for physical inspections and associated energy consumption.

4.5.7 NOTE - The contractor will employ good practice during the construction of the scheme and therefore be mindful of their energy consumption. Stipulations within the Code of Construction Practice (CoCP), which for example instruct the contractor to turn off plant when not in use etc. have the benefit of noise abatement with the ancillary benefit of reducing energy consumption.

4.6 Water

4.6.1 Does the design include sustainable urban drainage systems?

YES

It is stipulated within volume 2 of the contract documents that the contractor shall adopt the use of sustainable drainage techniques and consider their inclusion as early in the design process as possible. The preliminary drainage design has allowed for Sustainable Urban Drainage Systems (SUDS) with the introduction of attenuation ponds to limit the size of required pipes and reduce discharge rates.

4.6.2 Does the design include low water consumption devices, such as:

Rainwater collection?	N/A
Greywater recycling?	N/A
Dual flush toilets?	N/A
Waterless urinals?	N/A
Spray taps?	N/A
Water saving showers?	N/A
Tapered or peanut shaped baths?	N/A
Water saving white goods?	N/A
Low water use gardens/dry gardens?	N/A

4.7 Landscape and Biodiversity

4.7.1 Is new or additional open space being provided as a result of the development?

YES

Replacement amenity space is being provided in locations along the length of the scheme, Styal golf course is being remodelled so that there is little disruption to the golf course.

4.7.2 Does the design take account of Landscape Character Assessment?

YES

Landscape Character has been addressed in the Environmental Statement by explaining existing conditions, undertaking an impact assessment and recommending committed mitigation measure to address any significant impacts.

4.7.3 Does landscaping make use of native plant species?

YES

The Landscaping has been designed to be in keeping with the local flora of the area using native plants and tree's.

4.7.4 Have habitats been maintained or newly formed?

YES

Where the existing habitats are being affected by the scheme mitigation measures will be introduced reduce or negate potentially adverse impacts. Ecology surveys have been and will continue to be carried out over the design period and during construction. These surveys have identified any areas where wildlife, particularly protected species such as Great Crested Newts, are present within the vicinity of the scheme. The mitigation measures proposed will compensate for the majority of habitat loss, excluding the loss of ancient woodland at Norbury Brook. Further to these measures the SEMMMS Project Team have identified and designed habitat enhancement measures which will result in a net increase in high value habitats such as broadleaved woodland and species rich hedgerows. In addition the Environmental Statement commits the Project team to replace every pond lost to the scheme with two new ponds that can support a wide variety of species; including Great Crested Newts.

4.7.5 Has landscaping contributed to sustainable urban drainage provision?

YES

As part of the preliminary design the attenuation ponds are expected to be constructed using natural materials and turfed, also one of the constituent components of the attenuation ponds is the reed bed which acts as a natural filter to the water.

4.7.6 Where required, are linear areas being planted to enable species migration?

YES

Ecological design is integrated to maintain connectivity of linear belts of trees and hedgerows through mammal crossings and bat hops. To compensate for the loss of approximately 6000m of species poor hedgerows and 600m of species rich hedgerows, and enhance linear features, approximately 5500m of native species hedgerows are proposed.

- 4.7.7 Has the landscape been designed to achieve low maintenance and low resource intensive outcomes?

YES

The landscaping has been designed to require low resource intensive outcomes and maintenance.

- 4.7.8 Has planting been used as part of security provision on site?

NO

4.8 Health and Wellbeing

- 4.8.1 Does the design include occupant controls and management of individual areas for thermal comfort and lighting levels?

N/A

Note - Lighting levels throughout the scheme have been carefully considered as part of the Lighting Design. In the interest of light pollution the lighting columns through the scheme have been limited to within the junction locations. The choice of lighting column in the vicinities of the junctions, where residential properties are close by, has been designed to best reduce the impact on the local properties by being less intrusive.

- 4.8.2 Has noise from internal and external sources been appropriately assessed and modelled to inform design processes?

YES

Noise analysis of the area surrounding the scheme has been undertaken to determine the increased noise arising from the scheme that residents would be subject to. Modelling was also carried out with the proposed mitigation measures introduced which produced the net change residents would receive.

- 4.8.3 Do any fluorescent lights used have high frequency ballasts in to reduce flicker?

N/A

- 4.8.4 Has specification of internal finishes and furnishing taken into account Volatile Organic Compounds?

N/A

- 4.8.5 Have you done a Health Impact Assessment and submitted it for validation Stockport's Director of Public Health?

YES

A Health Impact Assessment (HIA) has been prepared during the design of the scheme in accordance with current guidelines in order to aid in the design development process. The HIA has been reviewed by the Director of Public Health for SMBC, CEC and MCC.

5.0 CEC Integrated Appraisal Toolkit

- 5.1 Will the initiative improve the competitiveness and productivity of businesses?

YES

One of several aims of the scheme is to improve the efficiency and reliability of the highway network, reduce the conflict between local and strategic traffic, and provide an improved route for freight and business travel.

- 5.2 Will the initiative exploit the growth potential of business sectors?

YES

The scheme will assist in realising the growth potential of the south Manchester corridor through the development of Airport City, Hazel Grove and Handforth Dean – each of which will yield high levels of economic output for Greater Manchester with the attraction of high value industries and a skilled labour force, providing large economic payoffs for the investment placed in the A6 to Manchester Airport Relief Road.

- 5.3 Will the initiative develop and exploit the regions knowledge base?

YES

The south Manchester corridor, running from Stockport through Trafford and parts of Cheshire East, contains a large volume of high-value, knowledge-based industry – and this is expected to increase as Manchester Airport develops as a growing hub of international economic activity. In particular, Airport City, Handforth Dean and Hazel Grove offer substantial development potential

- 5.4 Will the initiative deliver urban/rural renaissance?

N/A

- 5.5 Will the initiative secure economic inclusion?

YES

The scheme aims to regenerate local communities and encourage community, cultural, social and economic inclusion through reduced severance and improved accessibility to, from and between key centres of economic and social activity.

- 5.6 Will the initiative develop and maintain a healthy labour market?

YES

There is expected to be an additional 5,450 jobs brought about by the improved connectivity between labour and business markets. The envisaged increase in jobs was determined as part of the analysis of the wider economic benefits for the Major Scheme Business Case. It is also expected that several jobs will be created during the construction of the proposed scheme.

5.7 Will the initiative alleviate poverty?

YES

There is expected to be an additional 5,450 jobs brought about by the improved connectivity between labour and business markets. However, the skill levels of the jobs that are envisaged to be created has not been investigated.

5.8 Will the initiative reduce the need to travel and develop strategic transport, communication and economic infrastructure?

YES

The scheme will relieve congestion which will decrease journey times and create better traffic flow. The provision of efficient surface access and improved connectivity across south east Manchester by the introduction of the relief road will also generate economic growth. The road, however, will not reduce the need to travel.

5.9 Will the initiative or strategy develop and market the regions image?

YES

The A6 to Manchester Airport relief road will become a key travel link to Manchester airport, the proposed Airport City and other key centres of economic and social activity throughout south east Manchester. It will promote the strengthening of local and international cultures and communities through improved connectivity, accessibility and inclusion.

5.10 Will the initiative improve health and reduce health inequalities?

YES

Almost all kinds of additions to, and modifications of, transport infrastructure have positive and negative health and wellbeing impacts. The key thing therefore through the design, construction and operation phases is to minimise and remove the potential negatives and maximise the positive health and wellbeing impacts. Extensive changes have been made to the design of the A6MARR to minimise the potential negative health and wellbeing impacts.

Overall, the health and wellbeing impacts across the life of the A6MARR are more positive than negative for the majority of residents, users of amenities and workers in Stockport, Cheshire East and South Manchester and the wards areas considered in the HIA.

The positive and negative health and wellbeing impacts are widespread encompassing both more deprived and less deprived areas i.e. deprived areas are not facing a disproportionate share of the negative health and wellbeing impacts and less deprived areas are not experience a disproportionate share of the positive health and wellbeing impacts.

5.11 Will the initiative improve access to good quality, affordable and resource efficient housing?

N/A

5.12 Will the initiative reduce crime, disorder and the fear of crime?

YES

The scheme aims to reduce crime by strengthening links between communities. The project team has consulted with Greater Manchester Police during the design of the scheme with a view to reducing crime, disorder and fear of crime.

5.13 Will the initiative involve all stakeholders in decision making?

YES

Detailed consultation has been carried out throughout the inception and design of the scheme with all members of the public who are affected by the scheme, this consultation will be continued by the contractor. The consultation has been carried out through a number of mediums, including surveys via leaflets, public exhibitions, local liaison forums, land owner/stakeholder meetings and other communication via letter/email/phone call.

5.14 Will the initiative value diversity, improve equity and equality of opportunity?

YES

By improving transport links across south east Manchester for both motorised users and NMU's, the scheme aims to increase the opportunities available for those in deprived areas.

5.15 Will the initiative develop strong and positive relationships between people from different backgrounds and communities?

YES

The scheme aims to regenerate local communities and encourage community, cultural, social and economic inclusion through reduced severance and improved accessibility to, from and between key centres of economic and social activity.

5.16 Will the initiative improve access to and use of basic goods, services and amenities?

YES

The scheme will provide improved transport links across south-east Manchester and will therefore improve access to goods, services and amenities provided by south-east Manchester's key centres of economic and social activity. Any local severance that occurs as a result of the relief road has been addressed through the introduction of at-grade crossings and bridge structures.

5.17 Will the initiative protect places, landscapes and buildings of historic, cultural and archaeological value?

YES

As part of the Environmental Statement a detailed set of plans has been created for the entire envelope of the scheme. These plans detail sites/areas of historic/cultural/archaeological value and with the aid of this information the scheme has been designed to mitigate any effects on these areas/buildings as far as is possible. The alignment of the relief road has been designed with these constraints in mind so that it avoids as many of these sites as possible.

5.18 Will the initiative protect and improve local environmental quality?

YES / NO

There are benefits and dis-benefits associated with each environmental topic in the Environmental Statement. In the context of this Sustainability Statement and *protection and improvements to local environmental quality* the Environmental Statement defines, but is not limited to, the overall effect of the Proposed Scheme as follows:

- Air quality: benefit
- Cultural Heritage: dis-benefit
- Landscape: dis-benefit
- Visual: dis-benefit
- Ecology and nature conservation: benefit
- Noise: dis-benefit
- Effects on Travellers: benefit
- Private Assets: dis-benefit
- Water Environment: dis-benefit

The Environmental Statement indicates the significance of both the benefits and dis-benefits associated with each environmental topic. Mitigation measures have been designed, where possible, to prevent or reduce the effects of the Proposed Scheme.

5.19 Will the initiative protect and enhance biodiversity?

YES

As indicated above there are benefits and dis-benefits in the context of protecting and enhancing biodiversity. However, with the detailed mitigation measures in place the Proposed Scheme is predicted to have an overall beneficial effect. Where existing habitats are being affected by the scheme mitigation measures will be introduced to prevent any adverse consequences. Detailed ecology surveys have been and will continue to be

carried out over the design process and prior to construction. Further details of the mitigation measures and ecology surveys are contained within the Environmental Statement, which has been submitted as part of the planning applications.

5.20 Will the initiative protect and improve the quality of inland and coastal waters?

YES

Refer to section 4.6.1

5.21 Will the initiative protect and improve air quality?

YES

As indicated above there are benefits and dis-benefits in the context of protecting and improving Air Quality. However, the overall effect of the Proposed Scheme is thought to be beneficial. In the direct vicinity of the relief road the air quality modelling indicates that there will be a decline in air quality, however the reduced traffic on local road inherently indicates that there will be an improvement in air quality. Further details on the assessment of the air quality and the impact of the scheme are contained within the Environmental Statement, which has been submitted as part of the planning applications.

5.22 Will the initiative protect and improve land quality?

NO

The proposed scheme will predominately built within greenbelt and on agricultural land, the proposed alignment has been safeguarded for a number of years and this loss has been expected. However, where agricultural hand back is proposed the contractor will ensure that the appropriate storage of top soils will be undertaken in accordance with a Construction Environmental Management Plan.

5.23 Will the initiative address the need to limit and adapt to climate change?

YES

Additional Non-Motorised User (NMU) facilities aim to reduce the level of vehicular traffic by providing improved walking/cycle routes along the scheme. A Flood Risk Assessment has been carried out for the scheme. The scheme also incorporates SUDS into the preliminary drainage design, and it shall be the responsibility of the contractor to further utilise sustainable drainage techniques. The use of energy efficient components and central management systems, coupled with the lighting of predominantly junction only, further reduces associated emissions.

5.24 Will the initiative ensure the prudent use of natural resources and the sustainable management of existing resources?

YES

Refer to sections 4.3 and 4.4

- 5.25 Will the initiative minimise the requirement for energy use, promote efficient energy use and increase the use of energy from renewable sources?

YES

Refer to section 4.5

- 5.26 Will the initiative ensure the sustainable management of waste, minimise its production and increase re-use, recycling and recovery rates?

YES

Refer to section 4.4.

6.0 MCC Environmental Standards

6.1 Energy Efficiency

Energy efficient options for lighting

To reduce the amount of energy that will be consumed by the site, the lighting design for the scheme has restricted lighting columns to junctions only for the majority of the scheme. The product specification for the lighting columns makes use of energy efficient components and the use of a central management system reduces the need for physical inspections and associated energy consumption.

Central Management Systems

Central management systems have been specified for both lighting columns and traffic signals which allows remote control and monitoring and therefore less transport required for inspections etc.

Construction Practice

The contractor will employ good practice during the construction of the scheme and therefore be mindful of their energy consumption. Stipulations within the CoCP, which for example instruct the contractor to turn off plant when not in use etc. have the benefit of noise abatement with the ancillary benefit of reducing energy consumption.

6.2 Renewable Energy

No renewable energy systems have been specified as part of the design of the scheme. However, energy efficient options for the lighting of the scheme have been considered as noted in section 6.1 above.

6.3 Environmental Design

The CEEQUAL Award for Sustainability is the Standard by which the Proposed Scheme's environmental design will be assessed. The integration of the project management, design and construction sections of the CEEQUAL award into the governance of the Proposed Scheme will ensure that sustainability measures are considered and incorporated, where possible, into every aspect of the development of the road. The Project Team aspires to gain an Excellent rating for the CEEQUAL award. The interim award has been verified as excellent and is awaiting ratification (Please see Appendix XX: Confirmation Letter from CEEQUAL).

6.4 Water Management and Weather Resilience

Flood Risk Assessment

The scheme has had a Flood Risk Assessment carried out as part of the preliminary design which is updated at regular intervals as the scheme progresses. It should be noted that the majority of the proposed scheme is within Flood Zone 1 and therefore is at low risk from flooding.

Sustainable Urban Drainage Systems (SUDS)

It is stipulated within volume 2 of the contract documents that the contractor shall adopt the use of sustainable drainage techniques and consider their inclusion as early in the design process as possible. The preliminary drainage design has allowed for Sustainable Urban Drainage Systems (SUDS) with the introduction of attenuation ponds to limit the size of required pipes and reduce discharge rates. The attenuation ponds are expected to be constructed using natural materials and turfed, also one of the constituent components of the attenuation ponds is the reed bed which acts as a natural filter to the water.

6.5 Waste Management

A Site Waste Management Plan has been prepared in line with current legislation, it looks to identify all the waste materials on site and propose whether they will be re-used or disposed of.

Where possible all waste materials that arise through the construction of the scheme are to be re-used elsewhere. The majority of the material that is expected to arise as part of the scheme is the existing ground, as most of the road is in cutting. The use of earth bunds as a mitigation against noise, allows the re-use of a large amount of the existing material.

It is expected that during the construction of the scheme the contractor will take all the appropriate measures to ensure that waste materials are recycled where possible, as stipulated within the SWMP and the Code of Construction Practice (CoCP). It is stated that a target of 70% of construction waste is to be recycled by the contractor within the CoCP, as required by the Waste Regulations 2011.

6.6 Construction Management

In addition to 6.5 the Code of Construction Practice for the scheme aims to protect the interests of local residents, businesses, the general public and the surroundings in the immediate vicinity of the construction works. It stipulates that the code is to be read in addition to the Local Government Authorities Considerate Constructor Scheme (with the code superseding any part of the considerate constructor scheme, where it is more onerous).

It has been requested that the contractor uses locally sourced materials where possible on the grounds of sustainability.

6.7 Biodiversity

There are benefits and dis-benefits in the context of protecting and enhancing biodiversity. However, with the detailed mitigation measures in place the Proposed Scheme is predicted to have an overall beneficial effect.

Detailed ecology surveys have been and will continue throughout the design process and prior to, and if necessary during, construction. These surveys have identified areas where wildlife, particularly protected species such as Great Crested Newts, are present and have

been used to develop detailed mitigation proposals. Further details on the ecology surveys carried out and the potentially impacted species are contained within the Environmental Statement, which has been submitted as part of the planning applications.

Existing habitats will have to be removed as a result of the Proposed Scheme. Replacement and enhanced habitat creation has been proposed resulting in a net increase throughout the Proposed Scheme. Ecological design has been integrated to maintain connectivity of linear belts of trees and hedgerows to mammal crossings and bat hops. A commitment to replace every one pond lost to the Proposed Scheme with two new and strategically placed ponds has been adopted.

All Landscaping for the scheme has been designed to be in keeping with the local flora of the area using native plants and trees.

6.8 Waterways

In addition to the above information regarding SUDS, all drainage design has been subject to the approval of the Environment Agency, including their strict regulations regarding pollution of watercourses. Where necessary, preventative equipment has been specified in the form of oil interceptors, for example.

7.0 Conclusion

The scheme has been designed with sustainability borne in mind from the conceptualisation of the scheme through the detailed design, and will be carried on through the detailed design by the contractor.

Certain key areas of the scheme have been able to address the issues of sustainability as can be seen in the sections above, where most questions/topics are addressed positively. There are certain areas where these sustainability issues have not been addressed, however where this is the case, measures have been taken to best reduce the impacts of the scheme.

Certain aspects of the scheme have been able to address sustainability issues, these have been discussed below:-

- **CEEQUAL** – The scheme has been designed with the objectives of CEEQUAL borne in mind, with the aspiration to attain a CEEQUAL award of *Excellent*.
- **Carbon** – The scheme has compiled detailed carbon data for the construction of the scheme, which although does not provide an assessment of the scheme's impact, provides a baseline for those involved in the scheme to aim to reduce.
- **Transport** – The purpose of the scheme is to provide better surface access across south east Manchester by providing the relief road through key economic centres. It will remove traffic and therefore congestion from local road and will generally improve journey times throughout the affected areas. There will be several improved links for Non-Motorised Users including a new footway/cycleway running the full length of the proposed relief road and retrofitted to the existing A555.
- **Health and Wellbeing** – The scheme will aim to improve health and wellbeing by providing stronger links between communities with better surface access and decreased severance. The reduction in local traffic will locally improve air quality leading to a net benefit across the scheme. The introduction of the proposed footway/cycleway along the scheme will encourage walking and cycling, which will inherently improve health.
- **Waste and Materials** – The scheme is being designed to minimise waste and maximise site won materials. Stipulations are in place that conform with current regulations regarding the correct handling and disposal of waste on site and with aims to source sustainable new/recycled materials where they are required.
- **Drainage** – The drainage for the scheme has been designed with Sustainable Urban Drainage Systems (SUDS), particularly with the use of attenuation ponds to limit flow and therefore pipe sizes.
- **Lighting** – The lighting design for the scheme minimises the number of new columns required by limiting lighting to junctions in most areas and utilises low energy components in the lighting columns to reduce energy consumption following the construction of the scheme.
- **Landscape and Biodiversity** – Large extents of landscaping have been designed into the scheme, which have been designed to be in keeping with the natural landscaping of the area. The scheme is deemed to have a positive impact on the biodiversity in general, however where the scheme is deemed to have dis-benefits, extensive steps have been taken to mitigate the impacts as far as practicable.

Appendix A – Table 4.3 from the Major Scheme Business Case

Table 4.3 – Appraisal Summary Table (AST) for the Preferred Option

Appraisal Summary Table		Date produced:	26 Oct 2012	Contact:						
Name of scheme:	A6 to Manchester Airport Relief Road			Name	Jim McMahon					
Description of scheme:	A new 10-km 2-lane dual-carriageway linking the A6 to Manchester Airport, providing strategic connectivity and relieving congestion on local routes and through town and district centres. The scheme also includes a segregated cycle/pedestrian route to promote mode shift from car to more sustainable modes.			Organisation	SMBC					
				Role	Project Director					
Impacts		Summary of key impacts		Assessment						
				Quantitative		Qualitative				
				Monetary £000(NPV)		Distributional 7-pt scale/ vulnerable grp				
Economy	Business users & transport providers	Substantial journey time savings for business/freight users: £146m for personal business users and £157m for freight due to the improved connectivity and journey times to markets in major centres of Stockport, Manchester Airport, Trafford, Cheshire and Manchester.	Value of journey time changes(£000)	£427,596		Large Beneficial	£427,596	Moderate Beneficial		
			Net journey time changes (€000)							
			0 to 2min	2 to 5min	> 5min					
			£165,009	£98,266	£164,321					
Reliability impact on Business users			Not assessed		Large Beneficial	Not assessed				
Regeneration			Not assessed		Not assessed	n/a				
Wider Impacts		The scheme will generate benefits through agglomeration, labour market impacts and increased productivity. Approximately 45% of these benefits will arise in Stockport, 35% in Cheshire East and 20% in other parts of Greater Manchester.	GVA of up to £1,249 million and up to 2,098 new jobs created.		Large Beneficial	£1,249,000				
Environmental	Noise	The proposed scheme is expected to lead to increases and decreases in noise levels across the study area. There are a total 19,488 dwellings within the study area. In the opening year (2015) 14,274 of these are expected to experience an increase in noise levels (2,099 above 5db) , 5,115 a decrease and 1099 would experience no change.	Population annoyed in DM: 3420 Population annoyed in DS: 4151 Net noise annoyance change in 15th year: 731		Moderate Adverse	-£17,094	Slight Adverse			
	Air Quality	The scheme is anticipated to lead to an improvement in air quality (exposure to NO2 and PM10 concentrations) overall. The scheme leads to an increase in annual mean PM10 concentrations at 20m from the road centre of at least 1µg/m3. The scheme does not lead to an increase in annual mean NO2 concentrations at 20m from the road centre of at least 2µg/m3 and where concentrations are above the AQS NO2 objective of 40µg/m³. The scheme is anticipated to affect air quality within an AQMA. Overall 1003 properties within the AQMA experience worsened air quality and 4872 properties experience improved air quality. The scheme is anticipated to affect air quality within an AQMA. Overall 3899 properties within the AQMA experience worsened air quality and 11465 properties experience improved air quality. 507 properties experience exceedance of the annual mean NO2 EU Limit Value; 10 properties are removed from exceedance as a result of the proposed scheme. No properties experience exceedance of the annual mean PM10 EU Limit Value and no exceedances are removed as a result of the proposed scheme.	Number of properties with an improvement (PM10): 16,787 Number of properties with no change (PM10): 148,430 Number of properties with a deterioration (PM10): 10,147 Number of properties with an improvement (NO2): 38,323 Number of properties with no change (NO2): 109,520 Number of properties with a deterioration (NO2): 27,521 Overall Appraisal Score NO2: -10,166µg/m3; PM10: -52µg/m3.		Beneficial		Large Beneficial			
	Greenhouse gases	The proposed scheme is predicted to lead to an increase in carbon emissions over 60 year of approximately 10,300 tonnes	Change in non-traded carbon over 60y (CO2e)		10,308		Neutral	-£1,077		
					Change in traded carbon over 60y (CO2e)					
	Landscape	Landscape features are considered typical of the wider locality and display importance at the local level. Corridor landscape is generally ordinary to moderate quality with some areas considered moderate to good quality at the detailed level. Fragmented agricultural landscape with existing features of woodland and linear belts of trees demonstrating a capacity to accommodate change in combination with a robust mitigation strategy.	n/a		Slight Adverse		n/a			
	Townscape	Minor modification to the fabric of the existing townscape to deliver any traffic improvement measures in nearby towns /villages would not result in a significant change to the way in which local townscape is perceived. Detailed assessment /worksheets not required.	n/a		Neutral		n/a			
	Heritage of Historic resources	Sites of significance within study corridor (including 50m buffer zone) comprise earthworks, buildings, historic building complexes, structures and accumulated deposits. The potential exists for below-ground archaeological remains in areas where access has not yet been granted to undertake intrusive archaeological surveys. The level of impact (moderate adverse) is specifically a consequence of the impact on Norbury Mill, a site of regional importance, with the overall level of impact otherwise being slight adverse.	n/a		Moderate (slight) Adverse		n/a			
	Biodiversity	Ecology features present include Happy Valley Local Nature Reserve (LNR), Ancient Woodland (Mill Hill Farm and Norbury Brook Wood), Broadleaved woodland, Semi-improved grassland, ponds, Running Water, Hedgerows, Badgers, Bats, Otter, Hedgehog, Brown hare, Great crested newt, Common toad, Breeding Birds and Kingfisher. Japanese knotweed and Himalayan Balsam are also present. The construction and operation of the scheme could potentially impact on these features / resources. However the assessment has concluded that, with the inclusion of the proposed design and mitigation measures impacts would be no greater than moderate at specific locations and would be slight adverse overall.	n/a		Moderate (slight) Adverse		n/a			
Water Environment	Water Environment features present include the Oxhey, Threapurst, Norbury, Poynton, Lady, Spath, Gatley and Baguley Brooks, numerous small ponds, three distinct groundwater bodies: the Manchester and East Cheshire (M&EC) Carboniferous Aquifers, the M&EC Permian-Triassic Aquifers, the Dane and Weaver Quaternary Sand and Gravel Aquifers, and an SPZ3. These features are typical of the wider locality and are important at a local level. The construction and operation of the scheme could impact on these features. However the assessment has concluded that, with the inclusion of the proposed design and mitigation measures, impacts would be no greater than slight overall.	n/a		Slight Adverse		n/a				
Social	Commuting and Other users	Substantial improvement in journey times through town and district centres and on local roads relieved by the new route.	Value of journey time changes(£)	£452,495		Large Beneficial	£452,495	Moderate Beneficial		
			Net journey time changes (£)							
			0 to 2min	2 to 5min	> 5min					
			£185,469	£120,902	£146,124					
	Reliability impact on Commuting and Other users	Reduction in traffic through town and district centres along the South Manchester corridor will improve journey time reliability for the large volume of traffic commuting between these towns and to/from the larger employment centres in Stockport, Manchester and Cheshire East.			Moderate Beneficial	n/a				
	Physical activity	A combined, dedicated footpath and cycleway is proposed to run through the entire section, with purpose built crossing facilities which would be integrated with the existing public rights of way network. Provision of this feature as a key component of the proposed scheme would provide further opportunity to improve physical fitness by expanding the existing non-motorised user facilities.	No quantitative information available		Beneficial	n/a				
	Journey quality	Provision of dedicated cycle lanes and crossings, with clear signage and traveller facilities would be offered. There would be improvements to existing perceptions of the scheme corridor, with the proposal offering improvements to existing views east of Manchester International Airport through introduction of landscaping proposals in the western section of the scheme. The proposal offers some new viewing opportunities where none currently exists between the A555 and the A6, although the majority of the alignment is enclosed within cutting. There would be limited change in views around the A34 junction and in the vicinity of the airport; however traveller stress would generally			Large Beneficial	n/a				
	Accidents	The scheme will reduce the number of accidents overall, but this will be offset by an increase in severity of accidents at higher speeds, producing a net monetary benefit,			Slight Beneficial	£16,000	Moderate Beneficial			
	Security	Minimal impact	n/a		Neutral	n/a	Slight Beneficial			
	Access to services	Substantial improvement giving access to Manchester Airport, the Enterprise Zone and connections to other parts of the UK via train and bus from the airport.	n/a		Moderate Beneficial	n/a	Slight Beneficial			
Affordability						n/a				
Severance	Improved conditions for pedestrians following transfer of traffic from local routes to new route, particularly where large a proportion of vehicles removed are HGVs	n/a		Moderate Beneficial	n/a	Slight Beneficial				
Option values	Improved accessibility to Manchester Airport for business/leisure travellers in the future. In the longer term, there is the potential for bus operators to recommence the services that were deemed operationally unviable due to the lack of competitive journey	Not assessed		Slight Beneficial	Not assessed					
Public Accounts	Cost to Broad Transport Budget			n/a		£173,882				
	Indirect Tax Revenues			n/a		-£6,956				

Appendix B – CEEQUAL Assessment Letter



Joseph Booth,
Mouchel,
St John's House,
Queen Street,
Manchester.
M2 5JB

9 October 2013

Dear Joe,

Re: CEEQUAL Verification of 'A6 to Manchester Airport Relief Road' (CQA442)

I can confirm that the project titled 'A6 to Manchester Airport Relief Road' a Version 5 Whole Team Interim Award, has been verified as follows:

Sustainability Strategy Section: Excellent (93.1%)*

Sustainability Performance Sections: Excellent (87.6%)*

*Please note that these scores are subject to final ratification by us and as such could fluctuate up or down.

Kind regards,

Ian Nicholson
Technical Manager,
CEEQUAL Ltd

CEEQUAL – the Assessment & Awards Scheme for improving sustainability in civil engineering, infrastructure, landscaping and the public realm

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