

A6 to Manchester Airport Relief Road

Design and Access Statement

Volume 1: Full Statement

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October 2013



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A6 to Manchester Airport Relief Road

Design & Access Statement

October 2013

In association with



VERSION 1: OCTOBER 2013

PURPOSE : FULL PLANNING APPLICATIONS

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A6 TO MANCHESTER AIRPORT RELIEF ROAD / DESIGN & ACCESS STATEMENT

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INTRODUCTION TO THE PROPOSED DEVELOPMENT

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1.0 / INTRODUCTION TO THE PROPOSED DEVELOPMENT

1.1 INTRODUCTION

This Design and Access Statement (DAS) has been prepared as part of three separate Full Planning Applications (FPA) on behalf of Stockport Metropolitan Borough Council (SMBC), Cheshire East Council (CEC) and Manchester City Council (MCC) (the applicants). URS Infrastructure & Environment Ltd is the agent responsible for submitting the planning applications on behalf of the applicants. SMBC along with MCC and CEC are the promoting authorities for the development of the A6 to Manchester Airport Relief Road Scheme (A6MARR).

The determining authorities in respect of the proposed development, namely a new two lane, dual carriageway highway which spans the three authority areas between Hazel Grove in Stockport and Manchester International Airport in Manchester are SMBC, CEC and MCC as the proposed development passes through each of these local authority areas. Therefore, three separate planning applications are submitted, one to each planning authority. The planning applications are classified as Regulation 3 applications; as SMBC, CEC and MCC are the applicants.

1.2 SUMMARY BACKGROUND TO THE PROPOSED LINK ROAD

The proposed link road is part of a wider long-term transport strategy and associated package of delivery schemes which falls within the South East Manchester Multi Modal Strategy (SEMMMS). SEMMMS is a 20 year strategy covering an area to the south east of Manchester including parts of Cheshire East, Derbyshire, Stockport and Tameside local authority areas.

The Strategy was developed on behalf of, and subsequently endorsed by, the Government in the spring of 2001. Since then, the Local Authorities within the SEMMMS area – Cheshire East, Derbyshire, Manchester, Stockport and Tameside, together with Transport for Greater Manchester, have been working together to deliver the various elements of the strategy.

The 20 year strategy was developed to deal with existing and predicted transport problems in the area and aims to:

- Improve public transport;
- Improve the use of road space;
- Encourage transport change;
- Encourage urban regeneration; and
- Improve highways

The contents of the strategy were endorsed across the North West at all political levels with strong public support for the multi-modal package of measures. The A6MARR has been prioritised by the Greater Manchester Combined Authority (GMCA) for inclusion in the Greater Manchester Transport Fund, and a contribution from this fund will be used to part-fund the scheme.

The proposed scheme has been identified by Central Government as one of a number of nationally important infrastructure projects, which are required to revitalise the economy. £165 million of Central Government funding has therefore been allocated for the delivery of the scheme.

The key objectives for the proposed development are:

- Increase employment and generate economic growth: provide efficient surface access and improved connectivity to, from and between Manchester Airport, local, town and district centres, and key areas of development and regeneration (e.g. Manchester Airport Enterprise Zone);
- Boost business integration and productivity: 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;
- Promote fairness through job creation and the

regeneration of local communities: reduce severance and improve accessibility to, from and between key centres of economic and social activity;

- Reduce the impact of traffic congestion on local businesses and communities;
- Improve the safety of road users, pedestrians and cyclists: reduce the volume of through-traffic from residential areas and retail centres; and
- Support lower carbon travel: reallocate road space and seek other opportunities to provide improved facilities for pedestrians, cyclists and public transport.

Further detail relating to the need for the proposed development are provided within chapter 2 of the planning statement.

1.3 THE PROPOSED DEVELOPMENT

The following comprises the proposed 'Description of Development' for the entirety of the relief road:

"Construction of the A6 to Manchester Airport Relief Road, comprising a dual 2-lane carriageway, incorporating:

- Seven new road junctions;
- Modifications to four existing road junctions;
- Four new rail bridge crossings;
- Three new public rights of way/accommodation bridges;
- Five new road bridges;
- A pedestrian and cycle route for the whole length of the relief road, including retrofitting it to the 4 kilometre section of the A555;
- Six balancing ponds for drainage purposes; and
- Associated landscaping, lighting, engineering and infrastructure works."

For the purposes of the three planning applications to each LPA, Table 1.1 'Descriptions of Development' relate to the proposed development within Stockport, Cheshire East and Manchester.

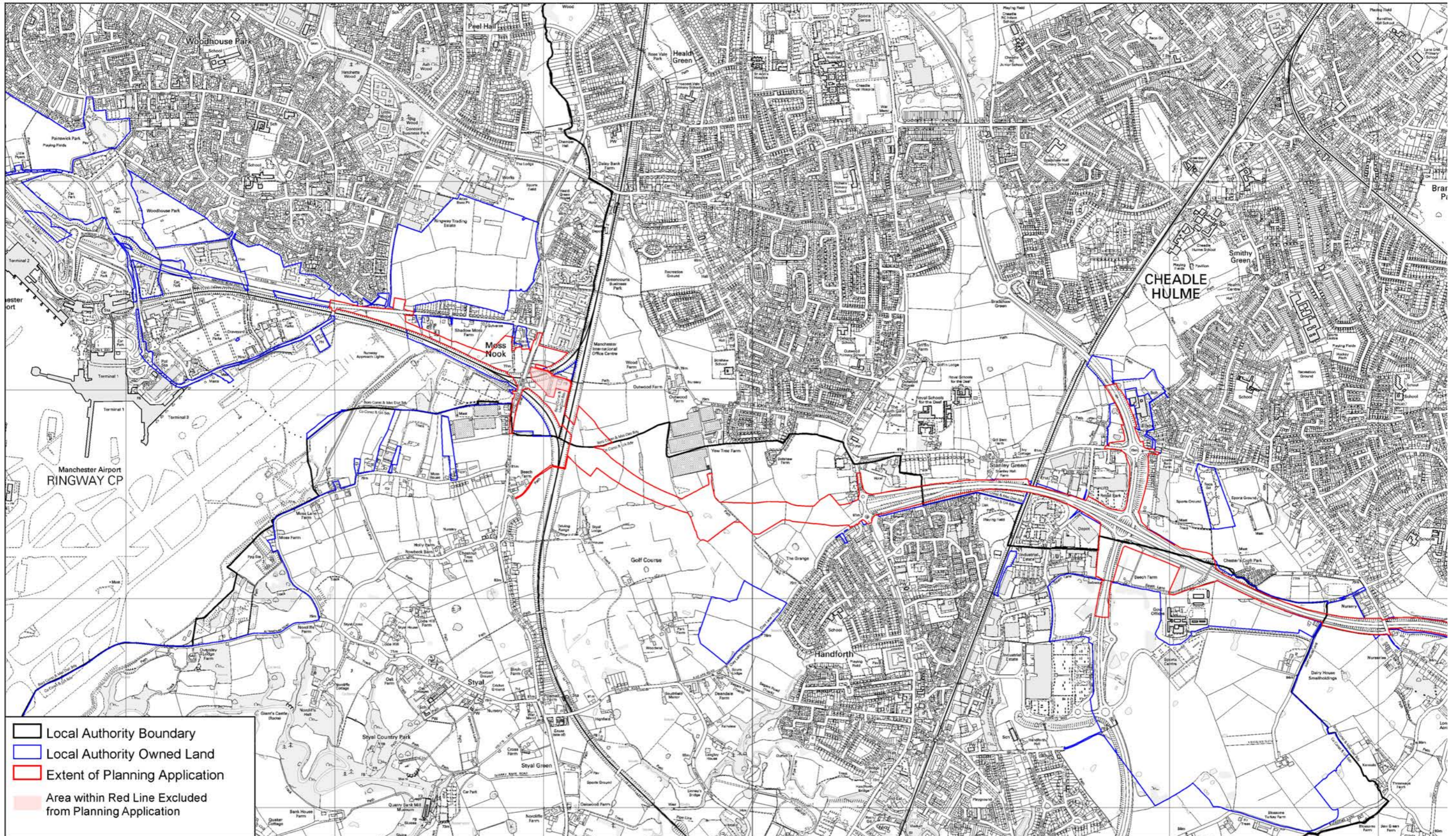
The red line boundary of the proposed route (shown in figure 1.1 below) encompasses 152.3 ha of land, which lies partly in the Green Belt on land predominantly used for agricultural purposes, but including a range of other land uses, including some vacant land, residential gardens, woodland, golf courses (3), garden centres and business land.

TABLE 1.1 DESCRIPTION OF DEVELOPMENT FOR EACH LOCAL PLANNING AUTHORITY

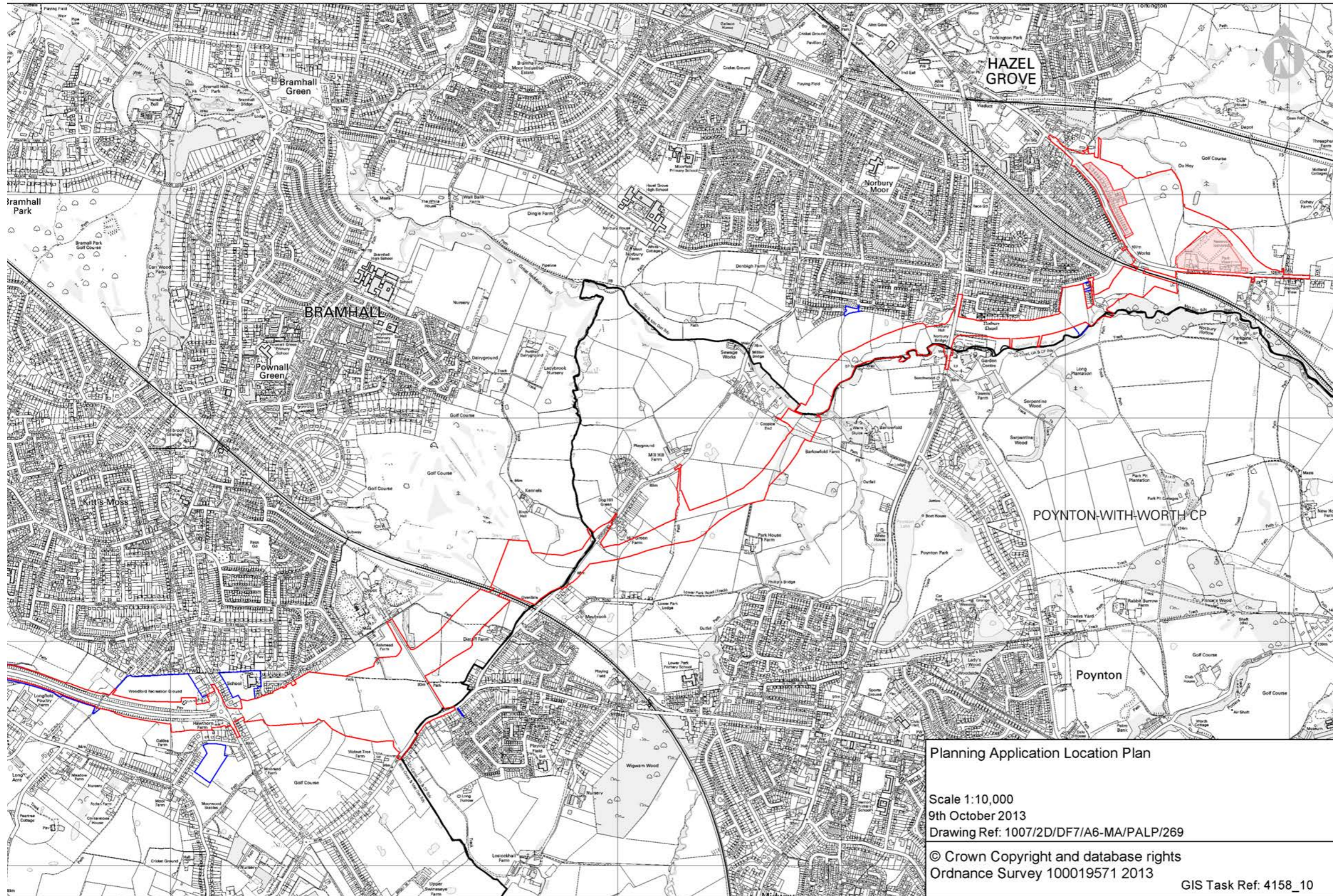
LPA	Description of Development
SMBC	Construction of the A6 to Manchester Airport Relief Road, incorporating: <ul style="list-style-type: none"> • Six new road junctions; • Modifications to three existing road junctions; • Three new rail bridge crossings; • One new public rights of way/accommodation bridge; • Three new road bridges; • A pedestrian and cycle route for the whole length of the relief road, including retrofitting it to the existing section of the A555; • Four balancing ponds for drainage purposes, and • Associated landscaping, lighting, engineering and infrastructure works.
CEC	Construction of the A6 to Manchester Airport Relief Road, incorporating: <ul style="list-style-type: none"> • Modifications to one existing road junction; • Two new public rights of way/accommodation bridges; • One new road bridge; • A pedestrian and cycle route for the whole length of the relief road, including retrofitting it to the existing section of the A555; • One balancing pond for drainage purposes; and • Associated landscaping, lighting, engineering and infrastructure works.
MCC	Construction of the A6 to Manchester Airport Relief Road, incorporating: <ul style="list-style-type: none"> • One new road junction; • One new rail bridge crossing; • One balancing pond for drainage purposes; • A pedestrian and cycle route for the whole length of the relief road; and • Associated landscaping, lighting, engineering and infrastructure works.

1.0 / INTRODUCTION TO THE PROPOSED DEVELOPMENT

FIGURE 1.2 SITE BOUNDARY PLAN



A6 TO MANCHESTER AIRPORT RELIEF ROAD/ DESIGN & ACCESS STATEMENT



1.0 / INTRODUCTION TO THE PROPOSED DEVELOPMENT

1.4 THE PLANNING APPLICATIONS

The FPA is divided into two parts. Part 1 comprises this Supporting Planning Statement, plans and drawings (see Schedule of Documents for Planning Applications), application forms and certificates, and a number of supporting documents including:

- Design and Access Statement (Volume 1 – Main Text and Volume 2 – Structures reports)
- Statement of Community Involvement
- Transport Assessment
- Socio-economic Assessment
- Flood Risk Assessment
- Tree Survey
- Street Lighting Design Statement
- Health Impact Assessment
- Drainage Strategy Report
- Airport Safeguarding
- Sustainability Statement
- Construction Code of Practice
- Equalities Impact Assessment

The Environmental Statement (ES) is contained in Part 2, and comprises:

- Volume 1 – Main text & Non-Technical Summary
- Volume 2 – Figures
- Volume 3 – Appendices

Volume 3 incorporates the relevant surveys, technical reports, reference documents, explanatory notes and calculations relied upon and referred to in Volume 1. These include the following reports:

- Appendix 11A - Badger Report
- Appendix 11B - Bat Tree Survey Report
- Appendix 11B.1 - Bat Survey
- Appendix 11C - GCN Survey Report
- Appendix 11D - Otter Survey Report
- Appendix 11E - Phase 1 Habitat Survey Report
- Appendix 12A Aecom Ground Investigation Report
- Appendix 13A Site Waste Management Plan

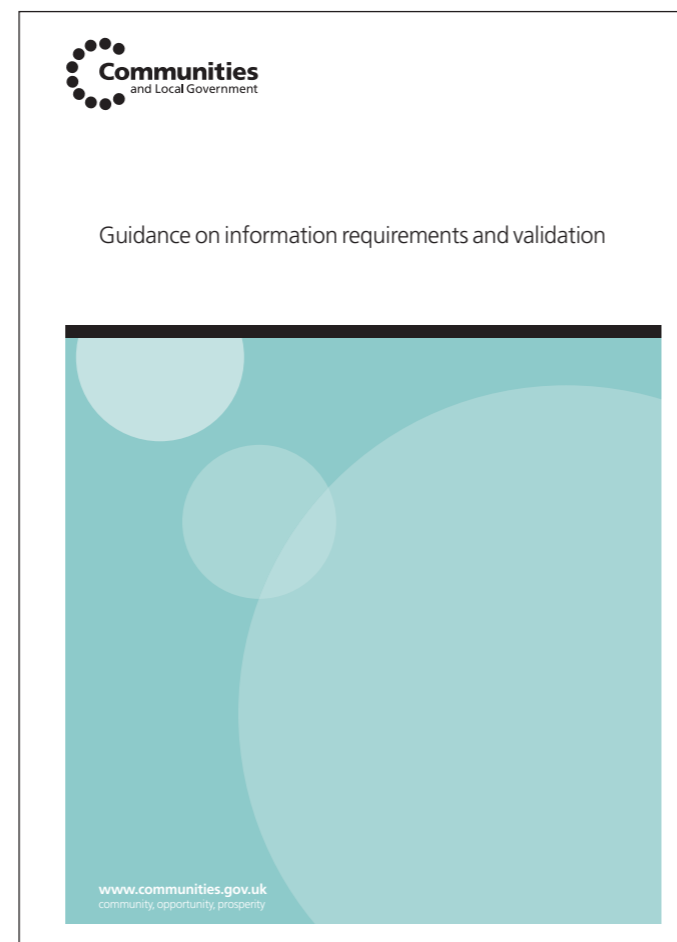
1.5 THE PURPOSE OF THE DESIGN AND ACCESS STATEMENT

The role and purpose of the DAS is set out in detail within the 'Guidance on Information Requirements and Validation' (GIRV) prepared by the Department for Communities and Local Government in March 2010¹. The guidance document highlights that a DAS is a short report accompanying and supporting a planning application to illustrate the process that has led to the development proposal, and to explain the proposal in a structured way.

The purpose of a DAS and its status is described in paragraph 114 of Section 6 of the guidance document which states:

"Design and Access Statements explain proposals already set out in the planning application, but they also set out the principles and concepts that will be used when that proposal is developed in the future."

FIGURE 1.3 GIRV REPORT COVER



The GIRV states that a DAS should explain the design principles and concepts that have been applied to particular aspects of the proposal – these are the amount, layout, scale, landscaping and appearance of the development. The principles expressed within the GIRV for what is required of a DAS have been considered in this document.

The National Planning Policy Framework (NPPF) also provides guidance on design. Section 7 of the document relates to "Requiring Good Design" and Paragraph 58 sets out the requirements of good design, which are that development:

- will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;
- establish a strong sense of place, using streetscapes and buildings to create attractive and comfortable places to live, work and visit;
- optimise the potential of the site to accommodate development, create and sustain an appropriate mix of uses (including incorporation of green and other public space as part of developments) and support local facilities and transport networks;
- respond to local character and history, and reflect the identity of local surroundings and materials, while not preventing or discouraging appropriate innovation;
- create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion; and
- are visually attractive as a result of good architecture and appropriate landscaping.

The DAS sets out how the proposed development aims to address these key points. In preparing this DAS, regard has also been had to local guidance on the production of Design and Access Statements, including the guidance produced by Stockport Council "Design and Access Statements²" and the former borough of Crewe and Nantwich guidance note "Making the Best Use of Design and Access Statements³" published by Cheshire East Council⁴. Regard has also been had to Manchester City Council's SPD "Guide to Development in Manchester⁵".

FIGURE 1.4 D&A STATEMENT STOCKPORT

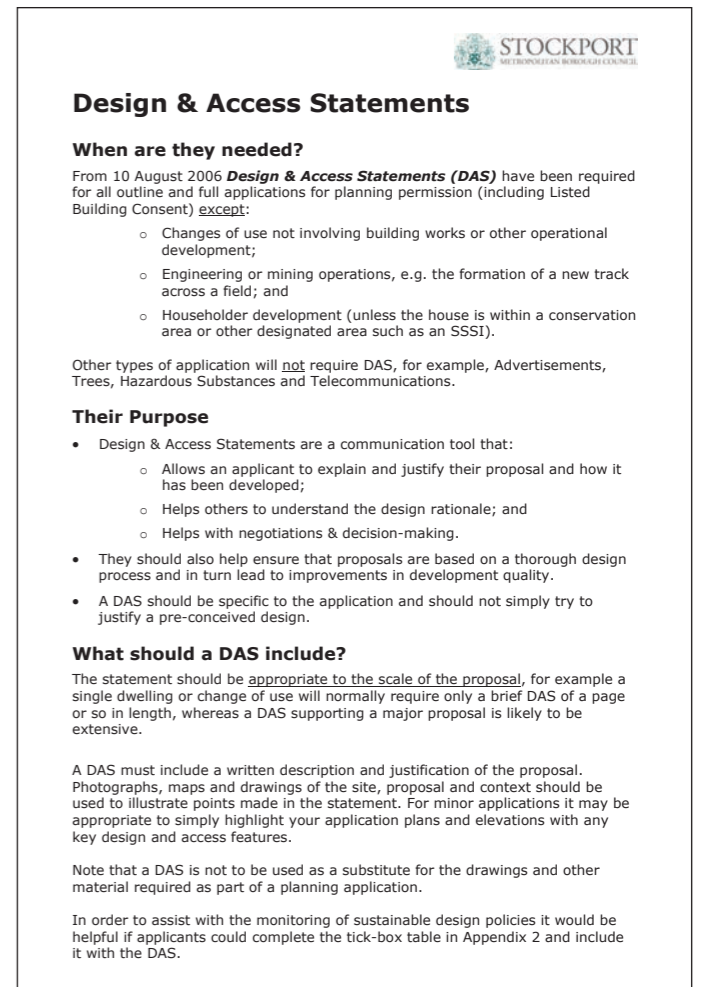
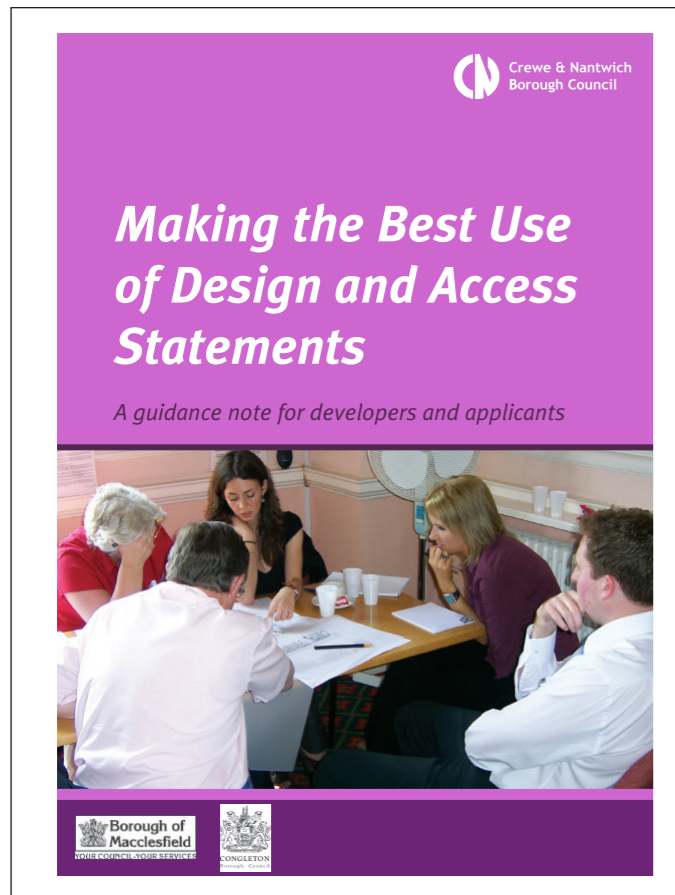


FIGURE 1.5 CEC MAKING THE BEST USE OF DAS



While much of the planning policy related to design is directed towards conventional buildings, these principles can be extended to a highway scheme. By definition, providing access is a primary purpose of a road. Thus “design” and “access” in a highway project are inextricably linked.

The GIRV recommends adopting an approach which is described in the publication “Design and access statements – How to read, write and use them”, produced by the Government’s statutory advisor on architecture, urban design and public space – the Commission for Architecture and the Built Environment (CABE), which is now part of the Design Council. However that approach relates to more conventional developments, and is not particularly suited to a highway scheme. For this reason, the key elements of design headings listed in the CABE guidance document have been revised for the purposes of considering the A6MARR Scheme, whilst still incorporating the design principles captured by each of the CABE terms. The revised headings in this DAS and how these correspond to the CABE headings is described below.

In interpreting the design principles set out in the CABE guidance, the following headings have been used in this DAS:

- **Context:** describes the existing condition of the area that will be affected by the A6MARR in terms of land use and landscape. It also considers the three Council’s stated intentions for development of the area and identifies known proposed developments. This section covers the heading “Use” within the CABE document (which explains the intended purpose of the proposed building) but extends this to include description of the wider area.
- **Function:** describes the requirements of the A6MARR within the relevant contextual area. This will include the form of the A6 MARR based upon consideration of required traffic carrying capacities and the need for supporting structures (i.e. to cross existing roads and railways). In essence this covers the following headings in the CABE document: “Amount”, “Layout” and “Scale”.
- **Appearance:** describes the detail of the proposed works which comprise the A6MARR and their aesthetic needs within the relevant contextual area. This covers the CABE heading “Appearance” and also recognises potential for mitigation where appropriate.
- **Landscaping:** under this heading the proposals for landscaping are illustrated, to demonstrate how the new works will be appropriately assimilated in to the environment described in the ‘Context’ section above.

1.6 DESIGN MANUAL FOR ROADS AND BRIDGES

The Design Manual for Roads and Bridges (DMRB) is a series of 15 volumes that provide official standards, advice notes and other documents relating to the design, assessment and operation of trunk roads, including motorways in the United Kingdom. The volumes within the DMRB are:

- Volume 0 - Introduction and General requirements
- Volume 1 - Highway Structures: Approval Procedures and General Design
- Volume 2 - Highway Structures: Design (Substructures and Special Structures), Materials
- Volume 3 - Highway Structures: Inspection and Maintenance
- Volume 4 - Geotechnics and Drainage
- Volume 5 - Assessment and Preparation of Road Schemes
- Volume 6 - Road Geometry
- Volume 7 - Pavement Design and Maintenance
- Volume 8 - Traffic Signs and Lighting
- Volume 9 - Traffic Control and Communications
- Volume 10 - Environmental Design
- Volume 11 - Environmental Assessment
- Volume 12 - Traffic Appraisal of Road Schemes
- Volume 13 - Economic Assessment of Road Schemes
- Volume 14 - Economic Assessment of Road Maintenance
- Volume 15 - Economic Assessment of Road Schemes in Scotland

The individual volumes contain technical requirements and guidance on a wide range of topics. The material includes:

- technical and other procedures and methods to be employed;
- analytical criteria to be used;
- appraisal requirements;
- dimensional requirements; and
- numerical and statistical data.

All design layouts have been developed using the (DMRB).

1.7 CEEQUAL ASSESSMENT

The first stages of a CEEQUAL assessment have been undertaken as part of the planning applications. The CEEQUAL assessment 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 rewards project and contract teams in which clients, designers and contractors go beyond the legal, environmental and social minima to achieve distinctive environmental and social performance in their work. In addition to its use as a rating system to assess performance, it also provides significant influence to project or contract teams as they develop, design and construct their work, because it encourages them to consider the issues in the question set at the most appropriate time.

CEEQUAL will be continued throughout the project lifecycle to assess how well the scheme is achieving its sustainability aspirations.

1.0 / INTRODUCTION TO THE PROPOSED DEVELOPMENT

1.8 STRUCTURE OF THE DAS

The remainder of this DAS is structured as follows:

Part 2: Provides an assessment of the context of the development. This part of the DAS is split into three sections, reflecting the GIRV guidance:

- Section 1 – Assessment: provides a summary of the analysis of the physical characteristics of the immediate route and its wider context. This section provides an appreciation of the social, economic and planning policy context, including the wider SEMMMS. It provides a summary of the proposed developments compliance with the relevant design and access policies that form the development plan, and other policies which form material considerations. It also considers local character and the historical context.
- Section 2 – Involvement: summarises the inputs from community consultation and consultation with local liaison forms, specialist forums, pre-application discussions with council officers, and how this has informed the design process.
- Section 3 – Evaluation: outlines the opportunities and constraints affecting the proposed development. In doing so, it determines a number of 'high-level' design and access principles which have been taken into account in formulating the design.

Part 3: Design sets out the general principles and concepts behind the design in Section 1, covering the function and appearance of the road corridor and associated shared use footway and cycleway, associated bridges and other necessary structures.

Part 4: Access explains the overall vision for the scheme, describes the various applicable design standards and policy requirements for access and how these have been taken into account, as well as identifying how consultation has informed the design process. It considers the access needs of public transport, pedestrians, cyclists and equestrians, as well as vehicular traffic.

Part 5: Sustainability, draws on the information presented above and in accompanying documentation such as the CEEQUAL assessment, Environmental Statement and Transport Assessment, to demonstrate the approach adopted toward sustainability – particularly with respect to climate change mitigation and adaptation measures. It considers issues such as energy efficiency, use of materials, recycling and waste disposal during construction, flood water and runoff issues, health and wellbeing and habitat creation.

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ASSESSMENT OF THE CONTEXT OF THE DEVELOPMENT

SECTION	PAGE	TITLE
2.1	12	Section 1: Assessment
2.2	26	Section 2: Involvement
2.3	32	Section 3: Evaluation

2.0 / ASSESSMENT OF THE CONTEXT OF THE DEVELOPMENT

2.1 SECTION 1: ASSESSMENT

An assessment of the physical characteristics of the immediate route and its wider context is provided below.

PHYSICAL CONTEXT

The proposed alignment traces the southern fringe of the Greater Manchester conurbation from the A6 in the east to Manchester International Airport in the west including the A555. Figure 1.2 shows the application site and the surrounding areas. The proposed alignment crosses several significant radial roads including the A6, A523 and A34. There are four rail crossings including the Hazel Grove to Buxton Line, the Stratford to Manchester Line, the West Coast Main Line, the Styal Line and Styal Line Spur into Manchester Airport.

The corridor comprises a sequence of open space and broader countryside, much of which is designated Green Belt and has been protected from development that would prejudice a road scheme within the corridor since the 1930s. The land use pattern is mainly agricultural land, with recreational and sports areas, institutional grounds, residential, and industrial and commercial land uses.

To the north, dense settlement forms part of the core conurbation and to the south settlements are discrete and set within open countryside. Key settlements include Hazel Grove, Bramhall, Cheadle Hulme and Heald Green to the north and Poynton and Handforth to the south.

An analysis of the physical characteristics surrounding the route of the proposed development at various sections along the route is outlined below. Figure 2.1 (taken from Chapter 4 of the Environmental Statement (Existing Environment) shows the location of key features located along the proposed route of the A6MARR.

FIGURE 2.1 MAP TAKEN FROM ENVIRONMENTAL STATEMENT SHOWING LOCATION OF EXISTING FEATURES ALONG THE ROUTE



A6 TO MANCHESTER AIRPORT RELIEF ROAD/ DESIGN & ACCESS STATEMENT

A6 Hazel Grove to A555 / A5102 Junction

From the A6 to the A555 / Woodford Road (A5102) Junction the corridor is characterised by open agricultural land used for grazing, the wooded valleys of Norbury Brook and Lady Brook and the urban areas of Hazel Grove to the north, Poynton to the south and Bramhall to the west.

At the eastern end of the corridor, the proposed development occupies the southern extent of Hazel Grove golf course and crosses Ox Hey Brook. The highway boundary and landscaped areas would abut a number of residential dwellings adjacent to the existing A6, though the highway itself would be set back by up to 20m from most of these properties and only abut the northernmost property. Hazel Grove is situated adjacent to both sides of the A6.

From the A6, the proposed alignment crosses the Hazel Grove to Buxton railway line and open fields toward the south west. To the south, the proposed alignment runs between Norbury Brook and the southern extent of Old Mill Lane where it would be in close proximity to residential dwellings on Old Mill Lane, with the proposed cycle path abutting the boundary of the southernmost property. At Norbury Brook the land is incised and slopes steeply downwards. A section of the wooded valley created by Norbury Brook is classified as Ancient Woodland.

The proposed development continues west through open pasture in parallel with the Ladybrook Valley Interest Trail and Norbury Brook and in close proximity to the residential properties of Hazel Grove to the north.

The proposed development crosses Macclesfield Road (A523) abutting Brookside Garden Centre (Figure Reference 1) and Norbury Hall (ref 2). Norbury Brook runs roughly parallel with and south of the proposed development until it crosses the brook just north of the confluence with Poynton Brook and Lady Brook. As the proposed development crosses the Lady Brook Valley and the associated Interest Trail it passes Barlowfold Farm to the east and adjacent to residential properties associated with Mill Hill Hollow to the north-west.

Ladybrook Valley is characterised by relatively steep sides. On the western side of the valley the proposed development continues and the landform flattens over open agricultural land with several public footpaths to the north and south. The proposed development then crosses Woodford Road and the West Coast Mainline passing Hill Green Farm and Bramhall Golf club to the north and Distaff Farm and to the west of Poynton.

The proposed development then continues south west through open agricultural land crossing several footpaths and the

access road to Woodford Oil Depot (ref 3) and Ashmead Farm which are situated immediately to the north; beyond the depot is the settlement of Bramhall.

The proposed development then crosses the northern extent of Moorend Golf Course before joining the A555. Residential properties associated with Woodford Road are in close proximity to the north and the south. Immediately to the north of the proposed development is Queensgate Primary School (ref 4).

Existing A555 / Woodford Road Junction to A555 / Wilmslow Road Junction

The existing A555 extends from Woodford Road (A5102) to Wilmslow Road (B5358). Throughout its length it passes through relatively flat pasture with the urban areas of Bramhall and Cheadle Hulme to the north.

The proposed Woodford Road (A5102) Junction abuts Woodford Recreational Ground (ref 5) to the north. To the south lies Longfield Poultry Farm and Andertons Nurseries (ref 6). The existing road crosses closely to residential properties associated with Hall Moss Lane which abut the highway boundary both to the north and south. Between Hall Moss Lane and the A34 junction the A555 is mainly surrounded on both sides by open fields and Chester's Park Croft (ref 7), a residential caravan park, adjacent to the north.

The A34 joins the A555 via a grade separated roundabout junction. Immediately west proposed alignment crosses the Stanley Green Trading Estate (ref 8) and the West Coast Mainline. To the south between the West Coast Main Line and Wilmslow Road (B5358) is the community of Handforth and a recreation ground (ref 9), both are immediately adjacent to the proposed alignment. To the north of the A555 are Stanley Road Farm and the residential dwellings associated with Stanley Road.

At the western end of the A555 the proposed development scheme will pass under Wilmslow Road using the existing bridge, where there are two small roundabouts at the top of the slip roads.

A555 / B5358 Junction to Shadowmoss Road

From the A555 / Wilmslow Road (B5358) Junction to Shadowmoss Road the land use comprises Styal Golf Club, outlying infrastructure associated with Manchester Airport, areas of pasture and the settlements of Handforth, Heald Green and Moss Nook.

Immediately west of the Wilmslow Road (B5358) the proposed alignment crosses an airport car storage facility (ref 10).

Immediately to the north is the Little Acorns Day Nursery (ref 11) which would abut the northern west facing slip at the proposed Wilmslow Road Junction. As the proposed development continues west the land use comprises open fields used for grazing livestock and the residential properties of Bolshaw Farm to the north.

A large residential dwelling called The Grange (ref 12) is located to the south of the proposed alignment. To the north there is a large commercial nursery and two farms; Yew Tree Farm and Outwood Farm. Continuing west the proposed alignment crosses a footpath before crossing the northern extent of Styal Golf Club.

To the west of Styal Golf Course the proposed alignment emerges into open fields used for grazing. The proposed development then crosses a footpath and continues adjacent to an electricity substation which is contained by the Styal Railway Line and associated Manchester Airport Rail Spurs.

From here the proposed development continues adjacent to the Manchester Airport Rail Spur to the south crossing Styal Road (B5166) North of Styal Road Railway Bridge, Regional Cycle Route 85 and Tedder Drive. To the north are open fields and the settlement of Moss Nook including Primrose Cottage Nursery and Garden Centre (ref 13). The proposed development then continues west where it links into the Junction of Ringway Road.

LOCAL CHARACTER OF THE SURROUNDING AREA (landscape, ecology, built heritage, archaeology and water related features)

Local Landscape Character

The landscape character of the study area varies across its extent, the east is typified by a marked contrast in urban development to the north and west and more open countryside to the east and south – there are aspects of the landscape most notably in the rising landform and wooded cloughs that reflect the influence of the hills that extend to the east forming the edge of the Pennines. To the west the landform softens and becomes more undulating, vegetation patterns become more coherent with hedgerows and mature trees forming a network of fields and woodlands that form a buffer between the suburbs of Bramhall to the north and Poynton to the south.

South of the predominantly urban areas of Bramhall there is a noticeable contrast in the character of the landscape, the A555 and A34 corridors mark the limit of the suburbs, to the south the landscape is largely one comprising open countryside – individual settlements and small clusters of houses. A visual relationship with the urban areas is retained

through a number of office buildings remaining visible from the south.

South of Heald Green the landscape briefly returns to farmland, framed by urban development to the north and south, the landscape retains landscape features that are typical of the gentler Cheshire plains landscape that extends south and west. This is bounded to the west by the rail corridor, its dense belt of planting forming a visual barrier and one that marks a distinctive change to the heavily modified and incoherent landscape that occurs to the western end of the study area and incorporates the rail and road corridors and the eastern end of the extensive Manchester airport development.

Local Landscape Character Areas (LLCAs)

The assessment of landscape character set out within chapter 10 of the ES (Landscape and Visual Effects) has refined the wider study area into defined, distinctive areas expressing a broadly homogenous character as indicated in Figure 2.2 (taken from chapter 10 of the ES). Supporting images provided in Figures 10.2 – 10.7 of the ES and the direction of the images is shown on figure 2.2. Six LLCAs have been identified:

LLCA - A - Norbury Brook Valley

The character area is formed around an area of open countryside between the urban fringes of Hazel Grove and Norbury Moor to the north west, Poynton to the south west and High Lane to the east. The area represents an important green buffer between the more settled landscape to the west with the more nucleated settlement of High Lane that is representative of the settlement pattern along the Pennine fringe.

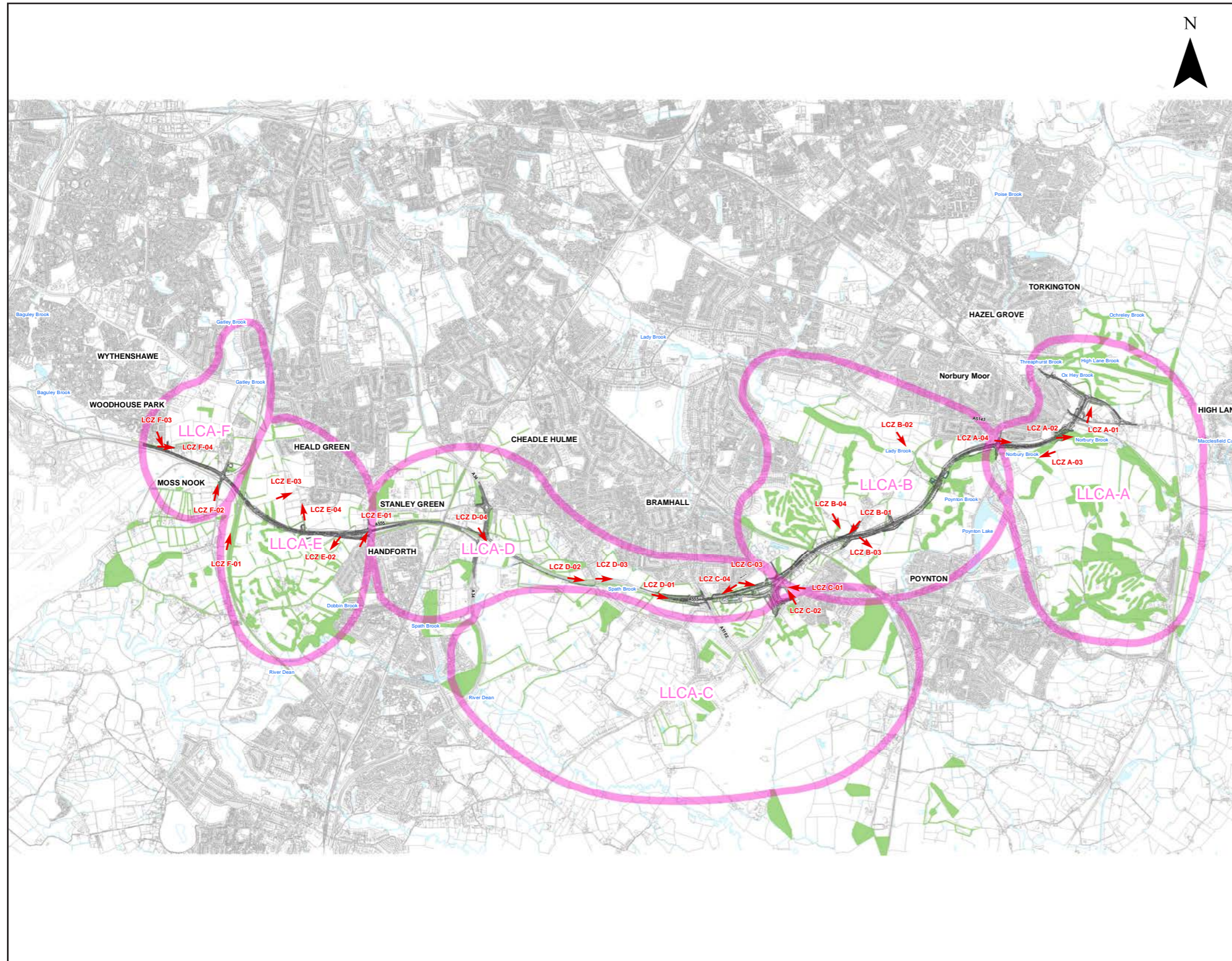
Norbury Brook Valley is a defining feature of the character area, it lies to the north west fringes of the character area and represents the upper reaches of the Ladybrook Valley, characterised by the heavily wooded steep sided valley. This forms a key element restricting visual awareness to the urban settlement of Norbury Brook to the north west. A significant proportion of the woodland within the valley is classed as ancient woodland and makes for an attractive route along the valley floor.

The wider area extends to the north of the existing A6 and is defined by substantial tree belts associated with the railway line enclosing several medium to large fields. Small paddocks exist to the north along with the southern edge of the suburb of Norbury Moor.

To the south of the valley the ground is flatter before gently

2.0 / ASSESSMENT OF THE CONTEXT OF THE DEVELOPMENT

FIGURE 2.2 LANDSCAPE CHARACTER PLAN (TAKEN FROM CHAPTER 10 OF THE ENVIRONMENTAL STATEMENT)



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rising to the south east to the high ground (160 Above Ordnance Datum (AOD)) just west of New House Farm. Much of this land is open arable fields with few hedgerows. To the west of this arable land the ground continues flat to meet with the A523 Macclesfield Road, here the land is mixed grazing land for beef cattle and sheep. A number of ponds exist in the area and these usually have a number of mature trees associated with them. This area has a rural feel with the vegetation along the Norbury Brook Valley screening the urban fringe of Norbury Brook to the north.

Norbury Brook itself is contained within a steeply sided clough, heavily wooded on either side there is limited appreciation of the watercourse, instead the adjacent vegetation delineates the route and the brook is only encountered when using one of the streamside rights of way or crossing using the bridge found at the end of Old Mill Lane. There is a degree of tranquillity through this corridor arising from the enclosed nature of the woodland and limited appreciation of the wider context.

Vegetation is predominantly pockets of woodland found scattered throughout the character area. The most extensive woodland is that found associated with Norbury Brook whilst a further broad tract of woodland is found to the south (Prince's Wood) that frames the landscape. The east of the character area is elevated above the core of the area although the landscape becomes increasingly more enclosed with smaller fields and numerous hedgerow trees combining with increased occurrence of woodland resulting in limited views across the landscape as Macclesfield Canal and the edge of High Lane is approached.

Public rights of way are frequent throughout the character area forming an extensive network and linking with longer distance trails such as the Middlewood Way and Ladybrook Valley Interest Trail. A single communications tower exists to the north east and is a noticeable detractor to the generally rural views of the area.

The general feel of the area is that of a large open landscape, broad views particularly to the south and east are contained by landform and belts of tree planting in the distance. The core of the landscape is visually remote from the surrounding urban development and as such has a distinctly rural character accommodating a number of long distance footpaths, as such it represents a recreational resource at a local level. The area does have an ability to accommodate some change as a result of quite extensive tracts of woodland, particularly to the north and west. As a result the area's sensitivity to change of the type being proposed is 'moderate'.

LLCA - B - Ladybrook Valley

Ladybrook Valley and surrounding farmland extends from the Macclesfield Road (A523(T)) in a westerly direction to form a broad green swathe to the east of the affluent suburbs of Bramhall. The eastern section of the Ladybrook Valley is broader and has small to medium sized fields with wooded sides, as the valley extends westwards it narrows to form a steeply sided wooded valley typical of the area and similar in form and character to the cloughs found to the east.

The character area is bound by the suburbs of Bramhall to the west, the sprawling suburbs of Bramhall Green and Norbury Brook along the A5143 to the north and the A523 (T) to the east along with the northern suburbs of Poynton and the railway line (Macclesfield to Cheadle Hulme) to the south. The influence of these urban areas is limited in part by the belts of woodland and hedgerow trees that combine with the valley landform to limit broader awareness across the character area.

Away from the wooded valley in the north of the area the broader landscape extending to the south is typical of the north Cheshire plain being made up of medium sized fields with occasional field ponds bordered by hedgerows with mature trees and narrow belts of woodland along drains and streams.

In addition to the influences of the urban areas to the fringes of the area it is not without urban elements, mainly in the form of Bramhall Golf Club that occupies the south western corner of the area, although the course is visually discreet due to extensive perimeter planting. Elsewhere isolated development occurs away from the suburbs throughout the area and is particularly noticeable along Woodford Road.

Rights of way occur throughout the area and combine to form a network linking Poynton in the south with Bramhall and include the Ladybrook Valley Interest Trail following the Ladybrook Valley in an east west direction. Elsewhere in the area there are mainly public footpaths with a bridleway linking the north and west of Poynton.

The overall appearance of the area is one of a gently undulating landscape with numerous hedgerows and trees and woodland creating a sense of containment. The Ladybrook Valley itself has an attractive appearance as hedgerows extend up the valley slopes to form belts of woodland. The area has a limited ability to accommodate some change as a result of its open nature, particularly to the east of the area. As a result the area's sensitivity to change of the type being proposed is 'moderate'.

LLCA - C - Woodford and Poynton Fringes

Lying in a broad area of open countryside to the south of the A555 and bounded to the east and west by Poynton and Woodford respectively; the character area is characterised by a combination of open countryside with frequent ribbon development along a series of primary and secondary road corridors.

The urban influences of the adjacent settlements are limited with the A555 corridor forming a buffer with the suburbs of Bramhall to the north and the strong vegetation framework limiting broader views across the area. The fringes of the area are dominated by a mixture of land uses typical of the urban fringe, including golf courses, industrial / commercial estates, and recreational activities such as horse riding set within an eroded agricultural framework.

The area is crossed by both primary and secondary roads, these have led to mixed development along these corridors including residential, commercial, light industrial as well as agricultural holdings. Residential properties form ribbon development along the main communication links, the majority of the properties are semi detached or detached and set within medium to large gardens. Small pockets of grazing occur throughout these areas and are predominantly occupied by stabling and paddocks for horses.

Woodland is sparse within the area as a whole with the exception of Wigwam wood to the east, despite this the gently undulating landform in combination with the frequent tall hedgerows that form the majority of field boundaries interspersed with mature trees mainly oak and ash results in a high degree of enclosure within the majority of the area. The exception to this is the area around Woodford Aerodrome – the lack of significant vegetation results in a more open feel to the character to the south and east of the area.

One of the other key features typical of the urban fringe within the landscape are golf courses. Moorend Golf Course is found in the west of the area, immediately adjacent to Bramhall and Woodford Road. Vegetation within the course is generally young and as such contributes little to the wider landscape, although several large mature former hedgerow trees have been retained and provide some sense of maturity.

Footpaths and bridleways are found throughout the area with a particular concentration found to the east of Moorend Golf Course.

This relatively large character area which is geographically remote from the large suburbs to the north comprises areas of open countryside, despite this the influence of ribbon development along local road corridors results in frequent

urban fringes land uses. The landscape's value as an area that represents a locally important green buffer between adjacent settlements and that accommodates numerous footpaths and a recreational resource. The area has a limited ability to accommodate some change as a result of its open nature and as a result the area's sensitivity to change is 'moderate'.

LLCA - D - A555 Corridor

This character area contains a noticeable green wedge between Wilmslow's increasingly urban character in the west and Woodford in the east, whilst the extensive suburbs of Bramhall and the southern edge of Cheadle form the northerly boundary. To the south the extensive agricultural landscape of the Cheshire plain extends forming LLCA C, although the area is not representative of the more rural landscapes to the south being uncultivated or grazed and with hedgerows in generally poor condition. The landform is generally flat ranging from between 80-90m AOD.

The area's proximity to adjacent urban settlements is an important one in that the area represents a clear delineation with the area of countryside, despite this the area is under some pressure in the form of typically urban fringe characteristics including numerous paddocks, riding stables and garden centres / nurseries. Housing is typically detached or semi detached and forms linear development along the main roads that are single carriageway with medium width footpaths on both sides. The exception to this is the existing A555 corridor.

The A555 links Woodford Road in the east with Wilmslow Road in the west and has a junction with the A34 along its length. In the east the road is set within extensive cutting and is largely hidden from the wider character area with only the top of the road lights and roadside planting giving any clues to its existence. In the west the road rises to cross the existing A34 before continuing at a slightly elevated level to meet with Wilmslow Road. Where views of the road do occur the road appears as a noticeable visual detractor.

Vegetation within the area is predominantly limited to hedgerows with numerous hedgerow trees. Management of the hedgerows varies across the area with some heavily maintained through trimming whilst others have been left to grow out to form thin leggy boundaries supplemented by post and wire fencing. Woodland within the area is sparse and confined to a few locations mainly in the central and eastern portions.

To the west of the A34 the land use dramatically changes to a typically light industrial and commercial one, dominated by medium sized warehouse style buildings linked by access

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roads. Further west the suburbs of Handforth border the character area to the south west and the junction of the A555 and Wilmslow Road as the adjacent character area (LLCA-E) is abutted.

To the north and west of the A34 and A555 junction the landscape is typically an agricultural one with small to medium fields bounded by a network of hedgerows and numerous mature hedgerow trees typically Oak. Scattered residential properties are found within this area along with a row of large detached properties with large gardens to the south of Stanley Road. The extensive grounds of the Royal School for the Blind are also found in this area along with a hotel to the very west of the area.

Its proximity to an extensive urban area gives it some importance as a recreational resource and as a green wedge in close proximity to heavily developed urban areas. The area has an ability to accommodate some change although this is primarily associated with existing transport corridors and established development within the area. As a result the area's sensitivity to change of the type being proposed is 'low'.

LLCA - E - Heald Green / Handforth Fringe

This area is typical of how the encroachment of development on the agricultural landscape has occurred in the area. Development of Heald Green to the north, Handforth to the south and farm diversification has meant that the original field pattern has been gradually eroded.

The character area is bounded to the north by the urban area of Heald Green development. The golf course makes up the westerly half of the area extending up to the railway line and extensive planting that forms the western boundary. The easterly boundary is formed by development along Wilmslow Road and the suburbs of Heald Green (north) and Handforth (south east). The area's relationship with the adjacent urban areas is an important one in that it provides a clear buffer and break in the wider settlement pattern between Handforth and the broader urban areas to the north.

Remnants of field boundaries with a number of mature trees are dotted across the golf course gradually linking into the field boundaries to the east of the area where agricultural land use returns, mainly for grazing. Only an area around The Grange would appear to have retained its original field boundaries of hedgerows with mature trees. Substantial properties including The Grange, and the small cluster set around Park Farm are dotted through the landscape, these are typically surrounded by mature gardens, paddocks and large mature trees that screen the properties from wider views.

2.1.59 A number of large commercial green houses exist in the northern section of the area at Yew Tree Farm that further

emphasises the diverse nature of the local land uses. These form a noticeable element in the local landscape particularly from local footpaths.

Field ponds are typical of the wider area and occur throughout the area typically associated with stands of mature trees that contribute towards the local landscape character.

To the north west of the character area the landscape opens up to large interlinked fields grazed by a large beef herd. Here the hedgerows remain with a number of mature trees and field ponds. Awareness of the setting within the urban fringe remains with the upper floors of office buildings associated with large developments around the airport visible to the north partially screened by belts of trees.

Overall the landscape is flat with a mixed land use. The mature trees in the area give a feeling of a contained landscape particularly in summer. Footpaths across the area are generally well sign posted and appear to be well used probably due to their close proximity to the large residential areas to the north, south and east.

The landscape retains much of its landscape structure, including numerous mature trees although a substantial part of the area is laid out as a golf course. Its proximity to an extensive urban area as well as footpath access to a wider network would suggest that it has value as an important green buffer between development to the north and south east. The area has an ability to accommodate some degree of change although this is primarily associated with existing development areas within the area. As a result the area's sensitivity to change of the type being proposed is 'moderate'.

LLCA - F - Moss Nook

A small character area bordered to the north by Simons Way, in the east by the existing railway line and extensive planting bordering LLCA-E, to the south by the northern edge of as marked by Moss Lane and to the west by the open expanse of Manchester Airport.

One of the key features of the area is the frequency and scale of the communication routes that converge in the area; road and rail links extend in a north south and east west direction linking to the airport and extensive suburbs of Wythenshawe. These transport corridors result in a fragmented landscape framework with remnants of field boundaries and hedgerow trees.

The remaining open areas are made up of a mosaic of glasshouses, nurseries and the remnants of agricultural land still used for grazing. Development has mainly occurred along the main road links in a series of residential ribbon

developments extending from the junction of Styal Road with Ringway Road West to result in a limited appreciation of the agricultural landscape beyond the local development. Commercial development occurs in the north east of the area as part of the mosaic of mixed development typical of the wider area.

The area has a feeling of movement with the busy local roads, aircraft landing/taking off at the airport and areas of development all increasing the sensation of movement and change and sense of enclosure and pressure for further development.

The area's landscape structure has been eroded and interrupted primarily by the development of roads, rail corridors and the encroachment of airport related activity resulting in a lack of cohesion. Access via footpaths and bridleways is limited within the north of area however its proximity to an extensive urban area gives it some value at a very local level as a recreational resource. The area is already heavily urbanised and as such is capable of accommodating further change. As a result the area's sensitivity to change is 'low'.

ECOLOGY

There are no nationally important ecological sites in close proximity to the site. However, there are numerous locally important sites within 2km of the site boundary. A full account of the ecological and biodiversity assets present within and around the application site is presented within Chapter 11 of the ES.

The Norbury Brook Site of Biological Importance (SBI) and Ancient Woodland is located along the route of the proposed development. Norbury Brook is a well developed oak-birch woodland covering an area of 19.86ha along the banks of Norbury Brook. Although the main habitat is woodland, the site also comprises 1.4ha of unimproved acid grassland and 0.16ha of running water habitats. The acid grassland is immediately west of Parkgate Farm, between Norbury Brook and the Hazel Grove to Buxton railway line. The site extends from Poynton Brick Works in the west to Old Mill Lane in the east.

The value of the Norbury Brook SBI is due to the combination and interaction of the locally valuable habitats within the site.

SBIs have biodiversity value at the district/borough scale. Ancient woodland is a habitat of Principal Importance under the NERC Act. Due to the extent of the ancient woodland at Norbury Brook, covering approximately 42% of the SBI, the site is ecologically valuable at the district scale.

The following habitats have also been identified on the site.

Semi-natural broad-leaved woodland / plantation

woodland - Semi natural broad-leaved woodland / plantation woodland associated with the proposed scheme corridor and surrounding area is concentrated along the Norbury Brook, Lady Brook and the confluence of the two watercourses with the Poynton Brook in the eastern half of the corridor and along the River Bollin and in the vicinity of Styal towards the western end and south of the corridor.

Semi-improved grassland - There is one area of semi-improved grassland which is distinct from what are otherwise generally poor areas of the grassland type along and adjacent to the proposed scheme corridor. It comprises several fields which extend for some 4.8ha north of the Norbury Brook adjacent to the A523 London Road.

Hedgerows – Hedgerows associated with the proposed development corridor are generally hawthorn dominated and species-poor. There are five sections of unmanaged species-rich hedgerow.

Open water (ponds) - A total of 192 ponds have been identified within a 1km area of search centred on the proposed scheme alignment.

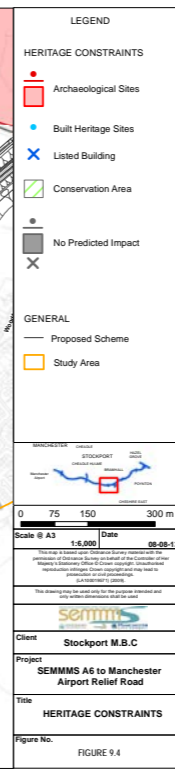
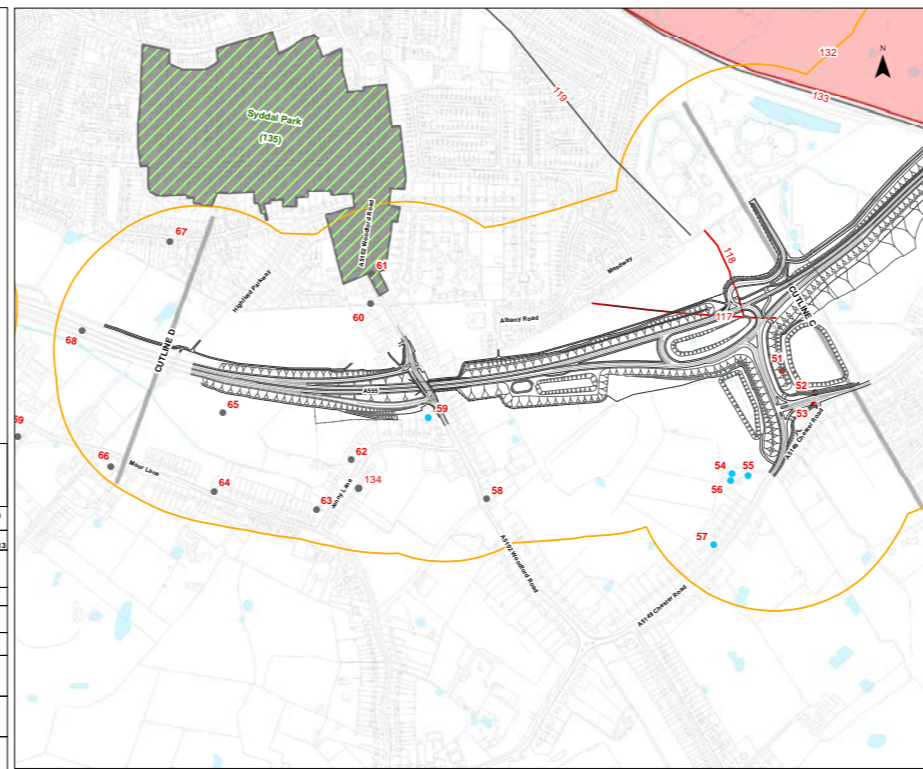
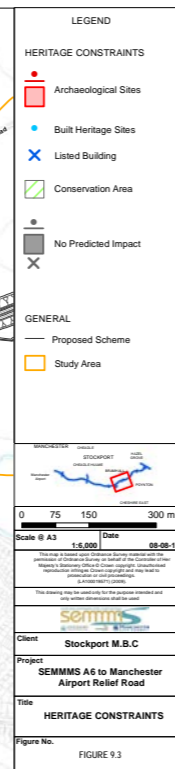
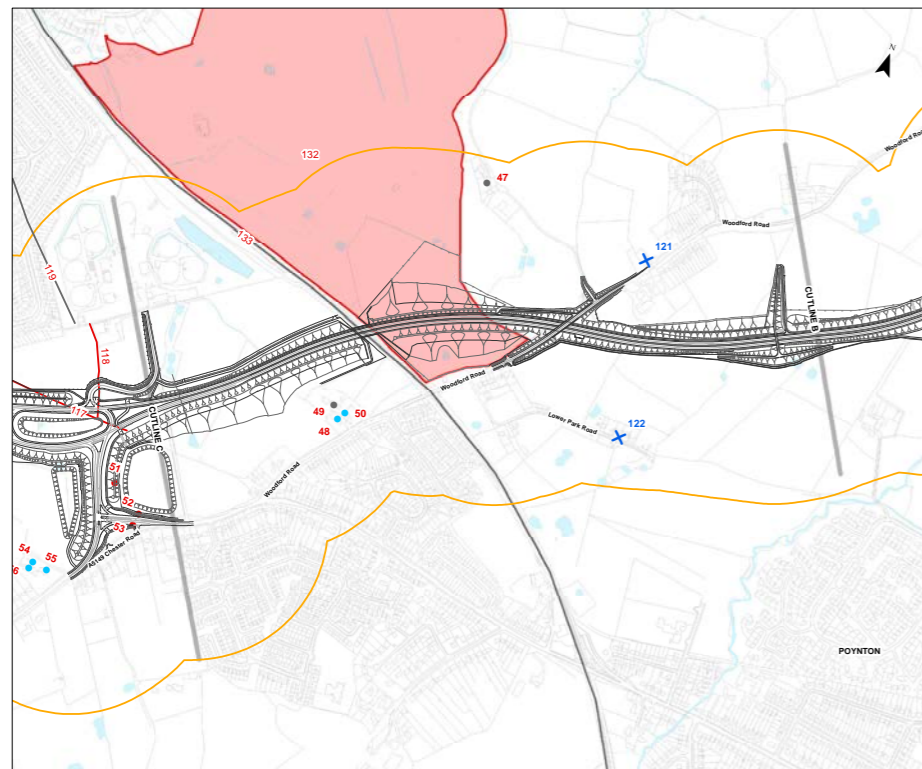
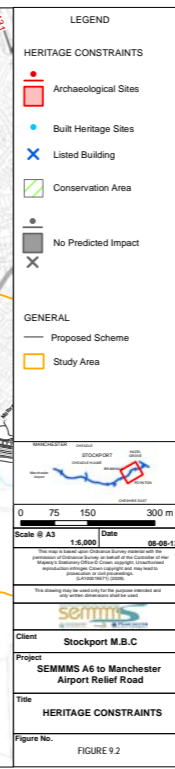
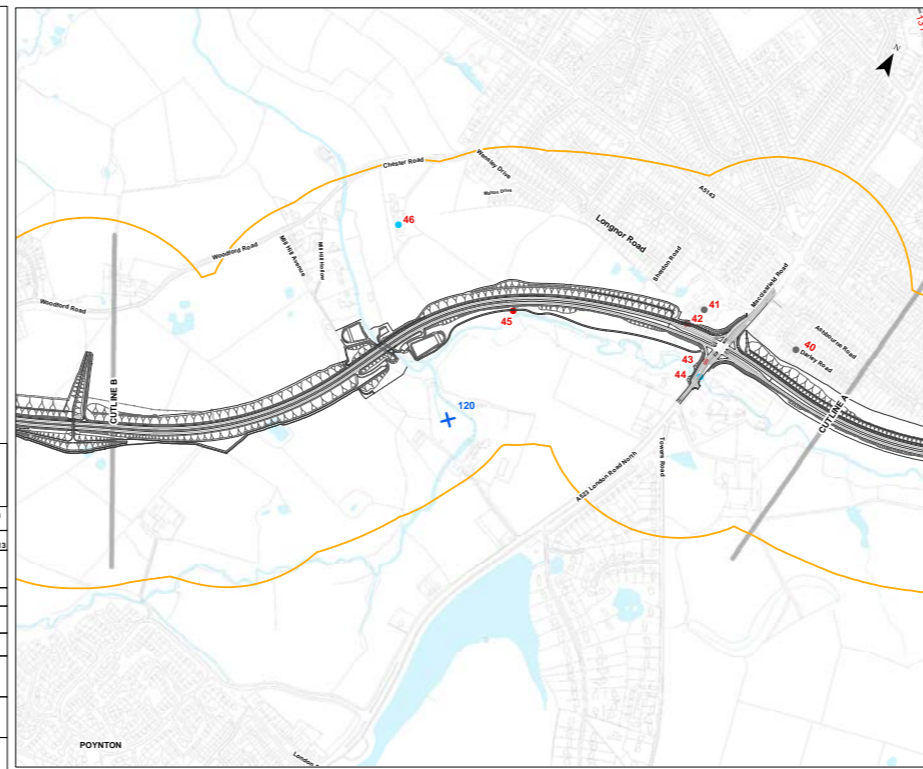
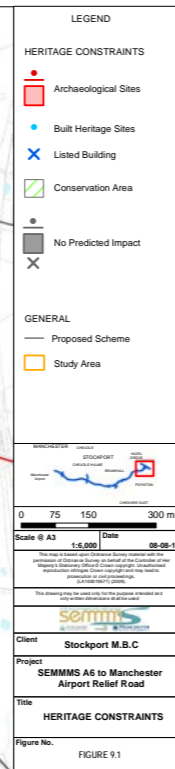
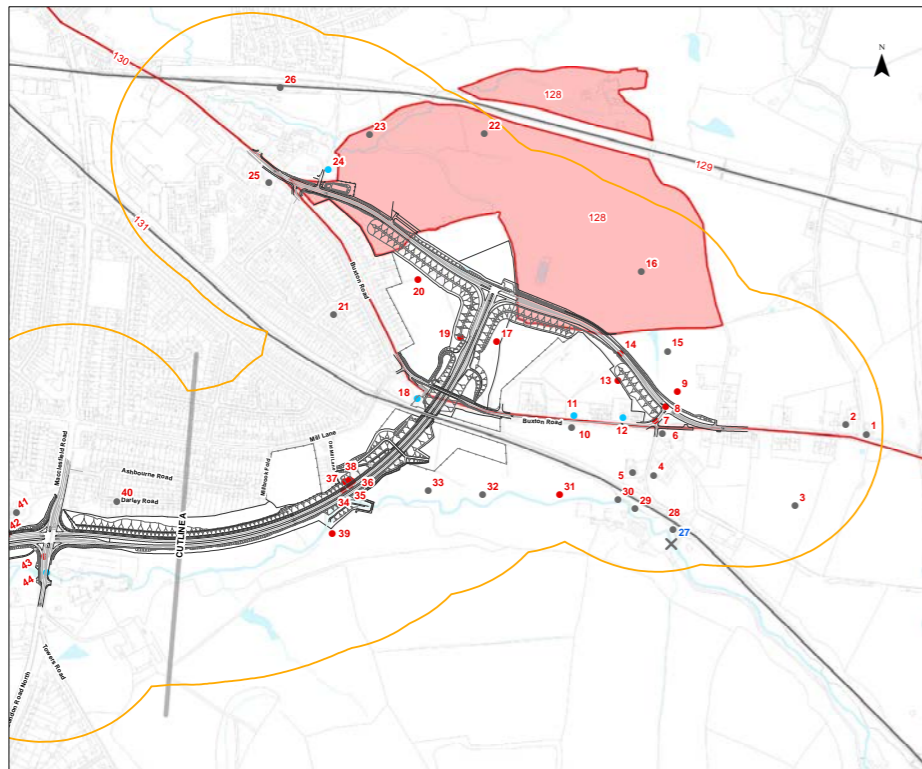
Through analysis of surveys undertaken and desk based studies, the following species have been identified:

- **Mammals** – badgers and bats
- **Herpetofauna** – great crested newts and the common toad
- **Birds** - kingfisher

An Environmental Impact Assessment has been undertaken and outlines appropriate mitigation measures relating to the protection of areas of ecology value located within the area. These mitigation measures are set out in detail within chapter 11 of the ES.

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FIGURE 2.3A LOCATION OF EXISTING HERITAGE FEATURES ALONG THE ROUTE (TAKEN FROM CHAPTER 9 OF THE ENVIRONMENTAL STATEMENT)



CULTURAL HERITAGE

Figure 2.3 identifies archaeological and built heritage sites and assets located in close proximity to the application site. Those sites and assets that would be impacted by the proposed development are described in Table 2.1.

The study area also includes standing buildings which are not Listed, but are still considered as of some historical significance and are recorded on the Historic Environment Record and/or Stockport's Local List. These are as follows:

- Hawthorn Farm (site 59)
- No. 83 Stanley Road (site 78)
- Norbury Bridge (site 44)
- Norbury Hall Farmhouse (site 41)
- A boundary post for the manor of Poynton (site 45)

Further detail relating to cultural heritage within and around the application site is provided in chapter 9 of the ES.

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FIGURE 2.3B LOCATION OF EXISTING HERITAGE FEATURES ALONG THE ROUTE (TAKEN FROM CHAPTER 9 OF THE ENVIRONMENTAL STATEMENT)

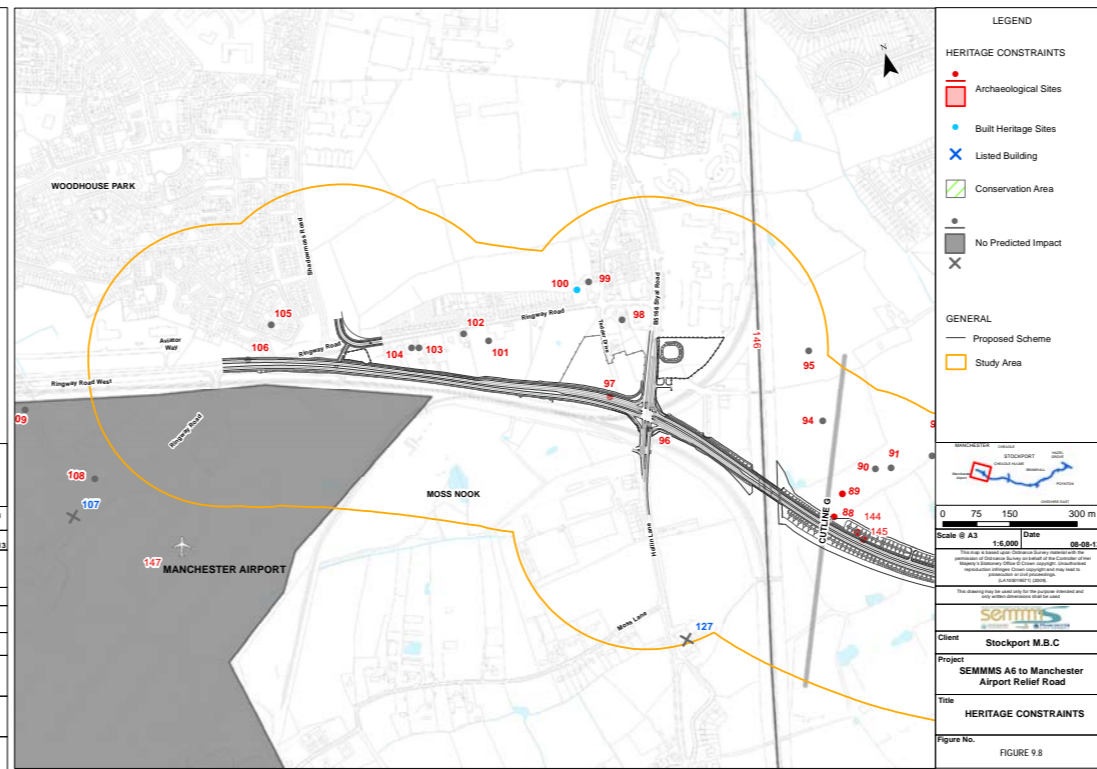
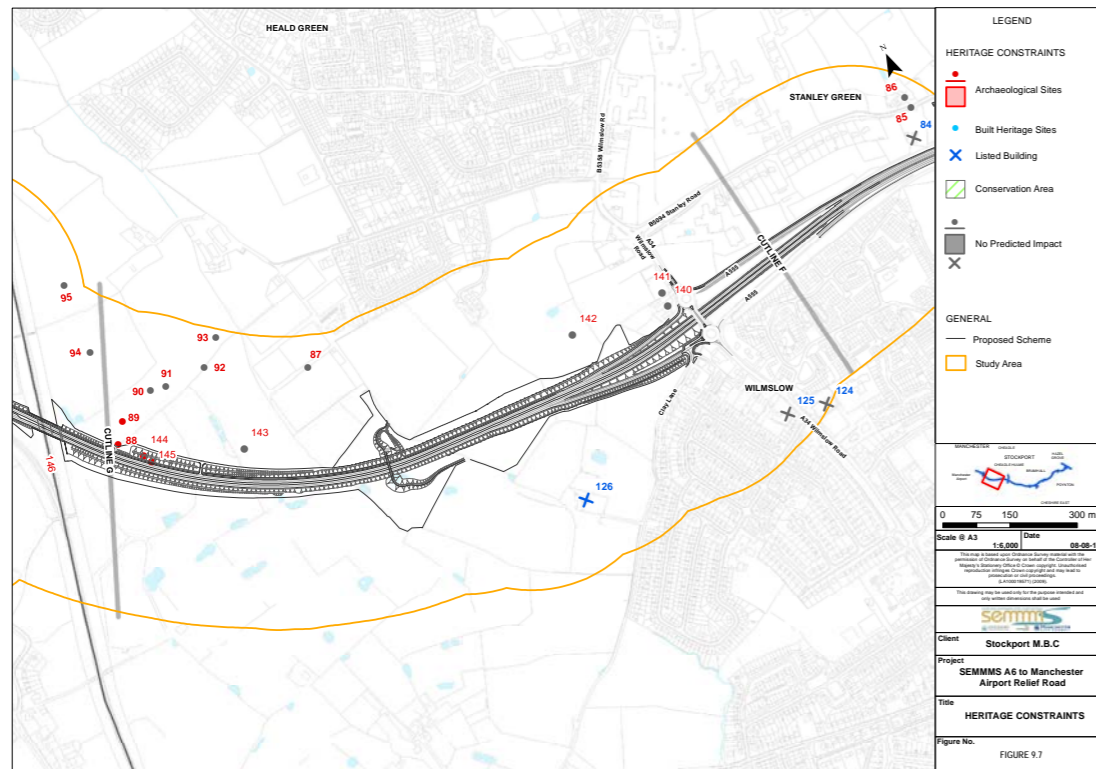
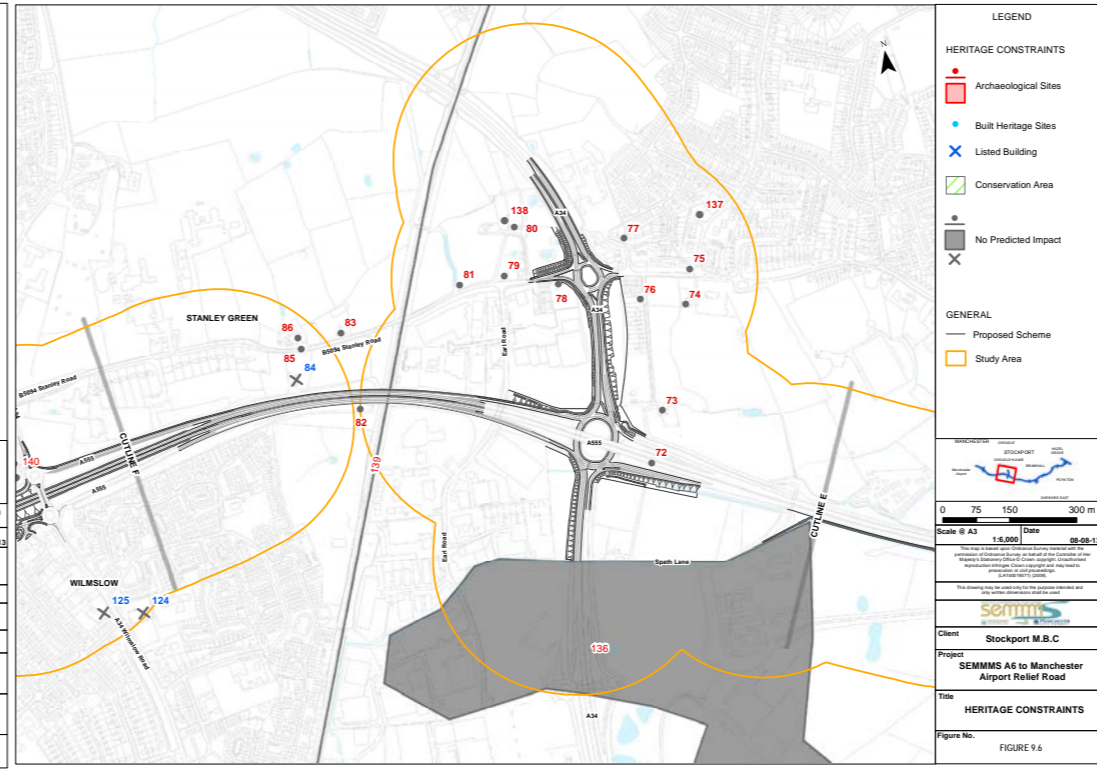


TABLE 2.1 ARCHAEOLOGICAL REMAINS

Site/Asset	Time Peiod	Corresponding number of Figure 2.8
Traditionally the former routeway known as Lumb Lane which linked Bramhall with Chester Road was itself considered to be a Roman road. Within the study area the line of this lane is partly still visible as a low earthwork.	Roman	118
Excavations by Peter Wroe in the late 20th century on the north side of Chester Road near Walnut Tree Farm revealed a gravel spread, with a width of 7.5m and a cambered surface, which he believed to be part of the Cheadle to Buxton road.	Roman	52
In 1998 the University of Manchester Archaeological Unit carried out an excavation at Walnut Tree Farm, within the easement of a new water pipeline, and also recorded a gravel road surface (UMAU 1998).	Roman	51
The spur of land on the edge of the study area which is the location of the farmhouse known as Norbury Hall, can be identified as the site of the medieval and later Norbury manor house.	Medieval	41
One water-powered corn mill site lies within the study area, Norbury Mill.	Medieval	34, 35, 36, 37 and 38
Possible evidence of medieval agricultural activity may survive within the study area in the form of earthworks. In the Midlands in particular, medieval open fields can be traced as long strips of raised ploughlands separated by narrower furrows. Earthworks of this form, known as 'ridge and furrow', have been noted in several locations along the road corridor, including near Styal Road (site 90), where these may be remnants of a larger grouping (sites 88, 89).	Post Medieval	88, 89 and 90
A farmstead on the fringe of the Proposed Scheme at Carrwood by the Norbury Brook in Poynton, now demolished, was in existence by 1770.	Post Medieval	39
Farmstead - house or cottage on Chester Road now demolished	Post Medieval	53
The water-powered Norbury Mill seems to have been built between the late 15th and the late 16th century and to have replaced an earlier windmill, situated on a site located c 1km to the north-west.	Post Medieval	34 to 38
In 1991 the GMAU carried out an excavation at Norbury Mill. The site lies in what appears to be a rock-cut hollow with higher ground immediately beyond the mill on the north and the west. Following removal of over 1000 tonnes of demolition debris from the site, the mill walls were found to survive to a height of up to 4m, with the wheelpit 3m deep. The excavation identified three main phases of development. The earliest remains belonged to a mill probably dating from the 18th century. Following the excavation in 1991 the site was backfilled and is now evident as a heavily overgrown hollow. The mill leat is visible above the site as a substantial earthwork.	Post Medieval	31
'Brick Kiln' field-names, implying the presence of a brick-making site, are found within the study area on the north side of the A6.	Post Medieval	17, 13
The Proposed Scheme crosses a hedgerow located on a township boundary as shown on tithe awards which is therefore classified as an Important Hedgerow as defined by the archaeological and historical criteria in Part II, Schedule I of the Hedgerow Regulations 1997. The hedgerow is on the boundary between the township of Bramhall on the north and Woodford and Poynton on the south.	Post Medieval	117
The Proposed Scheme study area includes the site of Norbury toll house near the northern end of one of the turnpike road.	Industrial	43

WATER

The water environment study area lies within an area of predominantly agricultural land on the urban fringe of Greater Manchester.

The principal watercourses comprise the Oxhey Brook, Threaphurst Brook, Norbury Brook, Lady Brook and Poynton Brook at the eastern end of the corridor, the Spath Brook in the central part of the corridor and the Gatley Brook and Baguley Brook at the western end of the corridor. Most of these watercourses drain generally northwards towards the Upper River Mersey upstream of the Manchester Ship Canal, with the exception of the Spath Brook which drains southwards to the River Dean.

In addition to the principal watercourses there is a network of small streams, drains and ditches throughout the corridor, including the Hill Green Brook and Bramhall Brook which are minor tributaries of the Lady Brook. Due to historic land use and urbanisation many of the surface waters of the study area are heavily modified due to realignment, straightening and culverting.

There are two areas of notable floodplain and flood risk. The first is associated with the confluence of the Norbury Brook, Poynton Brook and Lady Brook. The second is related to the Spath Brook in the vicinity of Stanley Green Trading Estate. There are numerous small ponds scattered throughout the rural areas of the corridor.

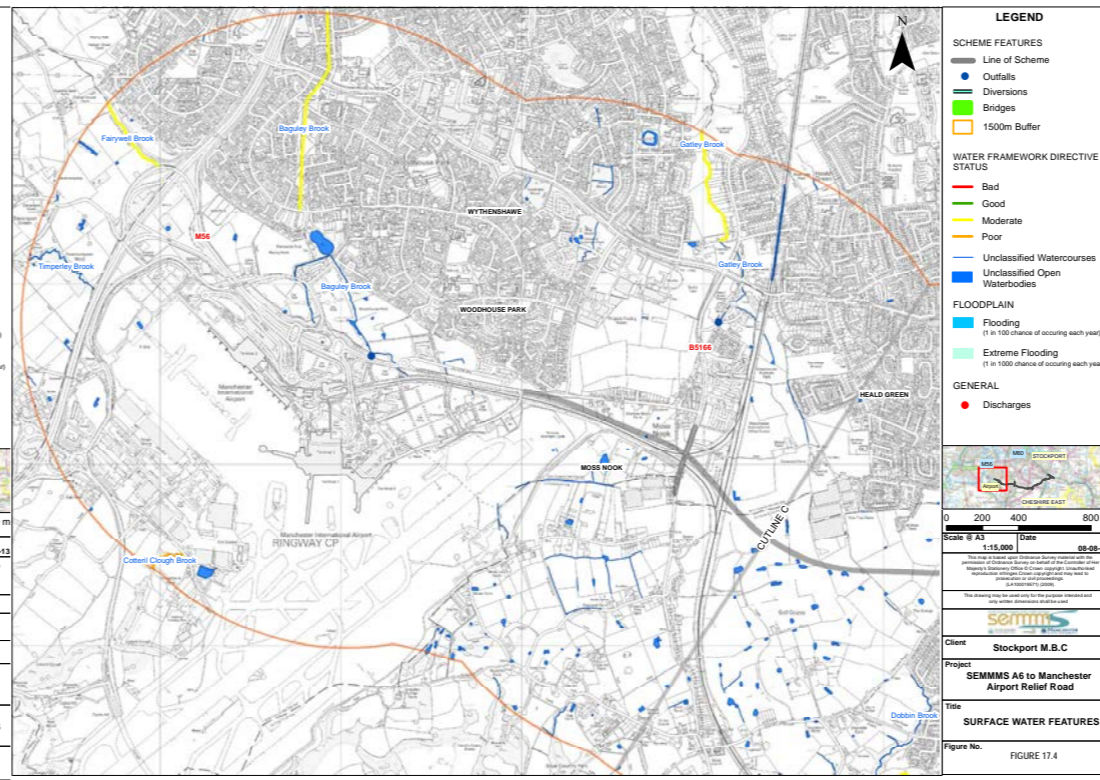
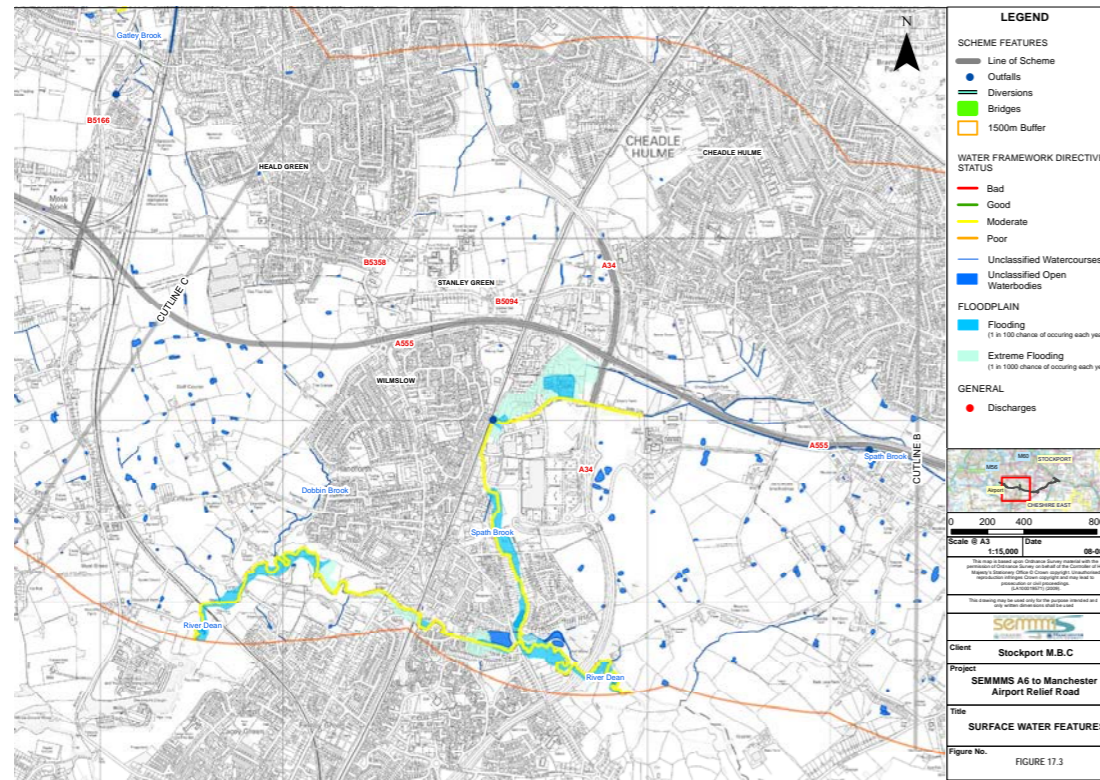
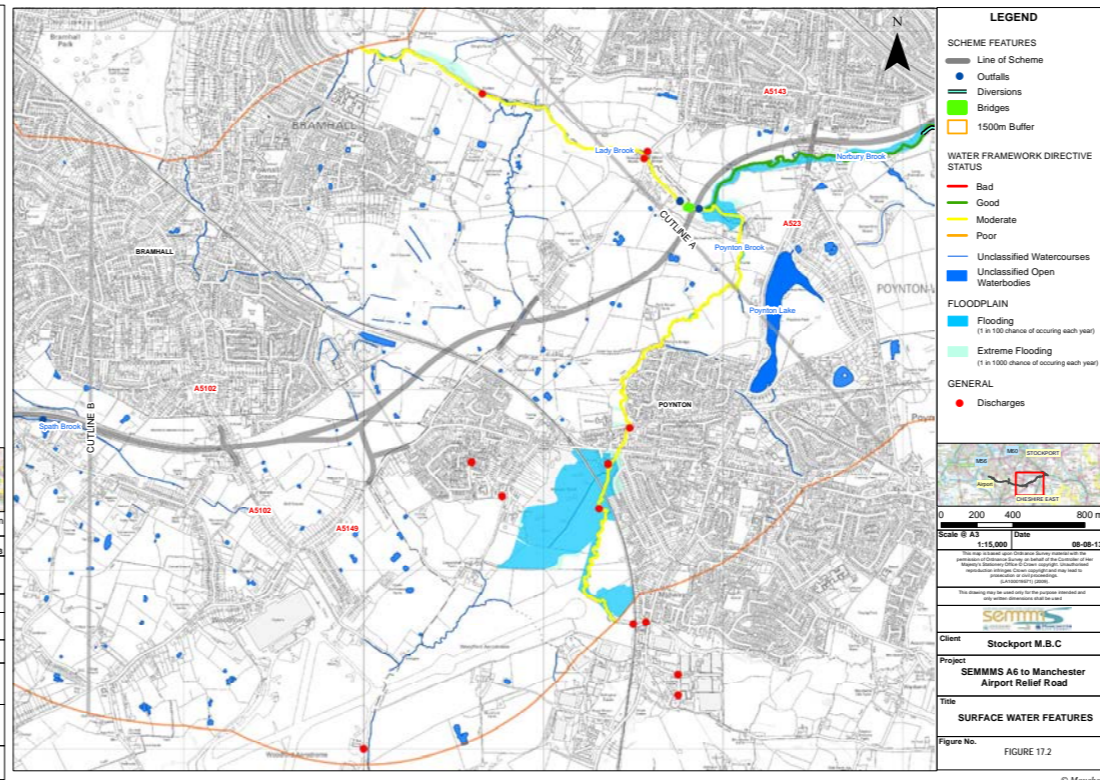
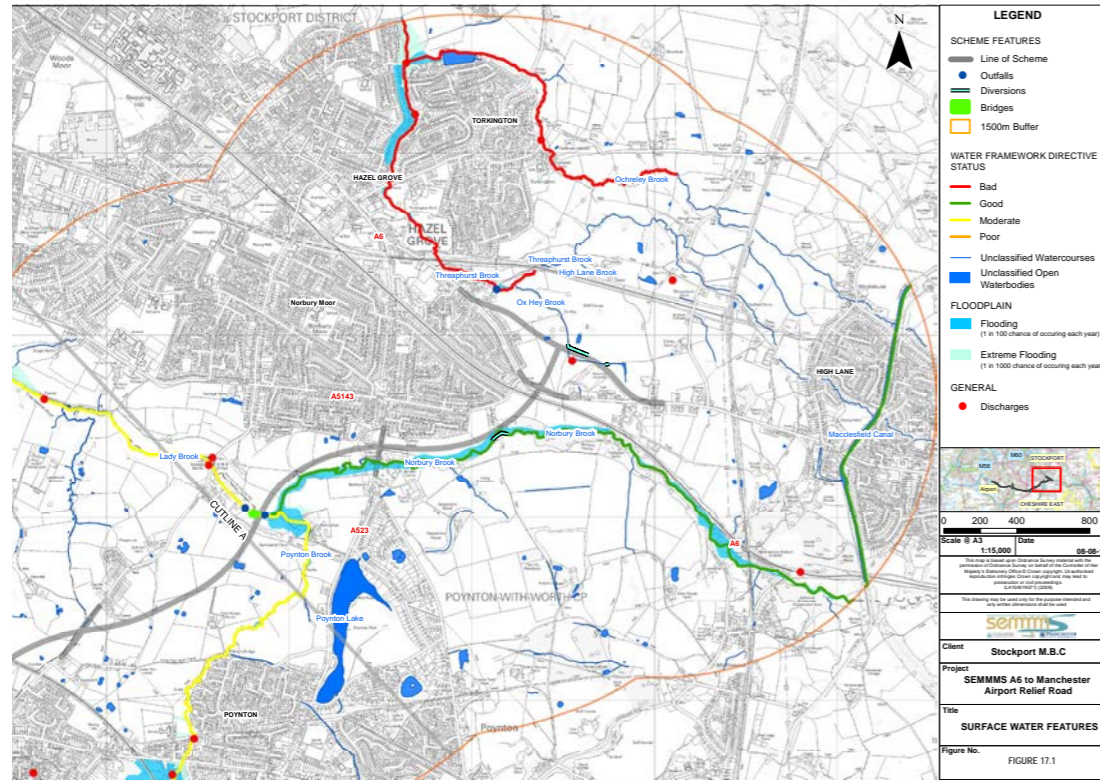
Examination of the Environment Agency flood map confirms the route to be located predominantly in Flood Zone 1, with isolated sections in Flood Zones 2. As the vulnerability of the proposed highway scheme, based on the guidance given in the NPPF Technical Guidance, is predominantly 'Essential Infrastructure' with some 'Water Compatible' features, the highway scheme is considered appropriate within the planning context without the need for the Exception Test. The route lies in a protected corridor identified for such a scheme, and is predominantly located in Flood Zone 1. It is therefore assumed that the Sequential Test is considered to be passed for the scheme.

The key surface water features of the study area are shown in Figure 2.5 overleaf.

Further detail relating to key surface water features within and around the application site is provided in chapter 17 of the ES.

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FIGURE 2.5 LOCATION OF EXISTING WATER FEATURES ALONG THE ROUTE



TOPOGRAPHY AND VIEWS

The topography of the corridor is generally flat and occasionally gently undulating with elevations ranging between 120m AOD in the east to 70m AOD in the west. Existing views into and within the application site are illustrated by the following photographs. The location where the photos were taken are shown in Figure 2.6 and a description of each view is provided.

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1. A6 Northern Junction Looking Southeast



2. A6 Junction with Mill Lane Looking Northeast



3. A6 Junction with Proposed Relief Road Looking North



4. A6 Eastern Junction Looking Northwest



5. Norbury Brook Looking West at Fernlea Footbridge (Structure No. 597)



6. Macclefield Road at Proposed Junction Location Looking East



7. Macclefield Road at Proposed Junction Location Looking West



8. South-eastern end of Mill Hill Hollow Looking Southeast



9. To the rear of properties on Woodford Road Looking Southeast



10. East end of Lower Park Road looking Northeast



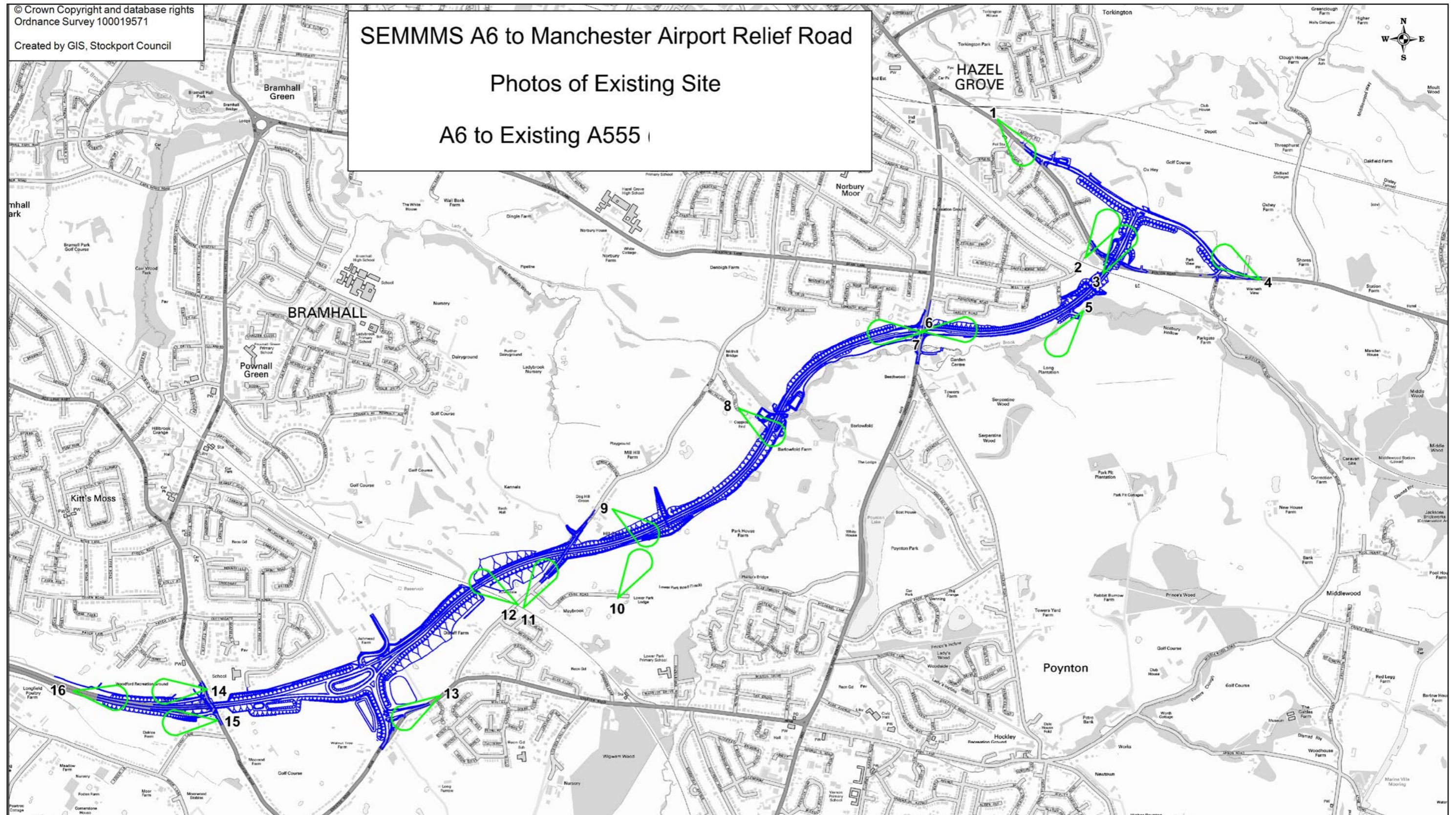
11. Woodford Road to Southwest of Proposed Bridge Looking Northeast

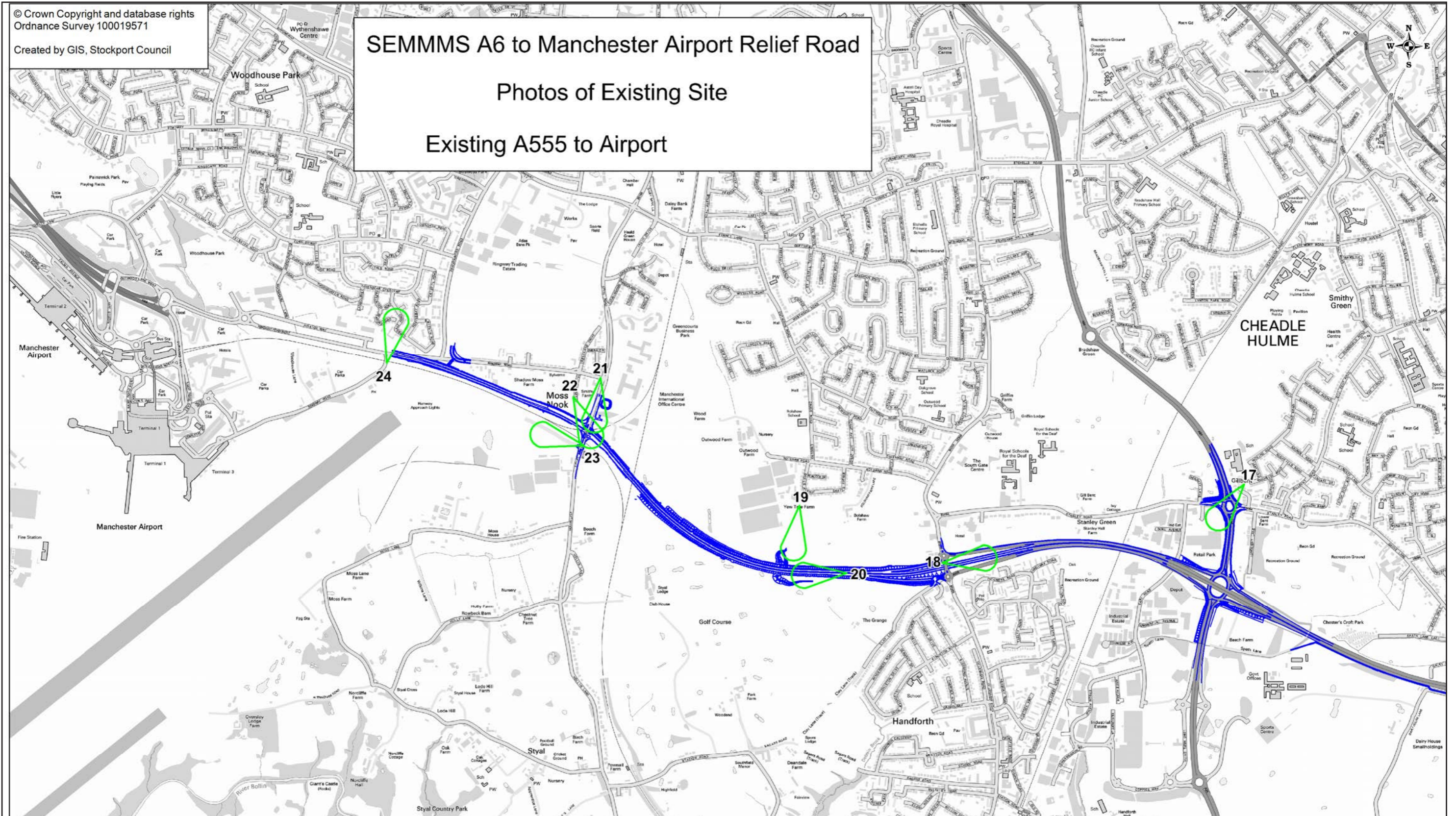


12. Woodford Road Bridge over WCML Looking Northwest

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FIGURE 2.6 VIEWS INTO AND WITHIN THE SITE





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13. Chester Road at Proposed Junction Looking West



14. Woodford Recreation ground Looking West Toward Pavillion



15. Woodford Road, Bramhall Looking West Along A555



16. Moorfield Bridleway No. 3 (Structure No. 836) Looking East



17. Stanley Road Roundabout Looking South



18. Wilmslow Road Bridge (Structure No. CB2320) Looking East along the A555



19. To the Rear of Properties on Davies Avenue Looking South Towards the Proposed Yew Tree Footbridge



20. Proposed location of Yew Tree Footbridge Looking West



21. Styal Road to the North of the Proposed Junction Looking South



22. View Looking Southeast on the Northern Styal Road Overbridge (Structure No. 526)



23. Styal Road Looking West along the Airport Spur



24. Ringway Road Bridge Looking North

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Current Access Arrangements

A complex network of Public Rights of Way (PRoW) provide access to the countryside and open areas from the neighbouring communities. In addition to numerous footpaths, the principal rights of way include:

- Ladybrook Valley Interest Trail, a long distance footpath running along Norbury Brook in the vicinity of Hazel Grove;
- National Cycle Route 55, which crosses the A6 road near Hazel Grove just south of the proposed alignment; and
- Regional Cycle Route 85 encompassing Manchester Airport Orbital Cycleway crosses the proposed alignment near Styal Railway Station; and
- Greater Manchester Cycle Routes.

There are a number of existing roads surrounding the application site. These include the A555 and the A34. The route of the proposed re-alignment of the PRoWs along the route of the A6MARR is shown in plan1007/3D/DF7/A6-MA/PROW/210 – 214 submitted as part of the planning applications.

SOCIAL AND ECONOMIC CONTEXT

By improving access to south east Manchester, the A6MARR will benefit both communities and the local economy in the following ways:

- **Economic growth** - generating additional economic output for the region and contributing towards the creation of new jobs;
- **Better access to Manchester Airport and other key destinations** for employment, education, health, leisure and retail;
- **Less traffic on local roads** - reducing congestion on local roads in surrounding areas;
- **Shorter journey times** for pedestrians, cyclists, public transport users, car drivers and freight;
- **Improved road safety**, particularly for pedestrians and cyclists by reducing the volume of traffic passing through residential areas; and
- **Increased investment** encouraged in Manchester Airport and Airport City as well as areas of Stockport, Cheshire East and Manchester.

Completion of the proposed development is predicted to contribute towards delivering significant benefits to the local economies of Stockport, Cheshire East and Manchester, including employment benefits with improved access to local areas, businesses and local and wider road networks. A socio economic assessment is submitted as part of the planning applications, which identifies the social and economic impacts of the proposed development.

PLANNING POLICY CONTEXT

A planning statement is submitted as part of the planning applications, which considers the proposed development against relevant and current planning policy. These include:

- At a national level, the NPPF provides a comprehensive policy and guidance on matters to be taken into account when considering planning applications and how environmental issues should be addressed when considering new development plan;
- The development plans for SMBC, CEC and MCC;
- Relevant supplementary planning documents; and
- The emerging new Local Plan for CEC.

Within SMBC and CEC areas, the proposed development is located within areas that are currently safeguarded within the relevant development plans for the delivery of the A6MARR. Further detail on this is provided within the planning statement.

The key policies from current planning policy relating to the design of new development are highlighted below.

National Planning Policy Framework (2012)⁷

The National Planning Policy Framework (NPPF) emphasises the importance of delivering good design as part of new development with one of its core principles 'Requiring good design'. This will contribute positively to making places better for people.

The NPPF also contains a key message that planning policies and decisions should not attempt to impose architectural styles or particular tastes and they should not stifle innovation, originality or initiative. The NPPF states in determining applications, great weight should be given to outstanding or innovative designs which help raise the standard of design more generally in the area.

Stockport Core Strategy Development Plan Document (2011)⁸

Policy SIE 1 (Quality Design) identifies that development, which is designed and landscaped to the highest contemporary standard, paying high regard to the built and/or natural environment within which it is sited, will be given positive consideration. It also outlines specific requirements which include using appropriate materials, respecting site characteristics and avoiding harm to the wider environment.

Macclesfield Local Plan (2004)⁹

The Macclesfield Local Plan is the part of the development plan for CEC that is of relevance to the proposed development. Policy BE 1 (Design guidance) highlights the need for new development to meet a number of design principles, including the following:

- Reflect local character;
- Respect form, layout, siting, scale and design of surrounding buildings and their setting;
- Contribute to a rich environment and add to the vitality of the area; and
- Use appropriate materials.

The Local Plan sets out a range of development control policies which proposals for new development must adhere to. Policy DC1 (New Build) highlights that the overall scale, density, height, mass and materials of new development must be sympathetic to the local environment.

A number of policies within the Local Plan seek to protect the amenity of residential occupiers including Policies H13 (Protecting residential Areas) DC 3 (Amenity). Policy DC 3 states that development should not significantly injure amenities of adjoining or nearby property due to matters such as loss of privacy, overbearing effect, loss of sunlight and daylight, traffic generation and car parking.

Manchester Core Strategy (2012)¹⁰

Policy SP 1 (Spatial Principles) of the Manchester Core Strategy is a spatial principle which aims to guide strategic development in Manchester to 2027. It states development in all parts of the City should make a positive contribution enhancing or creating character by being well designed. This includes minimising emissions, using natural resources efficiently and reusing previously developed land wherever possible.

Policy EN 1 (Design Principles and Strategic Character Areas) identifies the need for development in Manchester to have regard to the strategic character area in which the development is located. The proposed development is located within the 'Airport & urban fringe Character Area'. The policy highlights the need for development in this area to accommodate the future operational needs of the Airport, whilst retaining the area's open character.

Through Policy DM 1 (Development Management), the Core Strategy requires all development to have regard to a number of specific issues, including the impact on the surrounding areas in terms of the design, character, scale and appearance of the proposed development. There is also a requirement for developers will to demonstrate that new development incorporates sustainable construction techniques.

Stockport Sustainable Design and Construction SPD (2012)¹¹

The Sustainable Design and Construction SPD provides up to date guidance, information and resources to support sustainable design and delivery of buildings in the Borough. In particular it provides support in terms of compliance with the energy and climate change related policies in the Stockport LDF Core Strategy DPD. The aim is for Stockport to be a leading 'green borough'.

Guide to Development in Manchester SPD (2007)¹²

The Guide to Development in Manchester's aim is to provide guidance which will help to develop and enhance an environment within Manchester which is visually attractive, has a unique and positive sense of place and which properly caters for the functions which it accommodates both now and in the future.

The SPD highlights the importance of addressing a range of design criteria, which include:

- Character and Context: A place with its own identity;
- Continuity and Enclosure: A place where public and private spaces are clearly distinguished;

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- Legibility: A place that has a clear image and is easy to understand;
- Ease of Movement: A place that is easy to get to and move through;
- Quality of the Public Realm: A place with attractive and successful public areas;
- Diversity: A place with variety and choice; and
- Adaptability: A place that can accommodate change and innovation.

How does the design of the proposed development address key design policies?

The proposed development has been designed in consideration with the key design policies as identified above.

- Along the majority of the route, the relief road is located within a cutting to avoid any detrimental impacts on existing surrounding areas. This is to ensure any detrimental impacts relating to visual amenity, air quality and noise quality are avoided;
- The proposed development has been designed to relevant standards (see chapter 3);
- The use of appropriate materials has been applied throughout the proposed development to ensure that it respects the local character of the areas;
- Landscape bunds are proposed in a number of locations along the proposed route in order to ensure that the visual amenity of existing uses are protected; and
- The design team have worked closely with Manchester Airport Group to ensure that the proposed development has been designed so that it is consistent with the future operational needs of the airport.

2.2 SECTION 2: INVOLVEMENT

INTRODUCTION

Both the wider SEMMMS and the proposed development that is the subject of this FPA have been subject to extensive public consultation prior to their respective adoption and submission. The SEMMMS was consulted on in 2000. The M60 to Manchester Airport Relief Road formed a major component of the strategy and in 2003/2004 two further phases of consultation were undertaken on the principles of the road and junction options for the full scheme. The development of the M60 to Manchester Airport Relief Road Scheme was put on hold at the end of 2006.

In 2008 the Government announced the offer of funds to support the delivery of the 10km section of the road – the A6MARR. In 2009 design and planning work re-commenced, with significant amendments to the design and alignment. Consultation that took place from 2009 can be summarised as follows:

- Statutory and non-statutory consultees were re-engaged in 2009 to update them with the new proposals.
- Views and opinions from statutory and non-statutory consultees were sought in February 2010 on the revised scope of the ES.
- A series of forums for statutory and non-statutory consultees and interest groups were held between February 2012 and June 2012.
- A series of public exhibitions were held between October 2012 and January 2013, whereby the public was consulted both on the principal of the scheme, and on options for a number of junctions along the extent of the scheme.
- Specific consultation with affected land owners was undertaken throughout the summer of 2012 and are ongoing.
- Following the first phase of public consultation, a revised scheme was prepared, taking into account the feedback received from the first phase of consultation, in particular in relation to the various junction options that had been previously consulted on. This was the subject of a further public consultation in June/July 2013.

The proposed development which is the subject of the current planning applications was consulted on a two-phase consultation between 2012 and 2013. The SCI and DAS that form part of the FPA submission, identify how feedback from the public consultation has informed the final preferred scheme. An explanation of the consultation that has taken place and a summary of the feedback received is set out within this chapter.

STAKEHOLDER AND COMMUNITY ENGAGEMENT STRATEGY

In November 2012 a Communications Strategy was prepared and agreed by the promoting authorities, as a framework for consultation activities to be undertaken on the proposed development. The aim of the Strategy was to achieve meaningful consultation, capturing the views of those wanting to express a view on the proposed development.

The stated objectives of the Consultation Strategy were to focus on achieving good quality consultation and an understanding of the Relief Road Scheme so as to support its delivery and subsequent wider benefits to the South East Manchester area. The objectives of the strategy were divided into communications objectives and consultation objectives and were defined as follows:

Communications Objectives

- To raise awareness and inform stakeholders, road users and residents about the A6MARR;
- Promote the public consultation to ensure everyone who wants to have their say has the opportunity to do so;
- To engage all stakeholders, road users and residents with an interest of the Scheme; and
- To minimise and refute ill-informed, misleading and inaccurate, comments and complaints, achieving understanding and communicating the three Councils' and their partners' position on the Scheme.

Consultation Objectives

- Conduct meaningful consultation with all stakeholders and the public and ensure all audiences have an opportunity to have their say;
- To demonstrate/understand what the key issues are and to respond to them;
- Enable stakeholders to maintain an accurate understanding of the Scheme;
- Demonstrate that the consultation can help inform decision making;
- Provide feedback to all taking part, evidencing impact of consultation outcomes on the revised scheme; and
- To ensure consultation activity complies with all relevant legislation.

The Strategy provided the overarching framework for the detailed engagement and consultation activities that followed. These are described in more detail in the following chapters.

PHASE 1 CONSULTATION, INCLUDING JUNCTION OPTIONS

The first phase of consultation on the proposed A6MARR took place from 22nd October 2012 to 25th January 2013. The Phase 1 Consultation asked broader questions about the proposed development to gauge overall opinion of the proposal and preferences on the layout of six junctions along the proposed route. General comments were also captured.

A summary of the activities during this phase is provided in Table 2.2 below.

TABLE 2.2 ACTIVITY SUMMARY

Action	Date
General Awareness raising – leaflet one	w/c 15th October 2012
Phase One consultation begins for a period of 14 weeks (including bank holidays)	22nd October 2012 – 25th January 2013
Analysis of results for Phase One consultation	January to March 2013
Reporting outcome of the Phase One consultation	Early Spring 2013

Engagement Strategy

Leaflets and a feedback form were delivered to 85,000 properties to all homes and businesses adjacent to the proposed development. Consultees were encouraged to complete the feedback form or respond via other methods (including via the SEMMMS website, telephone, Twitter and Facebook). In addition, 17 exhibitions were held at various locations in order for local people to comment on the junction options and wider proposals for the A6MARR.

Over the course of the consultation period statutory and relevant non-statutory stakeholders were written to, to inform them about the scheme. In addition a number of meetings were held with stakeholders and representative organisations. Stakeholders were engaged using a range of measures, which included: Leaflet/letter/email; meetings specific to the scheme; presentations at the meetings of interest groups; and ongoing stakeholder forums for the scheme.

A number of Local Liaison Forums (LLF) were established in those areas considered to be most affected by the proposals. Membership included businesses, land owners and local residents affected by the Scheme. The LLF meetings were a vital channel for a two-way dialogue between the local community, the Local Authorities and will be continued during construction to provide a consultation avenue for the appointed contractor. The LLFs provided insight into local attitudes, raised awareness of the consultation and generated interest in participation amongst the wider community.

Summary of Consultation Findings

In total, 8,737 response forms were received, following a postal distribution of approximately 85,000 leaflets. This represents a response rate of approximately 10%. Adding the 294 other responses to the response forms which were received via email, telephone, post, twitter and the SEMMMS website, provides a total sample size of 9,031 consultation responses. The information provided on each of the responses was considered and utilized to determine any conclusions from the Phase 1 consultation.

The information and data captured as part of the consultation process demonstrates that there is support for the proposed A6MARR. 69% of overall respondents supported the proposals with approximately 50% of respondents specifying that they are strongly in favour of the proposals. 13% of overall respondents specified that they were not in favour or definitely not in favour of the proposed development.

The consultation responses also showed that there was a broad distribution of respondents strongly in favour of the proposed development across the urban areas and within

the vicinity of the proposed A6MARR. In particular, there were clusters of strong support in Hazel Grove, Bramhall, Poynton and Heald Green. With regards to those respondents who were definitely not in favour of the proposal, clusters emerged at locations in close proximity to the proposed road.

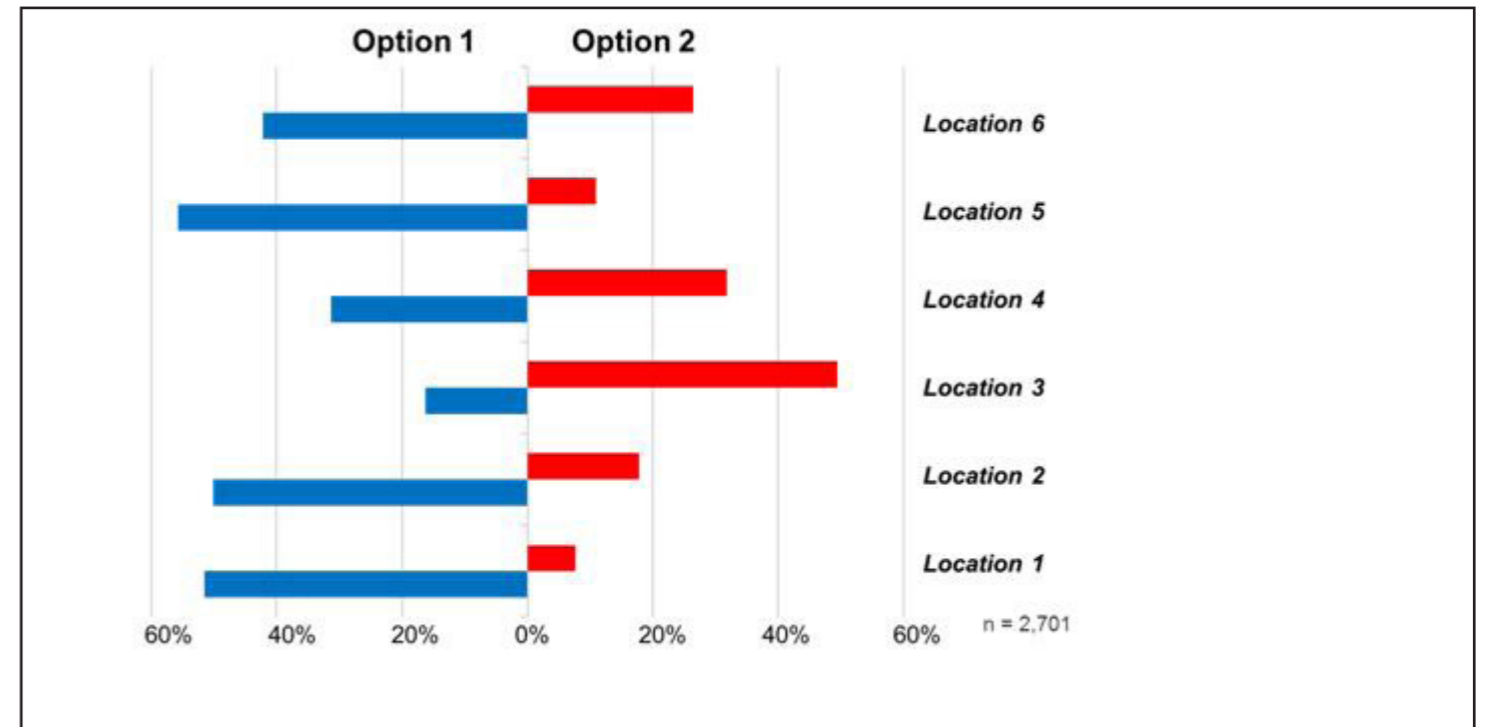
Options for 6 junctions were presented as part of the Phase 1 consultation. The locations of these junctions are shown in Figure 2.9.

Information captured on the response forms during the Phase 1 consultation also allowed for conclusions to be drawn with regards to preferred junction options. In the case of Locations 1, 2, 3 and 5, it was clear that there was an overwhelming support for one of the junction options. This overwhelming support also exists when specifically looking at the socio-demographic characteristics of the respondents at these locations. However, when analysing the information captured for Location 4, there was an even split in respondents support for both junction options. This split in respondents support also existed between genders and different age groups.

For Location 6, there appeared to be a significant level of support in favour of one junction option when considering the views of all respondents. However, when specifically focusing on the distribution of respondents, there appeared to be a greater level of support for the other junction option amongst those respondents located 1km from the appropriate junction option centre point. Within one kilometre of the junction 39% of respondents preferred option 1 and 61% option 2, whereas for all respondents (that provided a postcode) the split between Option 1 and 2 was 64% and 36%, respectively.

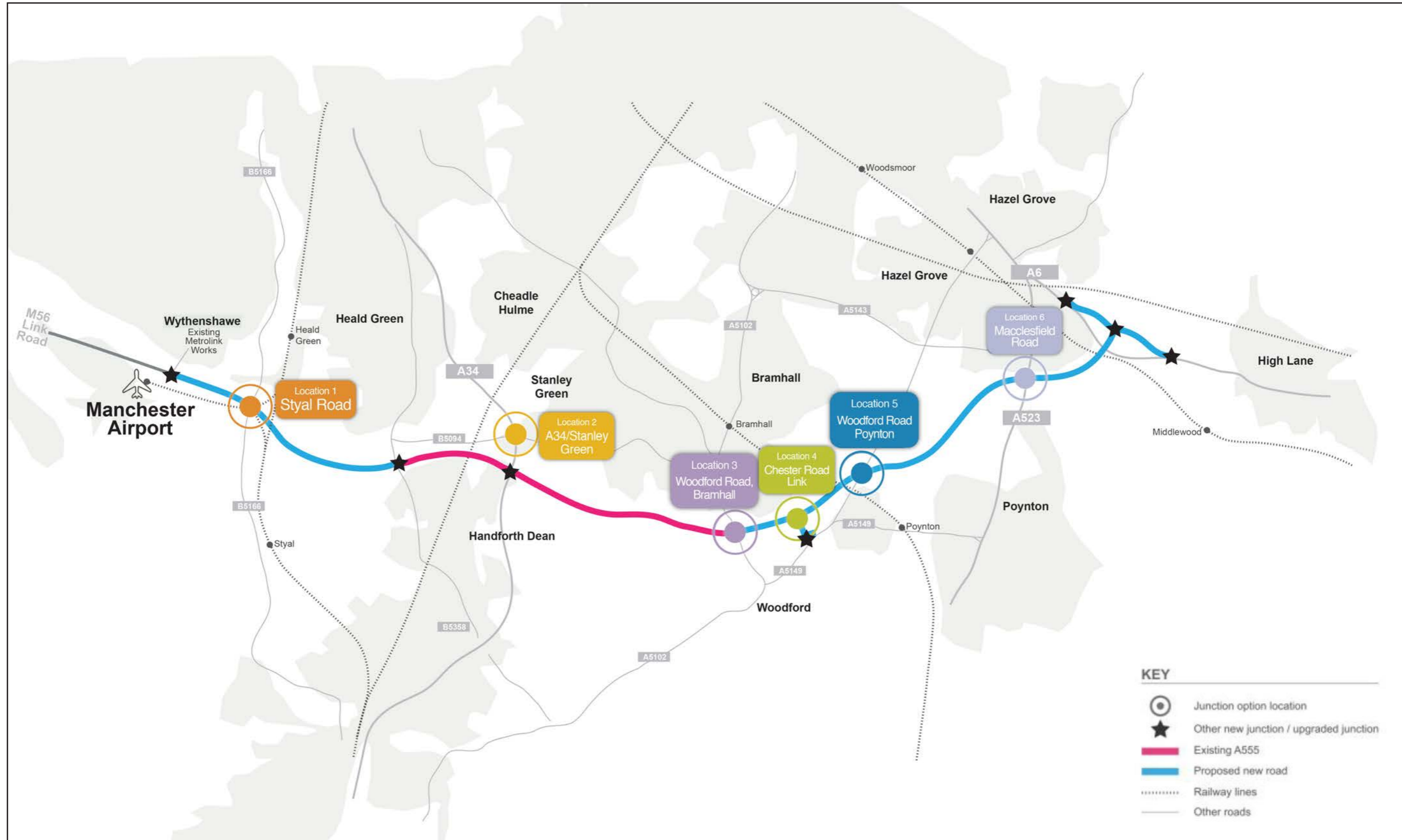
Further details of the Phase 1 consultation are provided within the statement of Community Involvement.

FIGURE 2.8 LOCATION JUNCTION OPTION PREFERENCE SUMMARY



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FIGURE 2.9 JUNCTION LOCATIONS



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How has consultation informed the design process

Several comments/queries were raised during the Phase 1 Consultation, all of which were logged and later amalgamated to remove any duplication. A total of 710 unique comments were raised regarding all aspects of the scheme, the SEMMMS team then considered each of these comments and an appropriate response was added to the log. The log was made available as part of the publically available Phase 1 Consultation Report. The log is duplicated in Appendix C of the Statement of Community Involvement.

Of the 710 comments that were raised 305 were highways/ design specific. Most of these comments were addressed within the responses in the log however several of the comments required further investigation to determine whether the raised issue could be remedied or practicable changes to the scheme could produce a beneficial outcome for the individual/s. These key changes are listed in Table 2.3.

TABLE 2.3 PHASE 1 CONSULTATION DESIGN CHANGES

Location	Design Change
Scheme Wide	The outcome of the phase 1 consultation informed the decisions taken in choosing the six junction options. The outcome of these decisions were as follows:- <ul style="list-style-type: none"> • Junction 1 (Styal Road) – There was a clear preference for Option 1, which involves widening the existing bridge over the airport spur line to carry the proposed junction. This among other design benefits concluded that Option 1 was the more feasible option. • Junction 2 (A34/Stanley Road) – There was a clear preference for Option 1, which involves upgrading the existing roundabout and the introduction of traffic signals. This among other design benefits concluded that Option 1 was the more feasible option. • Junction 3 (Woodford Road, Bramhall) – There was a clear preference for Option 2, which involves the construction of a single bridge over the relief road. This among other design benefits concluded that Option 1 was the more feasible option. • Junction 4 (Oil Terminal/Chester Road Link) – There was approximately an even split for the options at this location. Based on the design requirements for the options and considerations for the possible future instalment of the Poynton Bypass, it was concluded that the most feasible option was option 1, which involves the installation of a signalised roundabout. • Junction 5 (Woodford Road, Poynton) – There was a clear preference for Option 1, which involves the installation of a bridge over the relief road with no junction with the relief road. This among other design benefits concluded that Option 1 was the more feasible option. • Junction 6 (Macclesfield Road, Hazel Grove) – There is a clear preference for Option 1, which involves the installation of signalised cross road (at-grade) junction. This among other design and economic benefits concluded that Option 1 was the more feasible option.
Scheme Wide	Approximately 5km of acoustic fencing was introduced throughout the length of the scheme as appropriate.
Scheme Wide	The noise bunding throughout the length of the scheme was extended and their heights reviewed.
Scheme Wide	The landscaping throughout the length of the scheme was reviewed following identification of particularly sensitive areas.
A6 near Norbury Hollow Road	The design of the noise mounding was revised to maintain access currently utilised by the residents.
East of Macclesfield Road/ South of Darley Road	The alignment of the relief road was moved approximately 10m south of residential property, which also involved lowering the vertical alignment approximately 1.5m of the relief road and adjusting the design of the noise mounding accordingly.
Woodford Road, Bramhall	The size of the junction was reduced by approximately 30m by moving the east bound diverge slip road further south.
Woodford Road, Bramhall	The attenuation pond on the east side of the junction was moved from the north side of the relief road to the south side.
A34	Low-noise surfacing was introduced on the A34 as part of the resurfacing works in addition to the proposal for the new lengths of carriageway to be constructed with low noise surfacing.
Wilmslow Road to Styal Rail Bridge	The vertical alignment of the relief road was lowered approximately 1.5m to mitigate visual impact.
Yew Tree Accommodation Bridge	The structure was moved west to reduce the visual impact on residents.
A6 Buxton Road	Cycling ramp was realigned and steps introduced to link the existing A6 with the proposed parallel shared used footway/cycleway.
Oil Terminal junction	Steps have been introduced to connect the existing PRow to the new footways around the junction.
Oil Terminal to Woodford Road	A shared used cycleway / footway has been provided in lieu of a bridle way taking into account safety of equestrians at the Woodford Road junction.
Longshut Lane	Longshut Lane to be promoted as a bridleway to provide better links for equestrians away from the busy A34. This also reduces the requirements for construction on the A34.
Yew Tree Bridge	Bridge relocated in order to utilise available land and therefore PRow diverted accordingly.

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PHASE 2 CONSULTATION – THE EMERGING PREFERRED SCHEME

The phase 2 consultation began on 3rd June 2013 and closed on the 19th July 2013.

A summary of the activities during this phase is provided in the Table 2.4.

TABLE 2.4 ACTIVITY SUMMARY

Action	Date
Pre-engagement to the Phase Two Consultation	May/June 2013
Phase Two Consultation for a period of seven weeks	3rd June to 19th July 2013
Analysis of results for Phase Two Consultation	July / August 2013
Reporting outcome of the Phase Two Consultation	September 2013

Engagement Strategy

A leaflet and response form was distributed to properties within the area surrounding the proposed scheme. The postal distribution of the leaflets was to an area of approximately 85,000 properties, including residential and business properties. A total of nine exhibitions were held between 13th June and 4th July 2013. Approximately 870 people attended the exhibition events.

Through a combination of written correspondence and meetings, the project team has sought the views of key groups, including residents, road users, interest groups and local businesses, affected by the A6MARR.

An Environment Forum was set up specifically for the A6MARR proposal in order to discuss and gather feedback on environmental aspects of the scheme, such as environmental impact, mitigation and landscaping. The Forum was held during the Phase Two consultation on 19th June 2013. A total of three attendees were present at the forum.

A Vulnerable Road Users Group (VRUG) was set up specifically for the A6MARR proposal in order to discuss and gather feedback on pedestrian, cycle and equestrian facilities, provision for mobility impaired individuals and public rights of way. A VRUG meeting was held during the Phase Two consultation on 12th June 2013. A total of 17 attendees were present at the meeting.

Local Liaison Forums were undertaken in areas most affected by the proposals. The purpose of the LLFs was to provide invited residents and businesses with the opportunity to comment on the scheme, make suggestions for improvements to the design of junctions and the overall scheme as well as direct any questions regarding the scheme to members of the project team.

SUMMARY OF CONSULTATION FINDINGS

A summary of the Local Liaison Forum, Exhibition and Stakeholder feedback is provided below.

Response Form Results Summary

The key findings from the response form can be summarised as follows:

- There is agreement among respondents that environmental impacts and access / traffic issues are being addressed;
- Noise impact is the greatest environmental concern of respondents;
- Respondents living closer to the scheme are less likely to

agree that the environmental impacts and access / traffic issues are being addressed;

- There is a notable cluster of concern about the environmental impacts and access / traffic issues in the Hazel Grove area, particularly among respondents living in the vicinity of the Macclesfield Road junction;
- Of the four environmental impacts, respondents are most likely to respond neither agree nor disagree or don't know about how the ecological impact is being addressed by the scheme; and
- Of the four access / traffic issues under consideration, whilst respondents are most likely to agree that the scheme will address changes to traffic flows, conversely, they are also most likely to disagree that this is the case. This is likely to reflect both positive and negative changes to traffic flows within the consultation area as a result of the scheme, as exemplified by the high levels of agreement in the Heald Green and Cheadle area, contrasted with a notable strength of disagreement in High Lane.

Local Liaison Forum Comments Summary

The key comments made/ concerns raised at the LLFs can be summarised as follows:

- Concerns about noise, air quality and visual (including light pollution) impacts of the scheme;
- Requests for more detailed information on traffic, noise and air quality modelling;
- Concerns about the impact of the scheme on Queensgate Primary School;
- Concerns that traffic will increase on roads local to the scheme. More information on proposed complementary and mitigation measures requested;
- Access to properties needs to be addressed in the scheme proposals;
- Support from Poynton residents about selection of option 1 at the Macclesfield Road junction, however strong opposition from residents of Hazel Grove in close proximity to the junction in terms of noise, visual, air quality and traffic impact of the junction;
- Concern that drainage issues will increase as a result of the scheme;
- Concern about the impact of the scheme on the local environment, for example, ancient woodland and surrounding greenbelt land;
- The needs of pedestrians, cyclists and Public Rights of Way should be addressed through, for example, safe crossing facilities at junctions and accommodation of Pu;
- Concerns about increases in crime and antisocial behaviour as a result of the scheme due to improved accessibility;
- Requests for more information about construction impacts and how these will be addressed; and
- Questions as to the need for traffic signals at junctions.

Exhibition Comments Summary

The key comments made/ concerns raised at the LLFs can be summarised as follows:

- Concern about noise, air quality and visual (including light pollution) impacts of the scheme;
- Requests for more detailed information on traffic, noise and air quality modelling;
- Concern about the environmental impacts of the scheme, reflecting comments made at the LLFs;
- Concern about the selection of Option 1 at the Macclesfield Road junction, reflecting comments made at the LLFs;
- Concern about traffic flow increases as a result of the scheme, reflecting comments made at the LLFs;
- Particular concerns raised about traffic increases in High Lane and Disley, including about how the A6 can accommodate increases, deterioration of air quality and requests for more details about proposed mitigation measures for the A6. Comments that High Lane and Disley will receive no benefits from the introduction of the scheme;
- More needs to be done to address the needs of cyclists and pedestrians e.g. through the provision of underpasses/ bridges at junctions;
- Road safety concerns at junctions - particularly Clay Lane, Styal and Macclesfield Road;
- The Poynton Relief Road is needed to bring benefits to Poynton. Opposition to the scheme unless Poynton Relief Road is included within the proposals; and
- Junctions should be priority controlled roundabouts not traffic signal controlled junctions.

Stakeholder Comments Summary

The key comments made/ concerns raised in the stakeholder responses can be summarised as follows:

- General Comments:
 - The case for the scheme is built on out of date information and alternative, sustainable options have not been explored in sufficient detail;
 - The scheme's funding should instead be invested in sustainable travel improvements;
 - Concerns about the construction impact of the scheme;
 - Concerns as to the accuracy and validity of documents and analysis produced in support of the scheme;
 - Support for the scheme from the Road Hauliers Association and Woodford Community Council;
 - Opposition to the scheme from North West Transport Round Table, Campaign for Better Transport, Friends of the Earth, Campaign for the Protection of Rural England, CTC and PAULA.

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- Environmental Concerns:
 - Concern about the impact of the scheme on ancient woodland and greenbelt land in between Greater Manchester and Cheshire East;
 - Concern that the scheme will enable wider development of the greenbelt;
 - Concerns that the scheme will contribute to climate change;
 - The view that the scheme will worsen air quality across the area, included existing Air Quality Management areas and result in breaches to EU air quality limits;
 - Concerns about the impact of the scheme on Queensgate Primary School; and
 - Noise, air quality and visual impacts of the scheme should be minimised, for example, the scheme should go under the West Coast Main Line.
- Traffic Impacts:
 - Opposition to the scheme unless the Poynton Relief Road is introduced at the same time;
 - Concerns about traffic increase in High Lane and Disley;
 - Concerns about the wider traffic impact of the scheme in areas such as the Peak District National Park, Adlington and Prestbury;
 - More detailed information about proposed Complementary and Mitigation measures is required; and
 - The scope of CMM measures should be broadened, for example to encompass Adlington.
- Pedestrians, Cyclists and Public Rights of Way:
 - Insufficient attention has been paid to the needs of cyclists and pedestrians. Underpasses or bridges should be introduced at junctions. If at-grade crossings are necessary, signal timings should prioritise pedestrians and cyclists;
 - The scheme should be used as an opportunity for wider improvements for pedestrians, cyclists and equestrians in the local area;
 - The proposals need to accommodate the needs for commuter cyclists in terms of the surfacing of cycle lanes;
 - Concerns about the impact of the scheme on Public Rights of Way, such as the Ladybrook Valley Trail; and
 - Suggestions for improvements to proposals for pedestrians, cyclists and Public Rights of Way.

added to the log. The log was made available as part of the publically available Phase Two Consultation Report. The log is duplicated in Appendix D of this document.

Of the comments that were raised various were highways/ design specific. Most of these comments were addressed within the responses in the log however several of the comments required further investigation to determine whether the raised issue could be remedied or practicable changes to the scheme could produce a beneficial outcome for the individual/s. These key changes are listed in Table 2.5.

TABLE 2.5 PHASE 2 CONSULTATION DESIGN CHANGES

Location	Design Change
Scheme Wide	Acoustic fencing was extended and reviewed
Mill Lane	The suggested temporary site compound adjacent to Mill Lane will be sited further away following requests from residents.
Hazel Grove	The landscaping/earth mitigation was developed following requests at the Hazel Grove LLF e.g. the introduction of more semi mature trees in particularly sensitive areas.
Mill Hill Hollow / Glastonbury Estate	The vertical alignment of the relief road was lowered approximately 2.5m to mitigate noise and visual impact.
Woodford Road, Poynton	A footway on the west side of Woodford Road was introduced and the cross section of the bridge amended to include a shared use footway/cycleway.
A34/Stanley Road	Visual Mitigation (an earth mound) was introduced on the northwest side of the junction following requests from residents at the Woodford exhibition and Stanley Green LLF.
Hill Green Accommodation Bridge	The bridge has been lowered as a result of the lowering of the relief road in the area of Mill Hill Hollow / Glastonbury Estate.
Scheme Wide	Two additional sets of steps have been provided to link existing and proposed Public Rights of Ways.
Scheme Wide	Various lengths of PRowS will now be kept open as part of the final proposals in lieu of extinguishment.
Oil Terminal	An alternative PRow has been proposed to avoid the need for equestrian to cross the dual carriageway and to provide a safer route leisure route.
Yew Tree Footbridge	The bridge relocated again to mitigate the visual impact on residents to the north of the scheme including those of Davies Avenue.

As was the case during the phase one consultation, several comments/queries were raised during the Phase two Consultation. These again were logged and later amalgamated to remove any duplication. Again a large number of individual comments were received regarding all aspects of the scheme, the SEMMMS team then considered each of these comments and an appropriate response was

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2.3 SECTION 3: EVALUATION

This section of the DAS outlines the opportunities and constraints affecting the proposed development. In doing so, it determines a number of 'high-level' design and access principles which have been taken into account in formulating the design. The key opportunities relating to the proposed development are shown in Table 2.6.

The key constraints affecting the proposed development are shown in Table 2.7.

TABLE 2.6 OPPORTUNITIES FOR THE PROPOSED DEVELOPMENT

Opportunities	How have these been taken into account in designing the proposed development?
To address poor connectivity along the south Manchester corridor. There is currently a fragmented east-west highway network and a lack of surface access to Manchester Airport, which acts as a barrier to economic growth and regeneration.	The proposed development would help to provide a new east-west road that would improve surface access to Manchester Airport.
Congestion is an issue on the local and strategic network, particularly along the A6 and in the urban centres of Gatley, Bramhall, Heald Green, Hazel Grove, Poynton, Wilmslow, Handforth and Cheadle Hulme.	There is an opportunity to relieve this congestion through delivery of the relief road.
Poor environmental conditions exist in the District and Local Centres along the south Manchester corridor, caused by the high volume of traffic passing through these towns to reach other destinations.	Delivery of the relief road would contribute towards reducing the amount of traffic passing through District and Local Centres along the south Manchester corridor.
Unsatisfactory conditions for pedestrians and cyclists are a particular issue through busy urban areas along the extent of the south Manchester corridor, with all non-motorised transport users facing severance and problems of safely accessing education, employment and leisure facilities.	A shared use footway and cycleway is proposed as part of the proposed development, which would improve the provision for pedestrians and cyclists along the relief road.
There is an opportunity to improve the safety of road users, pedestrians and cyclists in the urban centres of Gatley, Bramhall, Heald Green, Hazel Grove, Poynton, Wilmslow, Handforth and Cheadle Hulme.	Through delivering the proposed development, there is likely to be a reduction in the volume of through-traffic from residential areas and retail centres.
To increase employment and generate economic growth through providing efficient surface access and improved connectivity to, from and between Manchester Airport, local town and district centres, and key areas of development and regeneration (e.g. Manchester Airport Enterprise Zone).	The proposed development would help to provide a new east-west road that would improve surface access to Manchester Airport and local town and district centres.

TABLE 2.7 CONSTRAINTS AFFECTING THE PROPOSED DEVELOPMENT

Constraints	How has this been taken into account in designing the proposed development?
The majority of the route of the proposed relief road is located within land designated as Green Belt by the development plans for SMBC, CEC and MCC.	The proposed development has been designed to maintain the openness of the Green Belt land surrounding the site as much as possible. A full account of how the proposed development relates to Green Belt planning policy is set out within section 5.2 of the planning statement.
The route of the proposed relief road crosses a number of existing public rights of way.	All existing public rights of way will be diverted to ensure that they can cross the relief road once it is operational. This will be through the provision of three new public rights of way/ accommodation bridges.
The proposed development would result in the loss of 0.4ha of the Norbury Brook Site of Biological Importance (SBI) including 0.06ha of ancient woodland.	Ancient woodland, as an irreplaceable resource, cannot be replicated through compensation and therefore its loss represents a significant negative residual effect on the local environment. However it should be noted that the area of loss is small (0.06ha) and the woodland at Norbury Brook SBI as a whole remains intact.
There are a range of archaeological and built heritage assets dating from the Roman era to the Industrial era located along the route of the proposed development. There are a number of archaeological assets that will be damaged, destroyed or removed due to the construction of the proposed development. The Proposed development will not damage or destroy any designated built heritage assets but will change the setting of built heritage and archaeology assets as well as the historic landscape character.	A comprehensive mitigation strategy is proposed in the ES (Chapter 9 – Cultural Heritage) and will be agreed with the Archaeology Officers at SMBC, MCC and CEC.
There is a varied landscape character along the route of the proposed development.	The proposed development would generally integrate into the receiving landscape, though there would be significant local impacts to landscape character in the long term. Further details relating to the landscape and visual effects of the proposed development are set out within Chapter 10 (Landscape and Visual Effects) of the ES.
There are a number of trees located along the route of the proposed development that would need to be removed.	Although a number of new trees will be removed as part of the proposed development they will be re-planted to mitigate this loss. Further details relating to tree removal/re-planting is provided within the Tree Survey submitted as part the planning applications.
There are a number of assets of nature conservation value located along the proposed route of the A6MARR.	Mitigation measures are proposed within chapter 11 (Ecology and Nature Conservation) in relation to nature conservation issues.
Air quality and Noise issues are likely to arise as a result of the proposed development.	Mitigation measures are proposed within chapter 8 (Air Quality) and chapter 14 (Noise and Vibration) of the ES in relation to air quality and noise issues.

03

DESIGN

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3.1	36	Introduction
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3.4	46	Section 2: Structures

3.0 / DESIGN

3.1 INTRODUCTION

This chapter describes the overarching design principles to be applied throughout the A6MARR. It will explain the form, function and appearance of the works applied throughout the proposed development to establish consistency of approach throughout the whole proposal. It will also explain the overarching landscape proposals for the proposed development.

A description of the design specific principles applied at various points along the route of the proposed development is also provided in detail within section 2 (Structures Design) of this chapter.

3.2 DEVELOPMENT OF THE PROJECT

INITIAL STAGES

The proposed development is the culmination of a large amount of analysis, review and revision over a number of years. The problems of congestion and poor connectivity to Manchester Airport were assessed as part of the SEMMMS study in 2000/01. The study considered both highway and public transport interventions, and ultimately decided upon a new highway scheme – the original SEMMMS Relief Road – that connected the M60 north of Stockport to the M56 at Manchester Airport.

In Spring 2001 the SEMMMS study was accepted by Government and the then Transport Minister requested that the three local authorities Cheshire, Manchester and Stockport start to develop the road scheme recommended in the strategy. The three local authorities agreed to work together with Stockport leading the scheme development to create a Major Scheme Business Case bid for funding for the original SEMMMS Relief Road. This bid was submitted in July 2004.

The Department of Transport requested further information on the traffic modelling which was submitted over the next few months. They also requested that the local authorities considered whether the scheme could be funded from Private Finance Initiative. The local authorities explored this option submitting further information to the Department of Transport over the next few years.

In July 2007 a response was received from Government stating that whilst the scheme was a good scheme they could not afford to fund it as a single scheme and requested that consideration be given to delivering it in phases. The local authorities submitted further information on three potential phases after discussion with DfT officers over the following few months in 2007/2008, which were:

- M60 to the A6, including the Stepping Hill Link
- A6 to Manchester Airport with Poynton Bypass
- A6 to Manchester Airport without Poynton Bypass

In Autumn 2008 the Government announced they would contribute up to £165 million from national funds towards the cost of the phase of the scheme from the A6 at Hazel Grove to Manchester Airport without the Poynton Bypass if that was matched with local contributions. The scheme cost was estimated at £330 million.

In May 2009 the Leaders of AGMA agreed to create a Greater Manchester transport fund of over £1.5 billion to fund key projects including a contribution of £125m towards the A6 MARR. Local Authority officers had indicated that following a review £290m would be sufficient to build this scheme.

The promoting local authorities remain committed to the full scheme but are, following the Government's advice, to deliver the scheme in phases. The current A6MARR proposal is the first phase of the full scheme. The various stages that have taken place for the A6MARR in terms of reaching the final design phase are explained in detail below.

Between 2009 and 2012, a range of studies were undertaken that were used to inform the design of the A6MARR. These included the following:

- Geotechnical assessments (2011)
- Drainage design and consideration of flood risk (2011)
- Traffic assessments (2010)
- Environmental surveys
- Lighting design (2012)

DESIGN STAGES

The following section explains the design process for the A6MARR from September 2012 to September 2013. It provides a summary of the various design freezes (DF) that occurred during the design process. In general, the design freezes are 3D highway designs. They are designed within the bounds of the protected scheme corridor and with the obligation to mitigate the loss of private land as far as possible.

Pre-consultation (DF 6) – September 2012

An initial design of the relief road was prepared prior to the start of the phase 1 consultation period. This stage involved the development of a series of junction layouts including options at 6 locations. A Junction Options Report was prepared in November 2012 setting out a 'core option' for costing and traffic modelling purposes, and this was titled 'Design Freeze 6' (September 2012).

Several layout arrangements were investigated at each junction location during the design process. In determining the junction options, Health and Safety during operation, environmental impacts, traffic capacity, land take requirements, land and construction costs, construction duration and disruption were considered. All design layouts were developed using the DMRB. A Road Safety Audit Stage 1 was carried out to inform the design and environmental impacts and considerations were considered and the findings utilised in aiding the development of the junction layouts.

Phase 1 consultation - October 2012 – January 2013

The first phase of consultation began on the 22nd October 2012 and closed on the 25th January 2013. It was designed

specifically to capture the public's overall opinion of the scheme and along with people's views on junction options. Following Phase 1 of the Public Consultation the Junction Options report was coupled with an addendum to surmise the findings of the public consultation in relation to the junction options that were consulted on, in order to inform the 'preferred scheme'. Phase 1 consultation also gauged the level of support for the scheme.

Development of Emerging Preferred scheme (January 2013 – June 2013)

The "Emerging Preferred" scheme was prepared through taking into consideration the phase 1 consultation responses with zero options on the layouts. The "Emerging Preferred" scheme was the consulted on during the phase 2 consultation.

Phase 2 consultation - June 2013 – July 2013

Following the results of the phase one consultation, the second phase of consultation began on the 3rd June 2013 and ran through to 19th July 2013. The purpose of the second phase of consultation was to provide feedback from the phase one consultation and to seek comments on the emerging preferred scheme, which included changes in response to Phase 1 feedback, to inform the development of the preferred scheme for the planning applications.

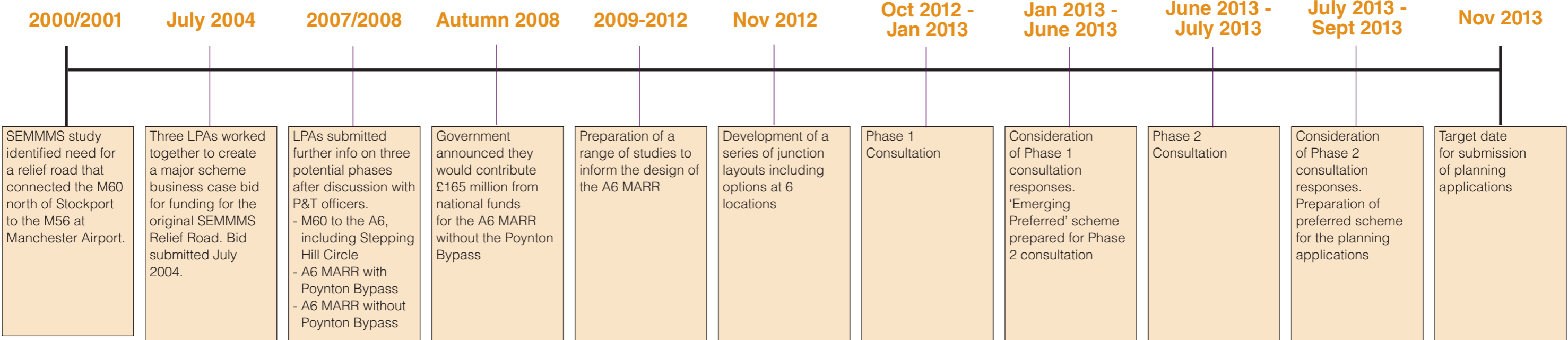
Preferred Scheme (DF7) July 2013 – September 2013

The "Preferred" scheme (DF7) was fed into by both phase 1 and 2 consultation. This included refinement of the more detailed elements of the proposal, including landscape design, bunding and PRoWs. The "Preferred" scheme is the subject of the planning applications.

Further details

Other design disciplines that branched from the highway design included environmental, landscaping, street lighting, drainage, traffic and signing design, which informed the highway design process. The design of the scheme has been an iterative process as continual refinements have been made to the highway design based on the information provided by the separate disciplines and other sources such as value engineering and consultation with the public.

FIGURE 3.1 TIMELINE



3.0 / DESIGN

3.3 SECTION 1: GENERAL PRINCIPLES AND CONCEPTS

An indicative computer generated flythrough is submitted as part of the planning applications, which provides an indication of the design of the A6MARR. The flythrough can be accessed through the following link: www.semmms.info/a6

DESIGN STANDARDS

Technical design standards to be applied in the UK are set out in the DMRB. As the appropriate highway authority, the Councils have largely adopted those standards as the requirements for the Relief Road. Under the DMRB, the decision to build a dual, two lane carriageway to urban standards requires the new road to be built to certain widths and to an alignment that achieves certain minimum standards.

The proposed development comprises two sections of new dual two lane carriageways. The first section is approximately 5.1km in length, starting from a new realigned section of the A6 at Hazel Grove, and extending west to the existing A555 at Woodford Road, Bramhall. The second new section is approximately 3.2 km in length and is an extension of the existing A555 that currently terminates at Wilmslow Road. The scheme continues in a westerly direction crossing Styal Road and heading towards Manchester Airport along the line of Ringway Road West. The proposed relief road also incorporates 1km of road realignment at the A6, 0.25km of Chester Road and 900m of the A34. The scheme utilises the entire length of the existing A555 Manchester Airport Eastern Link Road (MAELR) which is approximately 4.0km in length.

The Relief Road intercepts many of the arterial commuter routes through the Stockport conurbation for traffic accessing the City of Manchester and surrounding commercial centres. The scheme will be constructed on the fringe of Cheadle Hulme, Hazel Grove and Bramhall and also Wythenshawe, Gatley and Heald Green Local Centres providing an alternative route for commuters.

The proposed development will improve access from the south and east of Stockport to Manchester International Airport and the surrounding commercial areas, including the newly formed Enterprise Zone adjacent to the airport. Access to a number of regeneration areas will also improved by the scheme, including Stockport Town Centre M60 Gateway and Wythenshawe.

The Relief Road will provide a quality route for freight vehicles to access the trunk road network (i.e. M56), Manchester International Airport and the newly formed Enterprise Zone from the south and east of the region. This in turn will reduce the impact of heavy goods, and other commercial vehicles, on the surrounding residential streets and neighbourhoods.

The Scheme consists of eleven locations of potential new or improved highway junctions. These are a mixture of:

- At-grade and grade separated;
- Signalised controlled and priority junctions; and
- Roundabout, T junction and cross road arrangements.

The route of the proposed road crosses four railway lines, one of which is the West Coast Mainline. Provisions for pedestrians and cyclists have been included along the entire length of the scheme. A range of complimentary and mitigation measures have been identified to improve the local road network to offset the potential impact of the new relief road.

Mainline Standards

Each carriageway would measure 7.3m across. East and westbound traffic would be separated by a hardstanding central reservation measuring between 1.8m and 3.9m across with a concrete central barrier. Between Styal Road and the tie in to Ringway Road West, the central reservation would be kerbed and vary in width between 3.0m and 5.4m and would not feature a central barrier.

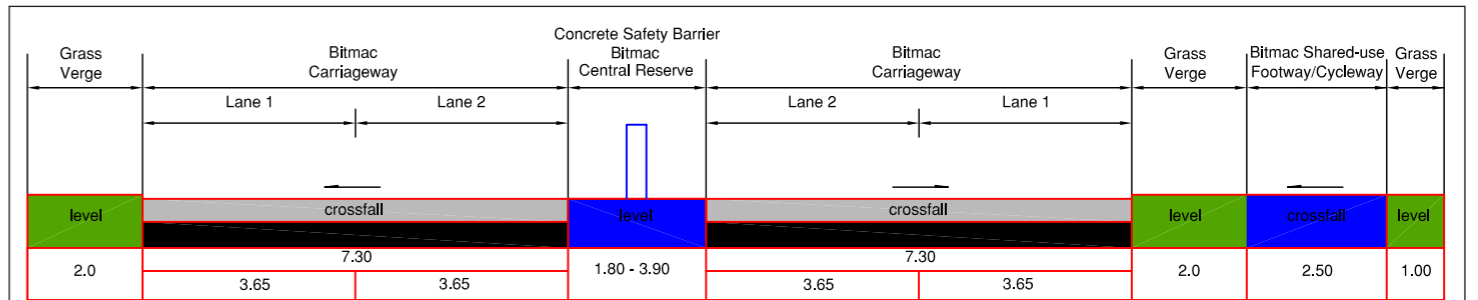
Between the A6 and Styal Road there would be a 2.0m wide soft verge on either side of the carriageway. The shared use cycleway and footway would be 2.5m wide and would be separated from the carriageway by the soft verge. There would be another soft verge measuring 1.00m on the outside of the shared cycleway and footway.

Between Styal Road and the tie in to Ringway Road West, the shared cyclepath and footpath would be 3.00m wide and would be adjacent to the highway. A 1.0m soft verge would be created on the outside of the shared cycleway and footway. A 3.0m soft verge would be present on the opposite side of the road.

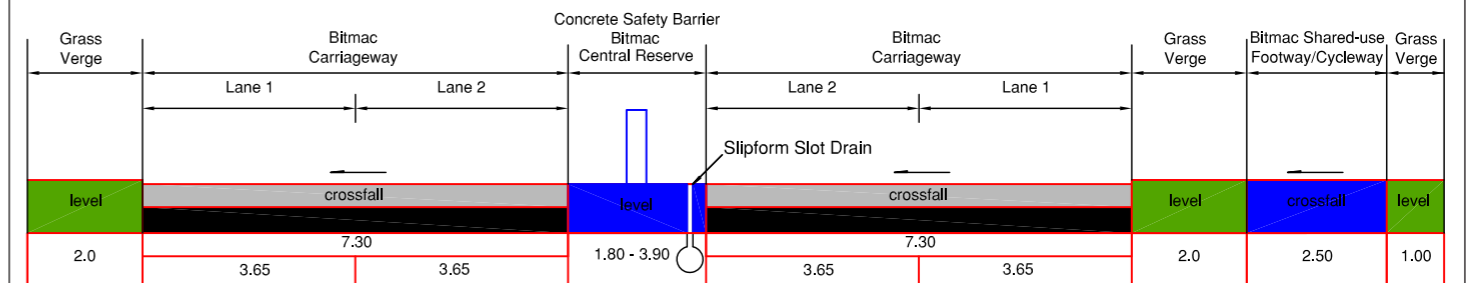
The scheme comprises two sections of new two lane dual carriageway. The first section, starting from a new realigned section of the A6 at Hazel Grove, and extending west to the existing A555 at Woodford Road, Bramhall has a proposed design speed of 85kph (50mph speed limit).

The second new section of road is an extension of the existing A555, which currently terminates at Wilmslow Road, and continues west toward Manchester International Airport. The proposed design speed for the section of new carriageway from Wilmslow Road to Styal Road junction is 85kph (50mph speed limit) and from Styal Road the proposed carriageway is designed to 70kph design speed (40mph speed limit) to its merge with the existing junction at Ringway Road/Ringway Road West.

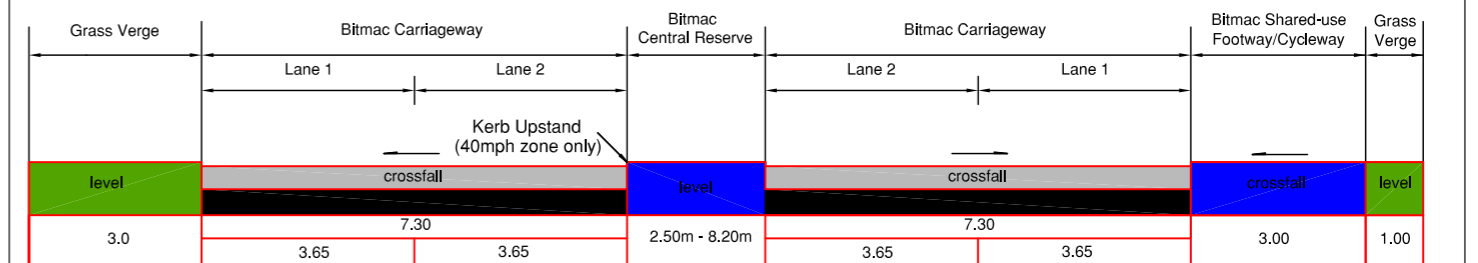
FIGURE 3.2 CROSS SECTIONS FOR A6MARR



Typical Cross Section for A6 - Styal Road (Speed Limit 50mph)
Total Width 24.6m (Assuming 2.5m Central Reserve)



Typical Superelevated Cross Section for A6 - Styal Road (Speed Limit 50mph)
Total Width 24.6m (Assuming 2.5m Central Reserve)



Typical Cross Section for Styal Road - Airport (Speed Limit 40mph)
Total Width 24.1m (Assuming 2.5m Central Reserve)

Both sections of the Relief Road have been designed as an Urban All-Purpose Road (DMRB, TD27). There are various speed limit changes proposed to existing side roads at the location of junctions and these are shown in plan number 1007/3D/DF7/A6-MA/SL/242-246 submitted as part of the planning applications.

Junction Standards

The overall scheme philosophy is to provide at-grade signal controlled junctions, with safe crossing facilities for Non-Motorised Users (NMUs). However, predicted traffic flows on the proposed mainline indicate that grade separation at particular junction locations will be required. The junction layouts considered during the design process have been designed to the DMRB and associated Advice Notes, in particular:

- TD9 Highway Link Design;
- TD22 Layout of Grade Separated Junctions;
- TD27 Cross-Sections and Headrooms;
- TD50 Geometric Layout of Signal Controlled Junctions and Roundabouts;
- TD42 Geometric Design of Major/Minor Junctions; and
- TA90 Geometric Design of Pedestrian, Cycle and Equestrian Routes.

SIDE ROAD STANDARDS

The design standards adopted for the side roads are based upon the DMRB and consultations with the relevant Local Highway Authority (LHA). The design speeds adopted at each junction are based on the existing speed limits and/or in consultation with the relevant LHA. Where appropriate, new design speeds have been proposed. Carriageway cross-sections, footpaths and verges for the side roads are based upon the existing site layout and/or in consultation with the relevant LHA.

RELAXATIONS AND DEPARTURES FROM STANDARD

The mainline of the Relief Road has been designed to conform to DMRB. However, in some instances deviations from these standards, which are known as 'Relaxations' or 'Departures from Standard' have been adopted. The junctions have been designed to conform with the DMRB where possible, with particular attention paid to forward visibility sight lines (Sight Stopping Distance) on approach to junctions.

Non Motorised Users

The design of facilities for non-motorised users has been carried out in accordance with TD36 Subways for Pedestrians and Pedal Cyclists - Layout and Dimensions. The

recommendations from the Advice Notes in the DMRB have been taken into account, specifically:

- TA68 The Assessment and Design of Pedestrian Crossing; and
- TA90 The Geometric Design of Pedestrian, Cycle and Equestrian Routes

Enhanced provision, such as Toucan/Pegasus crossings have been incorporated into the design following consultation with Public Rights of Ways (PRoW) and cycling officers of all three local authorities. The Vulnerable Road User Groups forum have also been consulted on the suitability of routes and provision.

All junctions have been provided with full signal controlled crossing facilities for NMUs where required, whether that be for pedestrian, cyclists or equestrians with the use of Puffin, Toucan or Pegasus crossing facilities, respectively.

FIGURE 3.3 DIFFERENT TYPES OF CROSSINGS



PUFFIN CROSSING



TOUCAN CROSSING



PEGASUS CROSSING

3.0 / DESIGN

CRIME PREVENTION

The combination of safe controlled crossing points (including bridges), safety barriers, and pedestrian deterrent paving and planting will combine to provide a more controlled constrained series of points, both visually and physical, where potential for pedestrian vehicle conflicts and opportunities for incidents may be anticipated.

This is supported by a fully integrated hard and soft landscape design strategy which clearly demarcates and separates pedestrians, cyclists and road users, developed in accordance with current 'best practice' guidance on urban landscape design, and fully compliant with current highway design standards.

The integrated approach to highway and environmental mitigation design also addresses issues such as:

- Minimisation of concealed areas and open visibility at laybys; and
- Over bridges have been designed for pedestrian, cyclist and equestrian use, in accordance with relevant standards and best practice.

The landscaping scheme has been chosen so that clear sight lines exist to all areas and there are no concealed areas and laybys will be clearly visible from a distance. In comparison with existing routes through Stockport, Hazel Grove, Wythenshawe and Poynton, the level of delay at signals and junctions is expected to be reduced, thus minimising opportunities for smash and grab incidents at junctions.

Greater Manchester Police have been consulted in formulating the design of the proposed development. The main issue raised related to the access provided to properties located in close proximity to the relief road. Where necessary, these issues will be addressed as part of implementing the scheme through appropriate planting.

ENVIRONMENTAL MITIGATION MEASURES

The proposed development has been subject to a formal process of Environmental Impact Assessment (EIA) in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (The Regulations). This Environmental Statement (ES) reports the findings of the detailed EIA.

The ES proposes a series of environmental mitigation measures. These include:

- Ecology and Nature Conservation - The EIA has established potential impacts upon bats, badgers and Great Crested Newts and mitigation measures have been proposed to

provide compensatory habitats.

- Landscape and Visual Effects – The planting strategy for the scheme includes a mix of planting and habitat creation proposals with combined objectives of landscape and ecological mitigation. In the context of landscape objectives, the proposals provide for integration of the proposed development into the local landscape and screening of the road and its associated traffic where sensitive receptors would be potentially subject to significant visual impacts.
- Noise and Vibration – Operational noise mitigation measures include the incorporation of bunds / landscaping and noise barriers.
- Effects on all Travellers - Construction of a new Cycleway and footpath linking the existing network of footpaths severed by the Proposed Scheme.

The environmental mitigation measures have been incorporated into the design of the proposed development.

APPEARANCE

The proposed development aims to achieve a consistent visual quality that enhances the general urban environment and provides a clear identity. This section describes the approach to appearance for the many elements that will contribute towards the appearance of the proposed development. Individual elements will be guided by applicable design standards. Elements that this section will address include:

- Materials
- Drainage
- Vehicle restraint systems
- Parapets
- Signs
- Gantries Structures
- Lighting
- Acoustic Barriers
- White Lining and Highway Marking
- Shared use footway and cycleway along proposed route

MATERIALS

The overall finishes to be applied along the relief road are shown in figure 3.2. A bitmac finish will be applied along the length of the relief road and on the shared use footway and cycleway proposed along the route. Further details of the materials to be applied to the design of individual structures located along the proposed route are provided in section 2 below.

DRAINAGE

The proposed discharge arrangements along the route are

discussed in full in the Drainage Strategy Report submitted as part of the planning applications. The Drainage Strategy Report has been prepared in discussion with both the Environment Agency and United Utilities to confirm approval in principle of the discharge points for the scheme. Preliminary networks have been modelled to demonstrate compliance with these agreements and to assist in identification of storage areas and additional land required for the scheme. Discharges of surface water from the proposed highway to the following watercourses are proposed:

- Threaplehurst Brook;
- Norbury Brook;
- Spath Brook (via the existing A555 drainage system);
- Gatley Brook (via existing intermediate piped drainage); and
- Tributaries of Baguley Brook.

As indicated above, the discharge from the proposed drainage networks either side of the existing section of the A555 will be to Spath Brook via the existing A555 drainage system.

Attenuation ponds have been designed into the scheme to serve as a storage area during periods of precipitation. They retain water and aid discharge in accordance with the SUDS philosophy reducing the risk of downstream flooding. The use of SUDS have been developed through liaising with flood managers and highway maintenance officers from the three local authorities. Figure 3.4 demonstrates the appearance of the proposed attenuation ponds. Furthermore a Flood Risk Assessment is submitted as part of the planning applications, which identifies flood risk issues along the route.

FIGURE 3.4 ATTENUATION POND



VEHICLE RESTRAINTS SYSTEMS

The objective of providing safety fences and safety barriers adjacent to or in the central reserve of a highway is to reduce the consequences of vehicles leaving the highway and entering an area where it would be unsafe for them to travel. It is emphasised that in practice the range of vehicle characteristics and of conditions of impact with a safety fence are such that some variability in response, particularly by the impacting vehicle, is inevitable.

Safety barriers are intended to provide containment without significant deflection or deformation under impact, and to redirect errant vehicles along the line of the barrier in the direction of traffic.

4 main types of safety barrier have been considered for the proposed development, each of which come in a variety of arrangements. These are Tensioned Corrugated Beam (TCB), Open Box Beam (OBB), Wire-Rope Safety Barrier (WRSB) and Concrete Safety Barrier (CSB).

Tensioned Corrugated Beam barriers consists of 310mm wide corrugated steel strip mounted 610mm high above the carriageway on "Z" type posts. The barrier is tensioned following installation.

Open Box Beam barriers consist of 200mm by 150mm "Box" beam mounted 610mm high (to the centre of the beam) above the carriageway way on "Z" type posts. This barrier is un-tensioned and generally provides a smaller deflection for vehicles.

Concrete Safety Barriers consist a continuous slipform reinforced concrete safety barrier that is 900mm high by 542mm wide that is slipformed directly on the bituminous surfacing. This barrier provides a small working width and is a very low maintenance solution. Use of a concrete barrier is proposed between the A6 and Styal Road.

FIGURE 3.5 TYPES OF SAFETY BARRIER



TENSIONED CORRUGATED BEAM



OPEN BOX BEAM

3.0 / DESIGN

SIGNS

All traffic signs will be designed in accordance with the standards set out within the Traffic Signs Regulations and General Directions (TSRGD) 2002, The Department for Transport's Design Manual for Roads and Bridges (DMRB) and several British Standards particularly BS EN 12899-1: 2007 Fixed, Vertical Road Traffic Signs – Fixed Signs.

The finish is dictated by several factors including the speed of the road, the information displayed by the sign and the physical constraints on site.

Typically road signs are varied in material but each material has certain properties which have to conform to the regulations set out in BS EN 12899-1: 2007.

Appropriate signage will also be provided on the shared use footways and cycleways.

Further details in relation to signage design along the proposed route is provided within the signage plans submitted as part of the planning applications (Plan Numbers 1007/3D/DF7/A6-MA/PMS/228-239).

FIGURE 3.6 EXAMPLE OF PROPOSED TRAFFIC SIGN DESIGN



LIGHTING

All highway lighting designs within the United Kingdom are governed by a set of recommendations:

- Design Manual for Roads and Bridges (DMRB) - specifically sections TA49/07 (Appraisal of New & Replacement Lighting on the Strategic Motorway & All Purpose Trunk Road Network) and TD34/07 (Design of Road Lighting for the Strategic Motorway & All Purpose Trunk Road Network).
- BS5489-1:2003+A2:2008 – Code of practice for the design of road lighting. An appropriate lighting category can be chosen by using Table B.2 from BS5489-1:2003.

Suitable lighting levels for the proposed carriageway have therefore been detailed in accordance with the requirements of the relevant highway authority in each of the three authority areas, in conjunction with the DMRB and the current British lighting Standards. The proposed lighting design has been modelled to confirm compliance with the current lighting requirements. In designing the lighting scheme, the requirements of Network Rail, Electricity North West (ENWL), Manchester Airport Group (MAG) and TfGM have also been taken into account.

Within the DMRB, TD34/07 gives guidance on the extents of junctions to be lit. This is determined as 1.5 times the Desirable Minimum Stopping Sight Distance, as set out in TD9/94. Therefore, based upon a design speed of approximately 85 kph, the proposed lighting will extend from the centre of each junction or roundabout approximately 240m in either direction; and if necessary tie in with the existing lighting at the extent of each scheme.

At the proposed realigned Ringway Road and Shadowmoss Road the proposed lighting will cover the extents of the carriageway realignment all the way to the Styal Road Junction and tie in with the existing lighting at each end of the scheme. Lighting on slip roads will extend to the end of the taper, where the slip road meets the main carriageway.

The proposed route of the works incorporates an existing section of the A555. This section is currently lit from Wilmslow Road, Heald Green to Woodford Road, Bramhall. There are also other areas of existing lighting along the proposed route. Where there is existing lighting, the proposed lighting scheme has been designed to be compatible with this existing lighting, or else it has been recommended that existing lighting is removed or replaced as appropriate.

Table 3.1 shows the proposed lighting scheme with the following plans submitted as part of the planning applications.

Whilst the site is not an Area of Outstanding Natural Beauty

(AONB) or of Special Scientific Interest much of the route passes through Greenfield areas. As far as is practical the proposed lighting has been designed to limit the impact on the local environment. The use of 10m high columns will ensure that the lighting has a minimal impact visually on the landscape and the lighting equipment specified complements the existing lighting, providing visual continuity.

The lanterns specified employ flat glass protectors which minimise glare and which will ensure there is no light above the horizontal. This limits the obtrusive light in accordance with the Institute of Lighting Professionals 'Guidance notes for the Reduction of Obtrusive Light'. However, the lanterns will exhibit different levels of glare control. Those specified for Stockport MBC have a glare rating of G3 whilst Chester East have a glare rating of G4. The lanterns on Manchester CC have a rating of G2. The DMRB within TD34/07 specifies a glare rating for the strategic road network of G6 although usually for rural locations a glare classification between G6 and G4 is viewed as acceptable.

The standard mounting height of all the columns generally will be 10m as per the requirements of the maintaining authorities. The proposed columns located within the Manchester Airport Take Off Climb Surface (TOCS) have all been reduced to a height of 5m to negate obstacles within the TOCS.

Further details relating to the location of the lighting along the route of the proposed development are provided in Plan Numbers 60248122_1300_001 Rev D – 010 Rev D. Details relating to the design of the proposed lighting along various parts of the route are provided below in Table 3.1.

FIGURE 3.7 LIGHTING STRUCTURES EXAMPLES



TABLE 3.1 LIGHTING

Location	Lighting Details
Tie in to Ringway Road	8 new 10m high lighting columns with single light fitting brackets are proposed at the western most extent of the tie in. 40 new lighting columns 5m high are proposed immediately east of the tie in, and 5 new columns 5m high are proposed at the new Shadowmoss Road / Ringway Road configuration. 42 existing lighting columns along Ringway Road and Shadowmoss Road would be removed.
Styal Road junction	79 new 10m high lighting columns with single light fitting brackets are proposed along all approaches to the junction and 2 lighting columns 10m high with twin light fitting brackets are proposed. 21 existing lighting columns along Styal Road would be removed.
Wilmslow Road / A555 junction	57 new 10m high lighting columns with single light fitting brackets on the new west bound slips, existing dumb bell junction and the eastbound east facing slip are proposed. 14 existing lighting columns on the eastbound east facing slip and the dumb-bell junction would be removed.
The existing A34 / A555 junction	69 new 10m high lighting columns with single light fitting brackets are proposed at the junction and the junction approaches and 3 new 10m high lighting columns with twin light fitting brackets. 35 existing lighting columns would be removed.
The existing A34 / Stanley Road junction	62 new 10m high lighting columns with single light fitting brackets are proposed and 1 new 10m high lighting column with a twin light fitting bracket. 30 existing lighting columns would be removed.
Woodford Road / A555 junction	54 new 10m high lighting columns single light fitting brackets are proposed. 13 existing lighting columns around the existing junction would be removed.
Woodford oil terminal / Chester Road junction	18 new 8m high columns with single light fitting brackets are proposed on the proposed oil terminal access road, 128 new 10m high lighting columns single light fitting brackets are proposed and 7 new 10m high lighting columns with twin light fitting brackets on the gyratory and proposed Chester Road link. 5 existing lighting columns on the Chester Road would be removed.
A523 Macclesfield Road junction	68 new 10m high lighting columns are proposed with single light fitting brackets. 1 new 10m high lighting columns with twin light fitting brackets are proposed in the centre of the junction. 7 existing lighting columns along the A523 Macclesfield Road would be removed.
A6 junction including the new A6 diversion	1 new 6m high lighting column with single light fitting bracket on the proposed golf course access road. 88 new 10m high lighting columns with single light fitting brackets would be proposed around the new A6 junction and the realigned A6 link and 1 new 10m high lighting column with a twin light fitting bracket. 11 existing lighting columns along the existing A6 alignment would be removed.

3.0 / DESIGN

ACOUSTIC BARRIERS

The purpose of the acoustic barriers located along the route of the proposed development are to protect inhabitants of sensitive land use areas from noise pollution. Acoustic barriers are the most effective method for mitigating road noise. The proposed location of the acoustic barriers along the route of the relief road are shown on the block plans submitted as part of the planning applications. The acoustic barriers are proposed to be generally 1.8m in height. There is an instance where 3m height fencing is proposed on the north side of the relief road near to Old Mill Lane. The barriers will be constructed of a single sided reflective timber sound screen.

SHARED USE FOOTPATH AND CYCLEWAY ALONG PROPOSED ROUTE

Provision for pedestrians and cyclists has been included along the entire length of the proposed development through a segregated multi-user cycle/pedestrian route adjacent to the new road and existing length of the A555. Example images of multi-user paths are shown in Figure 3.9

FIGURE 3.8 EXAMPLES OF ACOUSTIC BARRIERS



FIGURE 3.9 EXAMPLES OF MULTI-USER PATHS



WHITE LINING AND HIGHWAY MARKING

Road markings will be to current highway standards. (The Traffic Signs Manual, DMRB and the Traffic Signs Regulation and General Directions) White, amber, red and green reflective studs will be used as appropriate.

LANDSCAPE

Substantial new landscaping to screen and complement new highway works and reinforce existing planting is required as part of the proposed development. A series of short and long term goals and management practices for the soft landscaping scheme associated with the development for the first three years of the operation of the highway have been formulated. The proposals comprise of woodland and shrub planting, hedges, advanced nursery stock tree planting combined with various types of grassland.

A key objective is to incorporate the mitigation measures proposed in the ES for the changes to both the landscape/visual aspects of the site and habitats/biodiversity. The proposed development reflects the Landscape Character Areas at the regional, county and local levels.

The landscape management scheme and management plan has been designed to meet the following broad objectives:

- Enhancement and integration into the existing landscape – to maintain and develop the scheme so it becomes integrated with the surrounding landscape;
- Nature conservation and biodiversity – To create, integrate and maintain habitat types where possible, and to encourage greater biodiversity which is sustainable within the limits of the site;
- Recreation and education – to enhance local use of the site for passive recreation, such as walking along the local public footpath network and for the appreciation of the natural environment;
- Visual amenity – to provide an attractive, pleasant scheme that is visual pleasing and safe for road and rights of way users. To provide screening of various elements of the road scheme to reduce the impact on private properties and viewpoints, achieved through rapid and successful establishment.
- Auditory amenity – to reduce the adverse noise effects on properties and public spaces, achieved through rapid and successful establishment.
- Water quality – to maintain and develop the scheme to mitigate the impacts on areas sensitive to flooding, hydrological changes, water course and groundwater.

The landscape design plans (Plan Numbers 1007/3D/DF7/A6-MA/LD/215-249) and accompanying landscape design

reports) submitted as part of this planning applications identify where the different types of landscape planting are proposed along the route of the A6MARR. The specific types of plants/shrubs/trees that will make up each of the landscape planting mixes is highlighted within the 'Soft Landscaping specification' for the proposed development. The types of planting proposed along with details relating to maintenance are set out in Table 3.2.

TABLE 3.2 LANDSCAPE DETAILS

Landscape Planting Mix	Details of Maintenance
Woodland and Shrub	
Woodland (Mix: W1)	All shrub and tree planting will be managed in a manner that ultimately achieves a multi-layered, healthy structure.
Woodland Edge (Mix: W2)	
Wet Woodland (Mix: W3)	
Linear Belts or Shrubs and Trees (Mix: MS1)	
Shrubs with Intermittent Trees (Mix: S2)	
Shrubs (Mix: S3)	
Individual Trees	
Individual Trees (Mix: T)	Feathered, standards and semi-mature size trees will be located throughout the scheme. Trees will be managed to avoid conflict with pedestrians and road users to retain a form typical of the representative species.
Native Species Hedgerows with Trees (Mix: H)	
Hedgerows	
Native Species Hedgerows with Trees (Mix: H)	Hedgerows will be managed to provide a stock-proof 'A' shaped profile.
Grassland - Amenity Grassland and Open Grassland	
Amenity Grassland (Mix:G1)	The grassland shall be maintained to promote a healthy vigorous sward free of disease, fungal growth, discolouration, scorch or wilt to ensure rapid ground cover to prevent gully erosion and loss of soil onto road or footpath surfaces
Open Grassland (Mix: G3)	
Species Rich Grassland	
Species Rich (Conservation) Grassland (Mix: G2)	Grassland will be managed to ensure a species rich sward with a mixture of grasses and wildflowers.
Wet Grassland Mix (Mix: G5)	

3.0 / DESIGN

3.4 SECTION 2: STRUCTURES

This section of the DAS sets out details in relation to the design of the bridge structures, retaining structures and gantry structures along the proposed route. Figure 3.10 shows the location of each of the structures outlined in this section. Details relating to the context, function and appearance of each of the structures is provided below. Full reports providing the technical detail relating to each structure along the route is provided within volume 2 of this DAS.

Figures 3.11 and 3.12 provide details on the key terms that are used within this section of the DAS.

FIGURE 3.10 PLAN SHOWING THE LOCATION OF EACH OF THE STRUCTURES

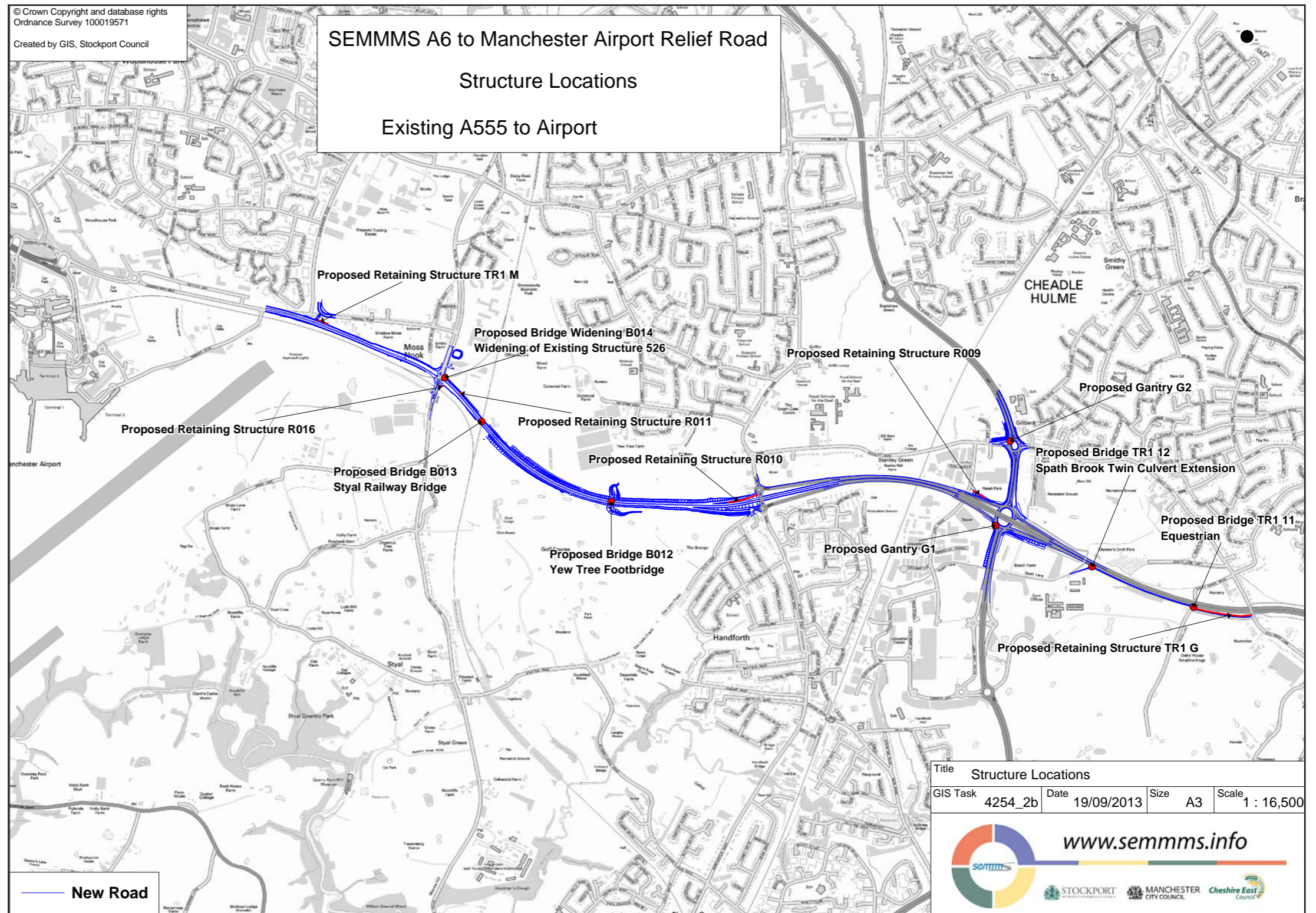


FIGURE 3.10 CONTINUED

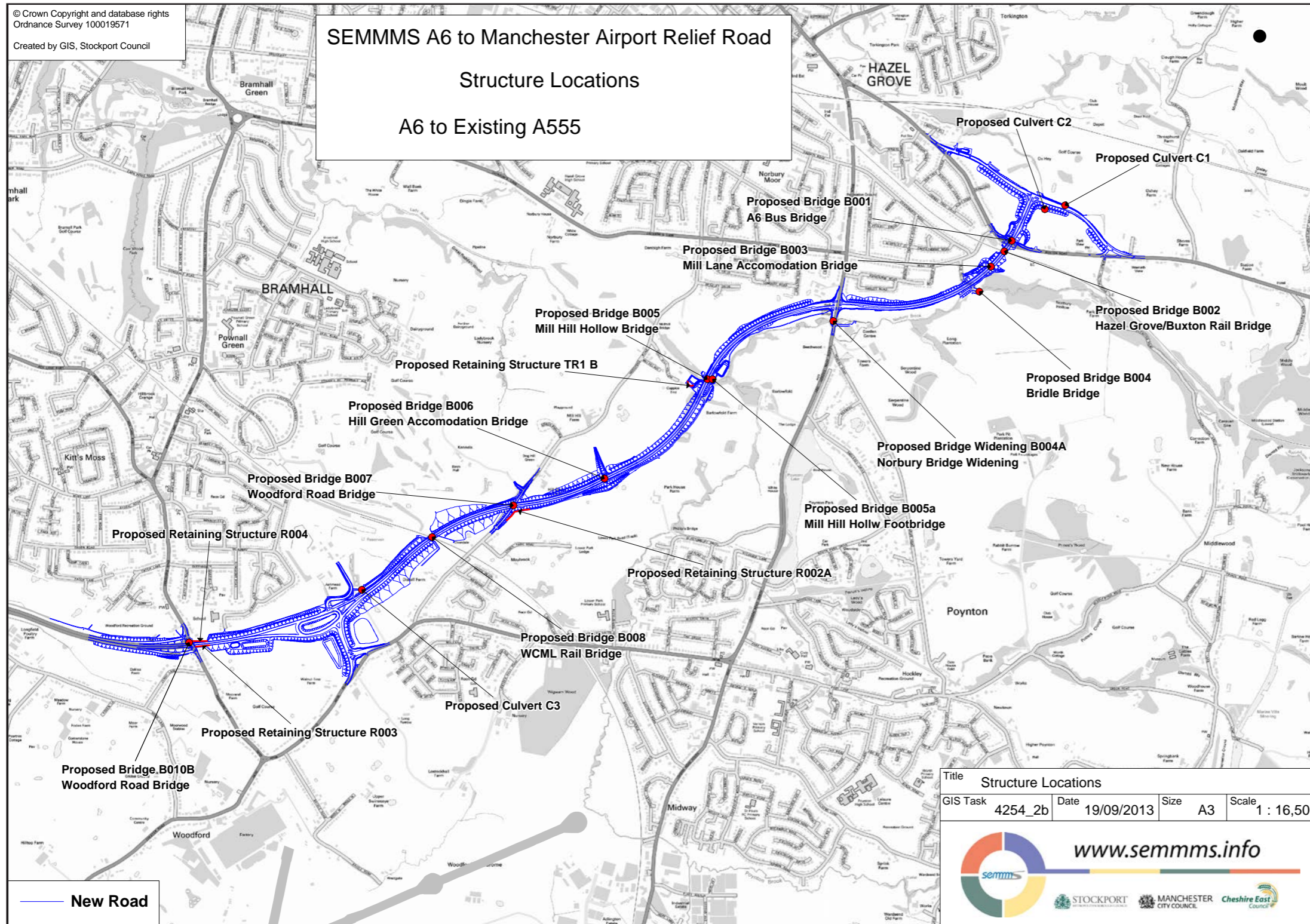


FIGURE 3.11 KEY TERMS 1

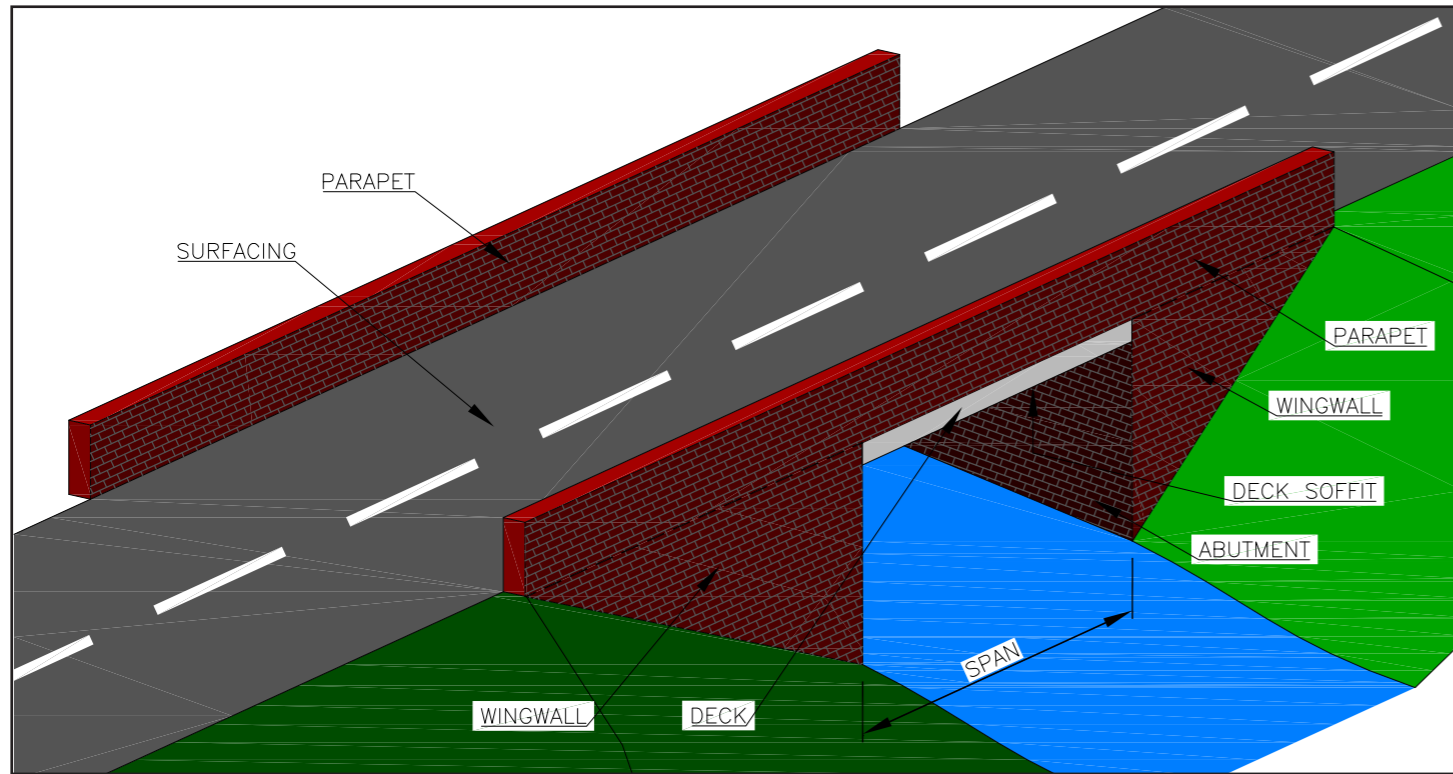
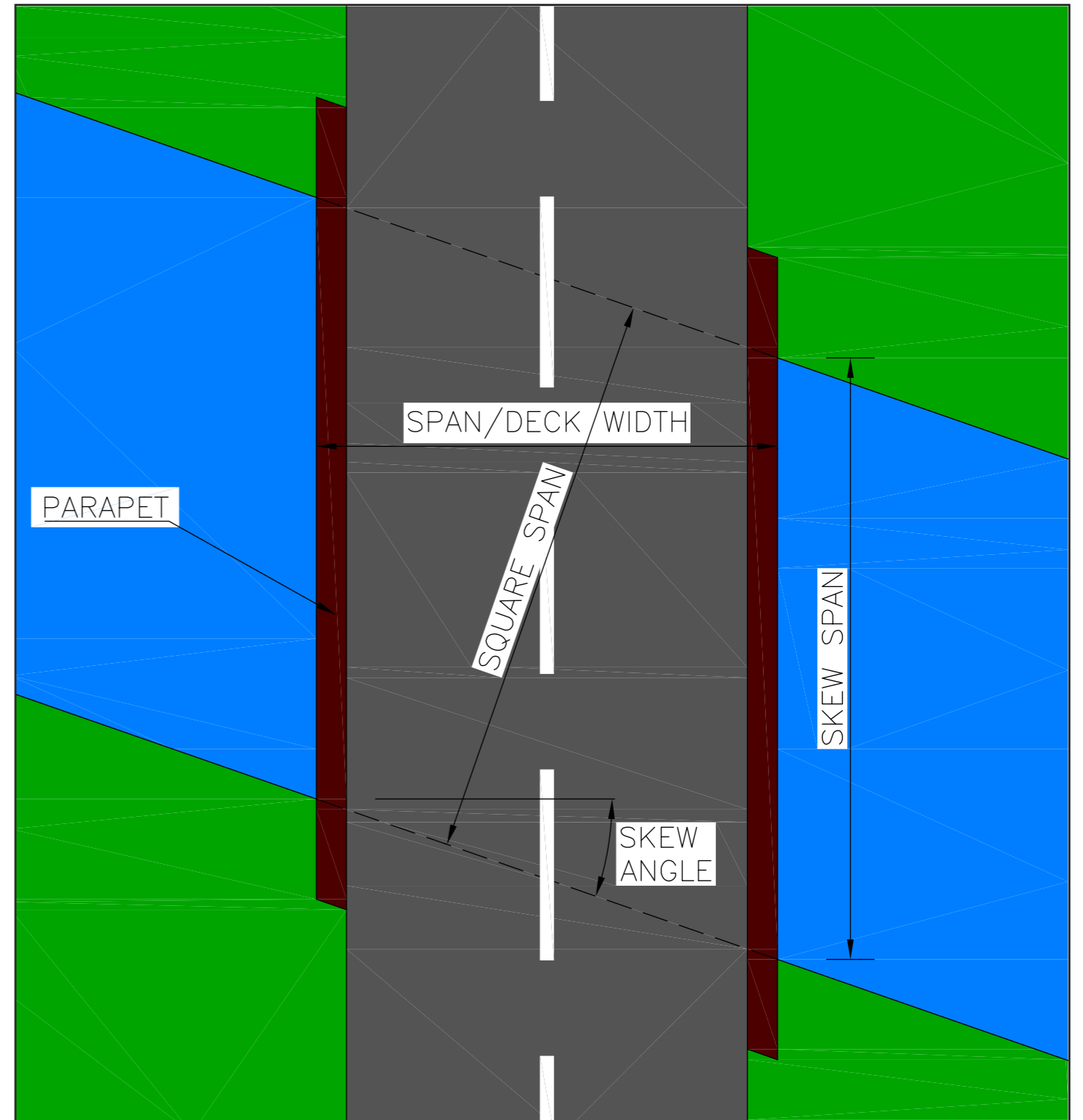


FIGURE 3.12 KEY TERMS 2



PROPOSED BRIDGES

Proposed Bridge B001 (A6 Bus Bridge)

Context
 The A6 Bus Bridge is proposed to cross the scheme with access restricted to buses, cyclists and pedestrians. The A6 Bus Bridge is located approximately 250m south of the A6/Relief Road at-grade interchange and 50m north of the Hazel Grove to Buxton Line Railway Bridge.

There are a number of residential and commercial properties in the vicinity of the site including the former Simpson Sausage Factory to the South West. Generally the surrounding area is open farm land to the north and to the south.

Function
 The proposed A6 Bus Bridge is required in order to ensure that the proposed relief road can cross under the A6.

Appearance
 Headroom clearance - The provided headroom for the bridge varies along its length. The minimum headroom clearance is 5.3m.

Span - 26.1m measured between abutment faces

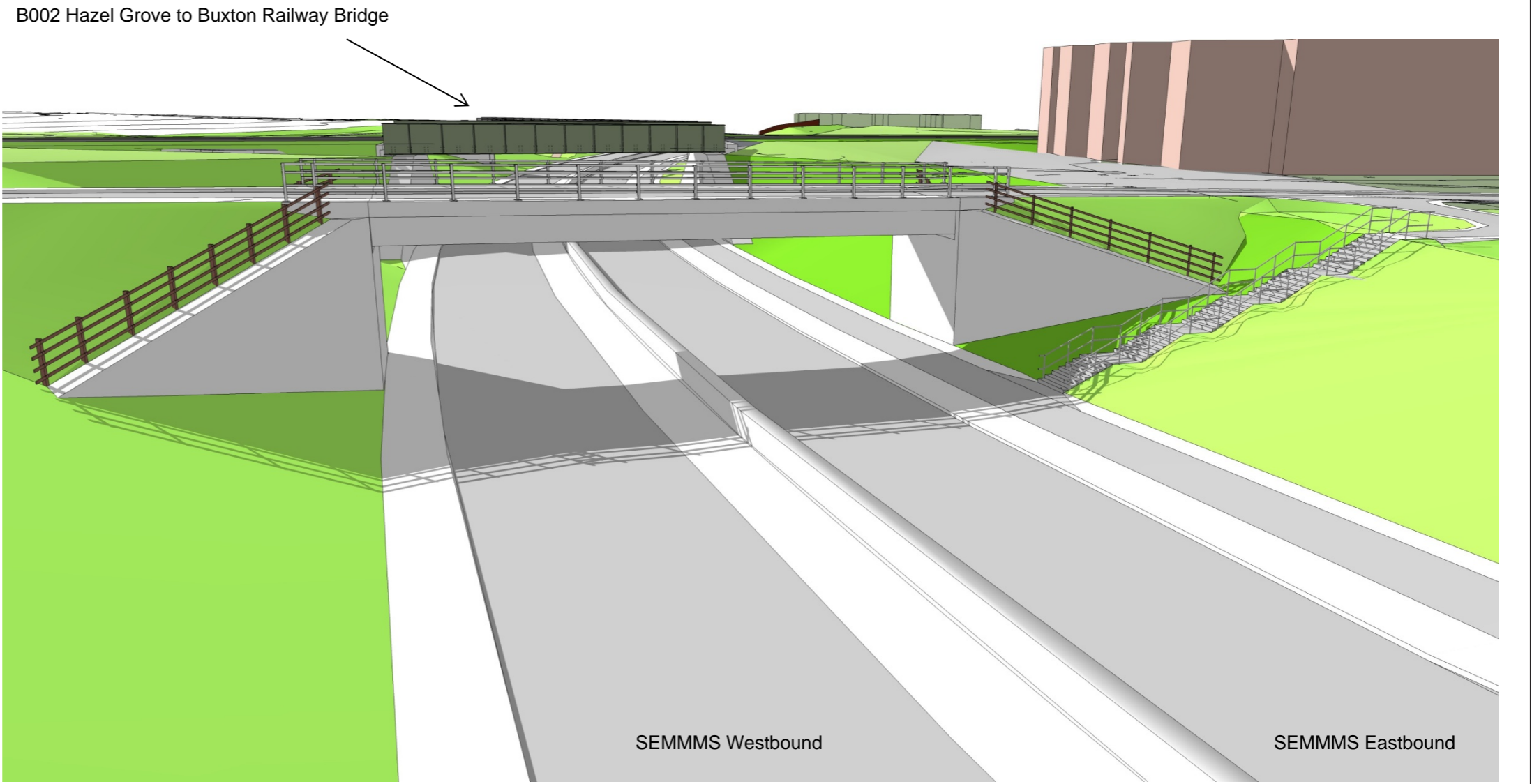
Parapet details - Type N2 steel parapet with mesh infill will be utilised for the parapets in accordance with TD 19/06.

Parapet height is to be 1.4m at the north verge, which contains a cycle route, and 1.0m at the south verge.

Materials – The bridge will be comprised of 1.2m deep concrete flush faced YE Edge beams and a string course of 0.6m. The abutments of the bridge are proposed to be of brick facing.

Relevant Plans
 Plan Number 1007-3D-DF7-A6-MA-B001-701

FIGURE 3.13 PROPOSED BRIDGE (A6 BUS BRIDGE) B001



B001 – A6 Bus Bridge
 Elevation Looking West



3.0 / DESIGN

Proposed Bridge B002 (Hazel Grove/Buxton Rail Bridge)

Context

The Hazel Grove to Buxton Rail Line crossing will be approximately 340m south of the A6/Relief Road at-grade interchange. The current A6 is less than 50m north of the rail crossing but the trunk road is to be relocated northwards and the existing route will be retained only as a grade separated combined bus/footpath and cycleway. The Hazel Grove to Buxton Line runs roughly west to east and is a twin track nonelectrified line providing a commuter route between Buxton and Manchester.

There are four residential properties in the close vicinity as well as farm buildings and the former Simpson Sausage Factory to the immediate northwest. Otherwise the surrounding area is open farm land to the north and to the south as far as Norbury Brook Valley.

Function

The proposed Hazel Grove/Buxton rail bridge is required to enable the A6MARR to pass under the railway line. The Buxton Line is a railway line in Northern England, connecting Manchester Piccadilly, Hazel Grove in Cheshire, and Buxton in Derbyshire. Passenger services on the line are currently operated by Northern Rail. There is one service per hour.

Appearance

Headroom clearance - The minimum headroom normally required by National Rail to underline bridges is 5.7m. The vertical alignment of the proposed bridge allows the provision of such headroom.

Span – 27.45m measured between abutment faces

Materials – The bridge will be constructed using precast reinforced concrete full height cantilever abutments.

Relevant Plan

Plan Number 1007-3D-DF5-A6-MA-B002-702

FIGURE 3.14 PROPOSED BRIDGE (HAZEL GROVE/BUXTON RAIL BRIDGE) B002



Hazel Grove to Buxton Line Underbridge
Elevation Looking East

FIGURE 3

Proposed Bridge B003 (Mill Lane Accommodation Bridge)

Context
 The bridge is to be located approximately 100m and 140m south-west of Buxton railway and Buxton Road respectively. There are a large number of residential houses on Mill Lane to the north of the site and several on Old Mill Lane to the west of the proposed bridge crossing. The immediate surrounding area of the proposed bridge is open farm land.

Function
 The Mill Lane Accommodation Bridge is proposed to give farmers, pedestrians, cyclists and equestrian access across the A6MARR at the Mill Lane.

Appearance
 Headroom clearance - The provided headroom for the bridge varies along its length. The minimum headroom clearance is 5.3m.

Span - The bridge will have a zero skew single span of 27.2m, measured between the centres of each abutment.

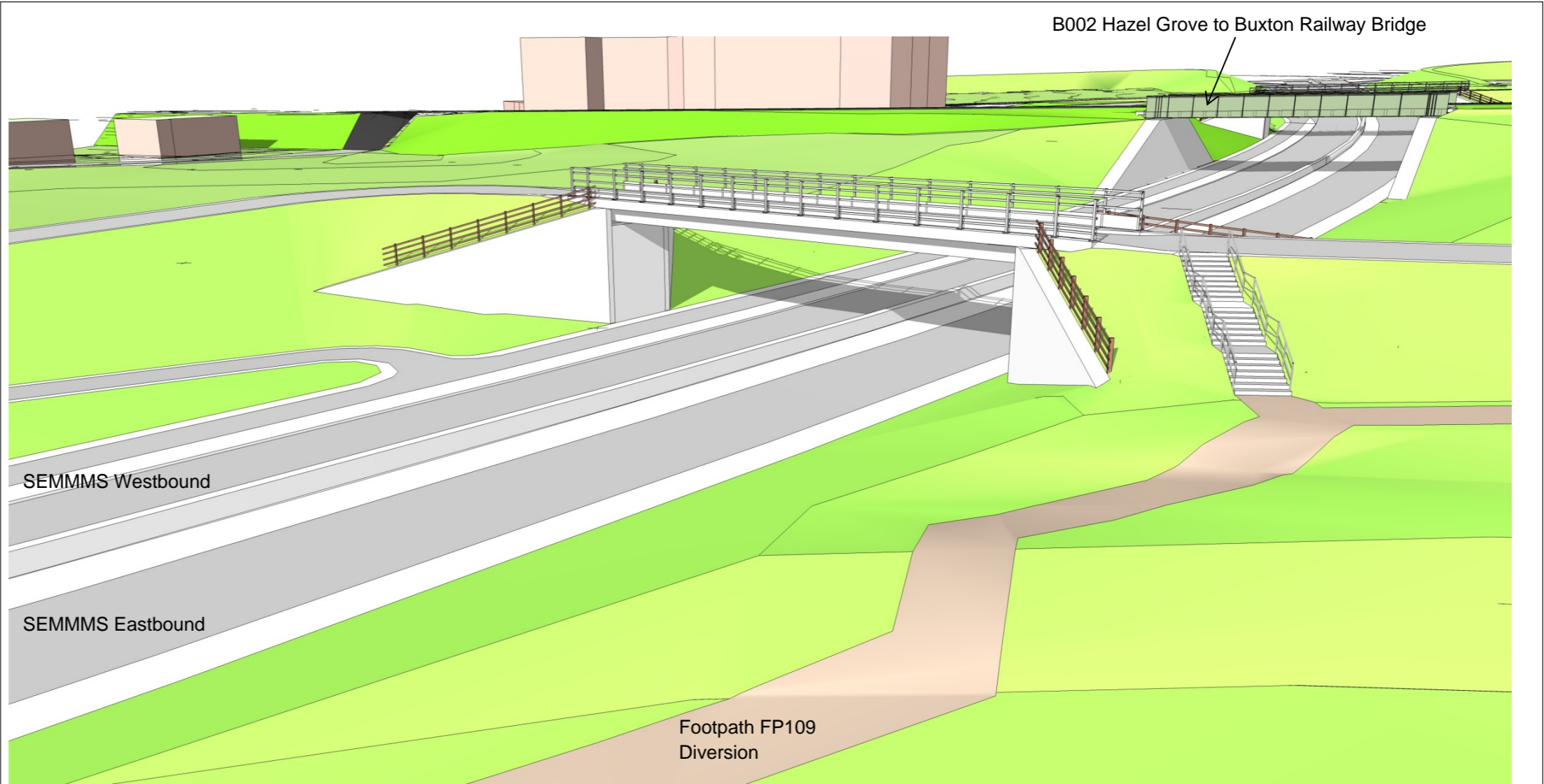
Parapet details - Type N2 steel parapet with mesh infill will be utilised for the parapets in accordance with TD 19/06.

Parapet height is to be 1.8m above finished road level at both verges to accommodate equestrian access and a solid infill panel should be provided at the bottom of the parapet to obstruct an animal's view of the road below.

Materials – The structure will be comprised of approximately 1.47m deep pre-cast beams and 0.67m string course spanning across the relief road. The beams and slab deck will have a plain concrete finish. The exposed faces of the abutments and wing walls to be ribbed concrete.

Relevant Plan
 Plan Number 1007-3D-DF7-A6-MA-B003-701

FIGURE 3.15 PROPOSED BRIDGE (MILL LANE ACCOMMODATION BRIDGE) B003



B003 – Mill Lane Accommodation Bridge

View Looking North



3.0 / DESIGN

Proposed Bridge B004 (Mill Lane Bridle Bridge)

Context

The bridge is to be located approximately 240m and 280m south-west of Buxton railway and Buxton Road. There are a number of residential premises on Old Mill Lane and Mill Lane which are approximately 100m and 200m away from the site respectively. However the immediate vicinity of the proposed crossing and the surrounding area is open farm land.

Function

The Mill Lane Bridge is proposed to give pedestrians, cyclists and equestrian access across Norbury Brook.

Appearance

Headroom clearance - Norbury Brook is a non-navigable watercourse and therefore minimum headroom limits do not apply. The bridge will be a minimum of 600mm above the anticipated high water table.

Span - The bridge will be a zero skew single span of 21.65m, measured between the centres of each abutment, running approximately parallel to the relief road.

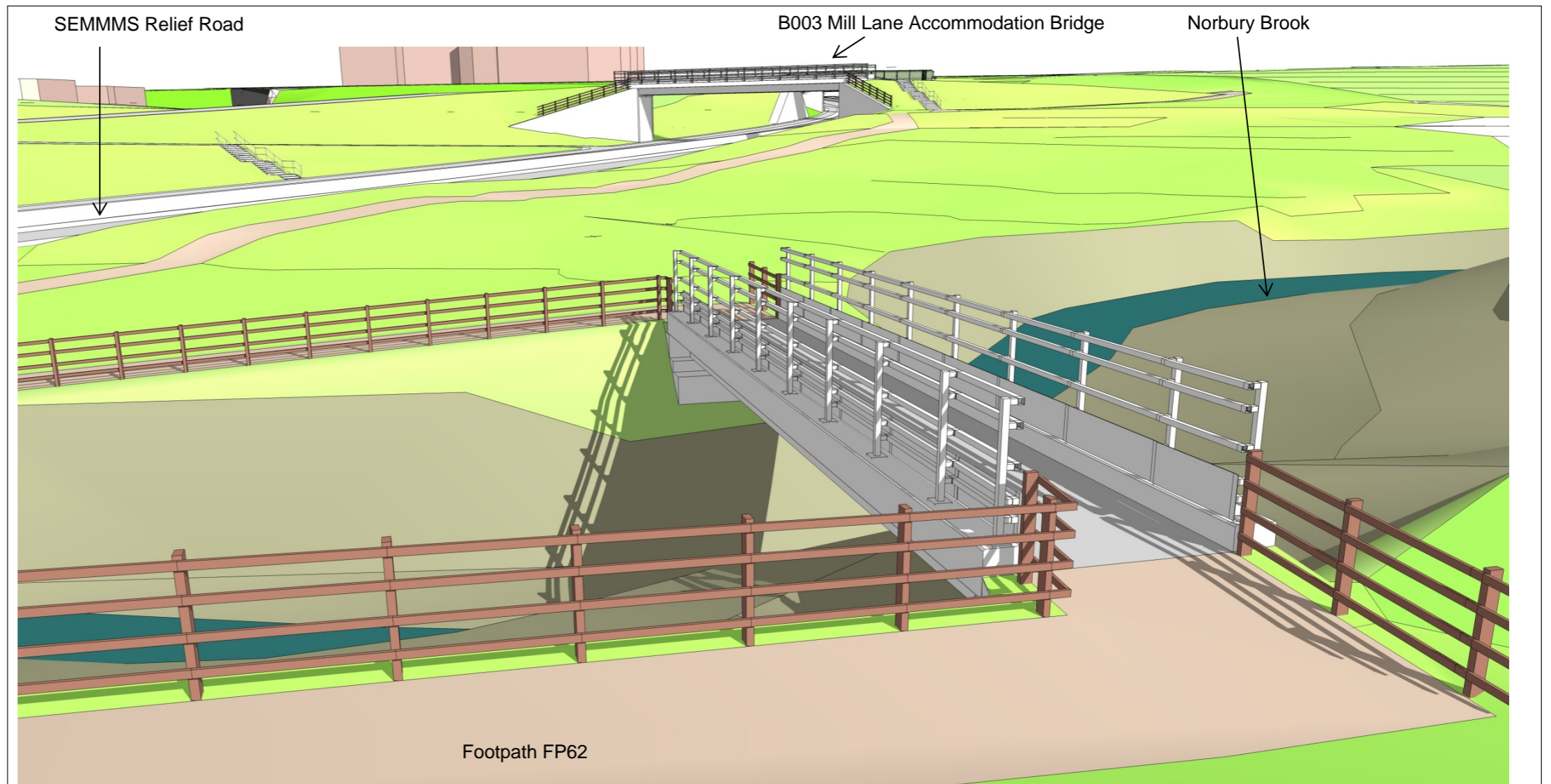
Parapet details - It is proposed to use steel equestrian parapets that shall be 1.8m above the surface course of the bridge in accordance with TD 19/06.

Materials - The bridge will be comprised of 0.7m deep pre-cast beams and 0.5m deep string courses spanning across Norbury Brook. All the beams and any exposed faces of the concrete abutments are to be plain concrete. The bridge deck should have a brushed concrete finish suitable for equestrian usage.

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-B004-701

FIGURE 3.16 PROPOSED BRIDGE (MILL LANE BRIDLE BRIDGE) B004



B004 – Mill Lane Pedestrian/Cycle bridge over Norbury Brook

View Looking North East

Proposed Bridge Widening B004A (Norbury Bridge Widening)

Context
 The bridge is located south of the proposed dual carriageway, approximately 30m west of Strikes Brookside Garden Centre. There is a residential property, Norbury Court, located 70m south-west of the proposed crossing and the immediate surrounding area is woodland.

Function
 The Norbury Bridge widening is proposed to allow additional lanes to be added on the south approach to the Macclesfield Road/Hazel Grove junction and maintain pedestrian and cyclist access across Norbury Brook.

Appearance
 Headroom clearance - Norbury Brook is a non-navigable watercourse and therefore minimum headroom limits do not apply. The bridge will be above the anticipated high water table.

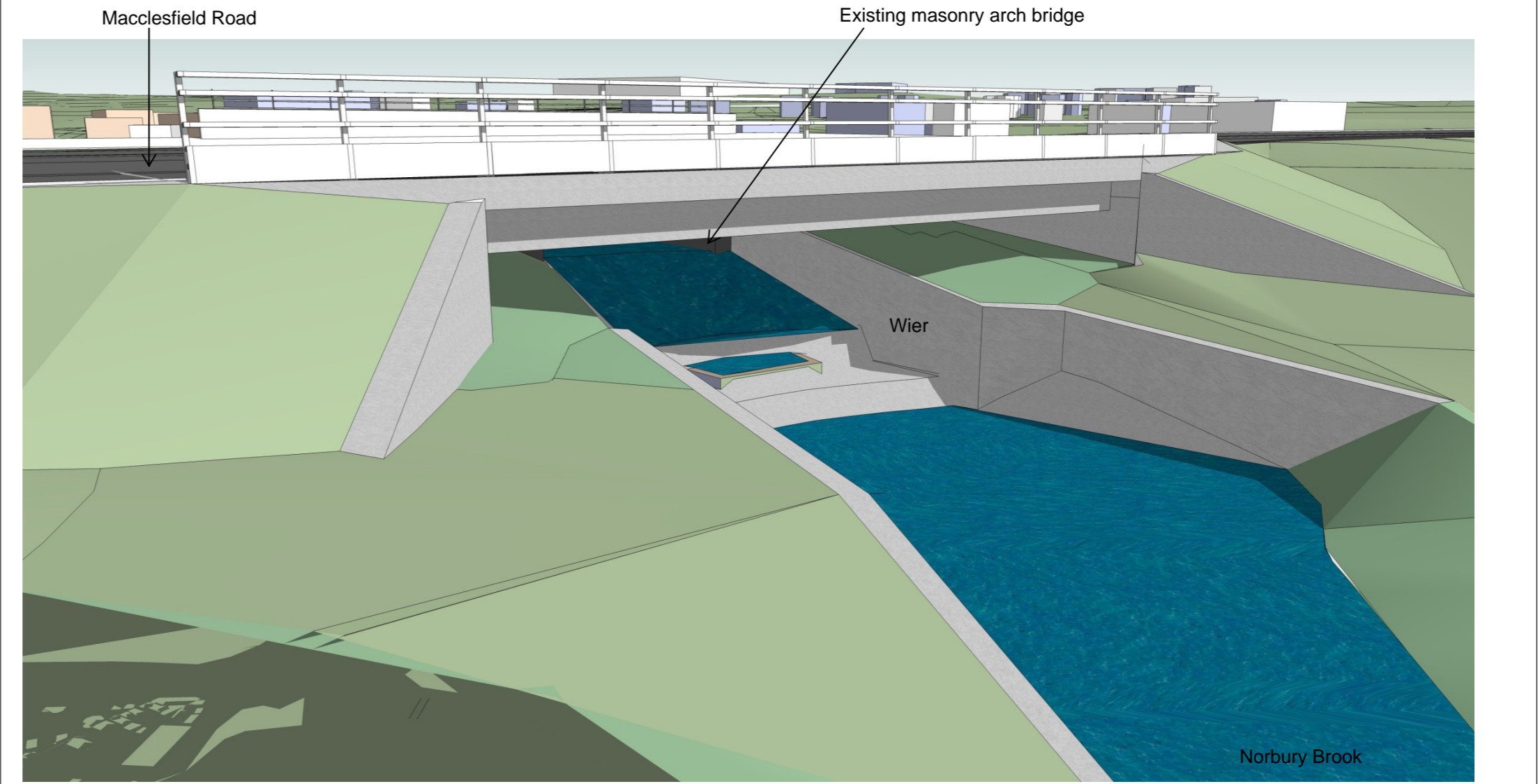
Span - The bridge will be a single span of 19.12m, measured between the centres of each abutment, running parallel to the existing bridge.

Parapet details – Type N2 steel parapet with mesh infill is in accordance with TD 19/06. The parapet is to stand at 1.4m above the proposed finished road level on the footway side of the bridge to accommodate pedestrian and cyclist access.

Materials – The elevation of the bridge comprises approximately 1.5m deep pre-cast beams and 0.65m string course spanning across Norbury Brook. The beams will have a plain concrete finish. The exposed faces of the abutments and wing walls are proposed to be ribbed concrete.

Relevant Plan
 Plan Number 1007-3D-DF7-A6-MA-B004A-701

FIGURE 3.17 PROPOSED BRIDGE WIDENING (NORBURY BRIDGE WIDENING) B004A



B004A – Macclesfield Road Bridge Extension

View Looking East



3.0 / DESIGN

Proposed Bridge B005 (Mill Hill Hollow Bridge)

Context

The proposed Mill Hill Hollow Bridge crosses Norbury Brook approximately 600m North of Poynton Lake. The nearest road to the proposed structure is Mill Hill Avenue, which is approximately 240m to the northwest of the structure. The alternative access, Macclesfield Road, is approx. 800m north-east of the proposed structure location. There are a few residential houses on Mill Hill Hollow Road to the North of the proposed bridge crossing. The immediate surrounding area is open farm land to the West and to the East.

Function

The proposed Mill Hill Hollow bridge is required in order to ensure that the proposed relief road can cross over Norbury Brook.

The bridge spans Norbury brook which will be channelled by new retaining wall structures. The retaining walls are proposed in order to create a footpath at either side of the watercourse.

Appearance

Headroom clearance - Norbury Brook is not a navigable watercourse and hence headroom is not critical. A clearance of approximately 7.2m is provided above the footpaths at either side of the watercourse

Span – single span of 18.0m measured between abutment centrelines.

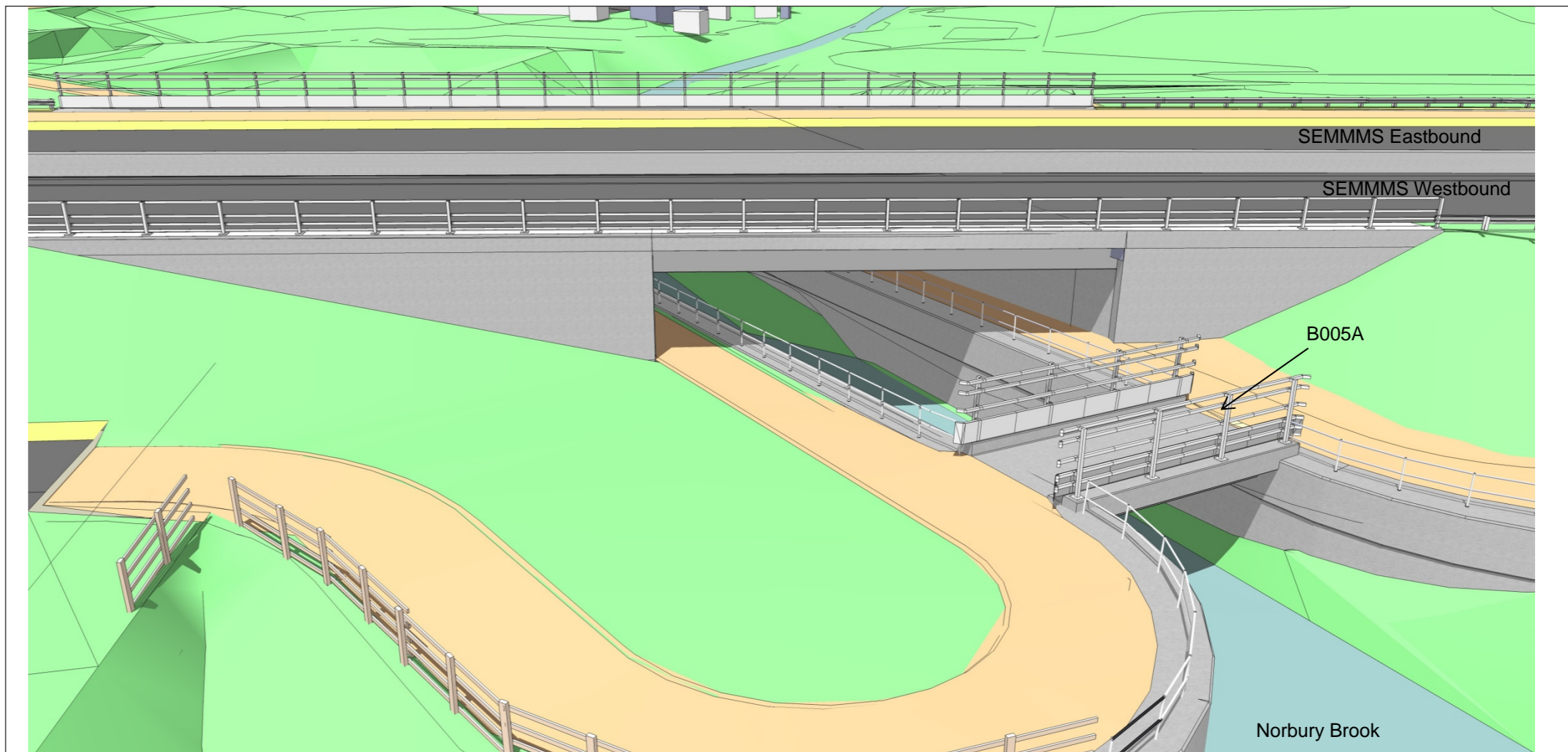
Parapet details – Type N2 steel parapet with mesh infill will be utilised for the parapets in accordance with TD 19/06. Parapet height is to be 1.4m at the north verge, which contains a cycle route, and 1.0m at the east verge.

Materials - The proposed bridge comprises of approximately 1.0m deep pre-cast beams and 0.6m string course spanning across Norbury Brook. The abutment facing at the bridge location is proposed to be of brick facing.

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-B005-705

FIGURE 3.18 PROPOSED BRIDGE (MILL HILL HOLLOW BRIDGE) B005



B005 – Mill Hill Hollow Bridge
B005A – Pedestrian Bridge over Norbury Brook

View Looking East

Proposed Bridge B005A (Mill Hill Hollow Footbridge)

Context

There are a few residential houses on Mill Hill Hollow to the North of the proposed bridge crossing. However the immediate surrounding area is open farm land to the north and to the south.

The proposed bridge is sited adjacent to the proposed bridge B005 on the east side of the structure.

Function

The Mill Hill Hollow Footbridge is proposed to give pedestrians and cyclists access across Norbury Brook approximately 600m North of Poynton. The footbridge will also provide private and maintenance access to existing land.

Appearance

Headroom clearance - Norbury Brook is a non-navigable watercourse and therefore minimum headroom limits do not apply. The bridge will be a minimum of 0.6m above the anticipated high water table.

Span - The bridge will be a single span of 8.05m, measured between the centres of each abutment, running approximately parallel to the relief road.

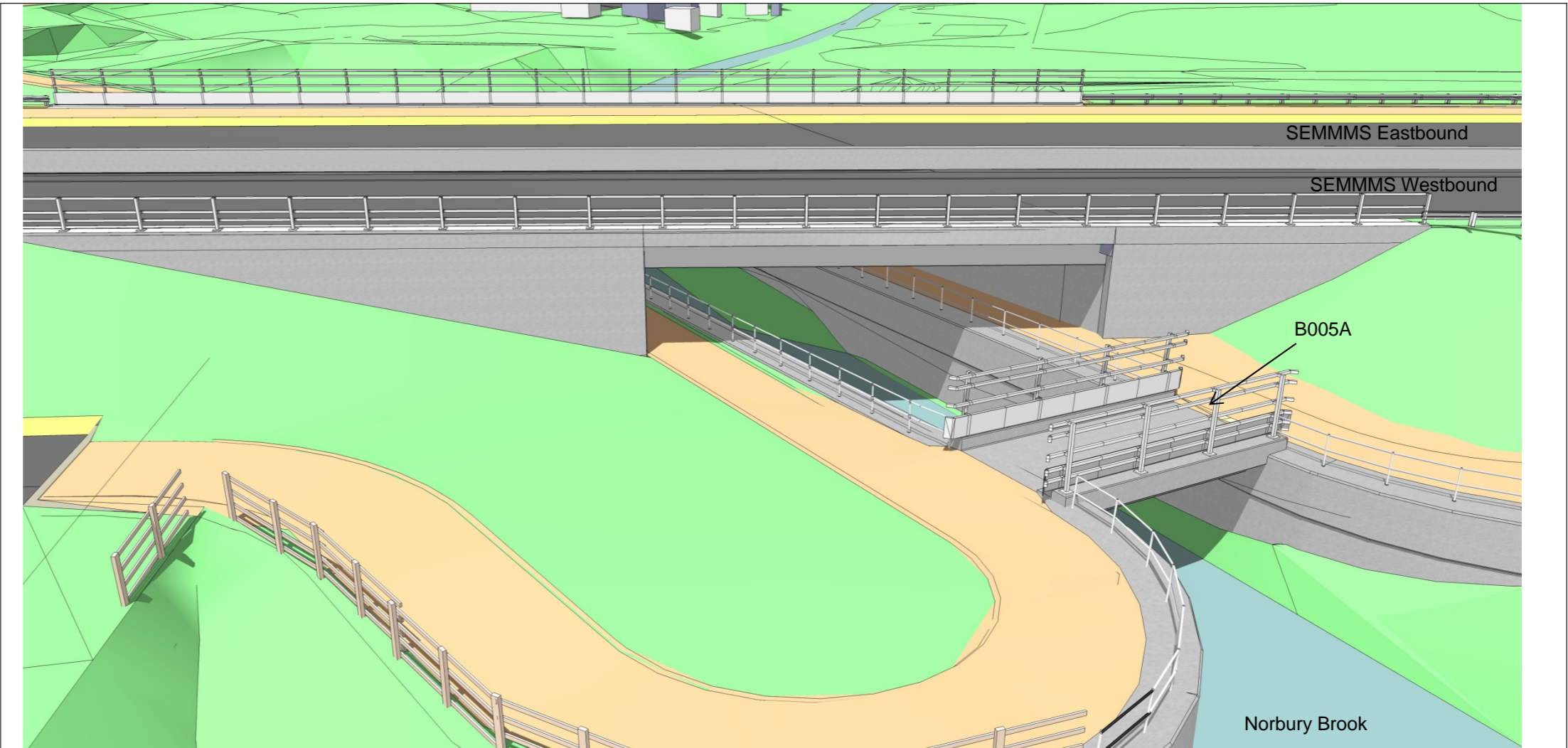
Parapet details – It is proposed to use steel equestrian parapets that shall be 1.8m above the finished road level of the bridge in accordance with TD 19/06.

Materials - The bridge is proposed to be comprised of approximately 0.45m deep pre-cast beams and 0.5m string course spanning across Norbury Brook. The exposed concrete beams are to be plain concrete and the faces of the contiguous piled wall to be masonry cladded.

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-B005A-701

FIGURE 3.19 PROPOSED BRIDGE (MILL HILL HOLLOW FOOTBRIDGE) B005A



B005 – Mill Hill Hollow Bridge
B005A – Pedestrian Bridge over Norbury Brook

View Looking East



3.0 / DESIGN

Proposed Bridge B006 (Hill Green Accommodation Bridge)

Context

The Bridge is located in the vicinity of Park House Farm between Woodford Road, to the North, and Lower Park Road, to the South. It provides farm vehicle accommodation access and serves as a diversion of footpath FP31.

There are a few residential properties approximately 150m to the West on Woodford Road. The immediate surrounding area, however, is generally open farm land.

Function

The purpose of the accommodation bridge is to divert footpath FP31 over the proposed relief road and provide access for pedestrians, cyclists, equestrians and farm vehicles.

Appearance

Headroom clearance - A minimum headroom of approximately 5.7m is provided, therefore in accordance with TD27/05 the superstructure will not need to be designed for impact load.

Span - A span of 16.2m is measured between abutment centrelines.

Parapet details – Type N2 steel parapet with mesh infill is in accordance with TD19/06. The parapet height is to be 1800mm above finished surfacing level as required for equestrian usage. A 600mm high solid infill panel will be provided in order to obstruct an animal's view of the road below.

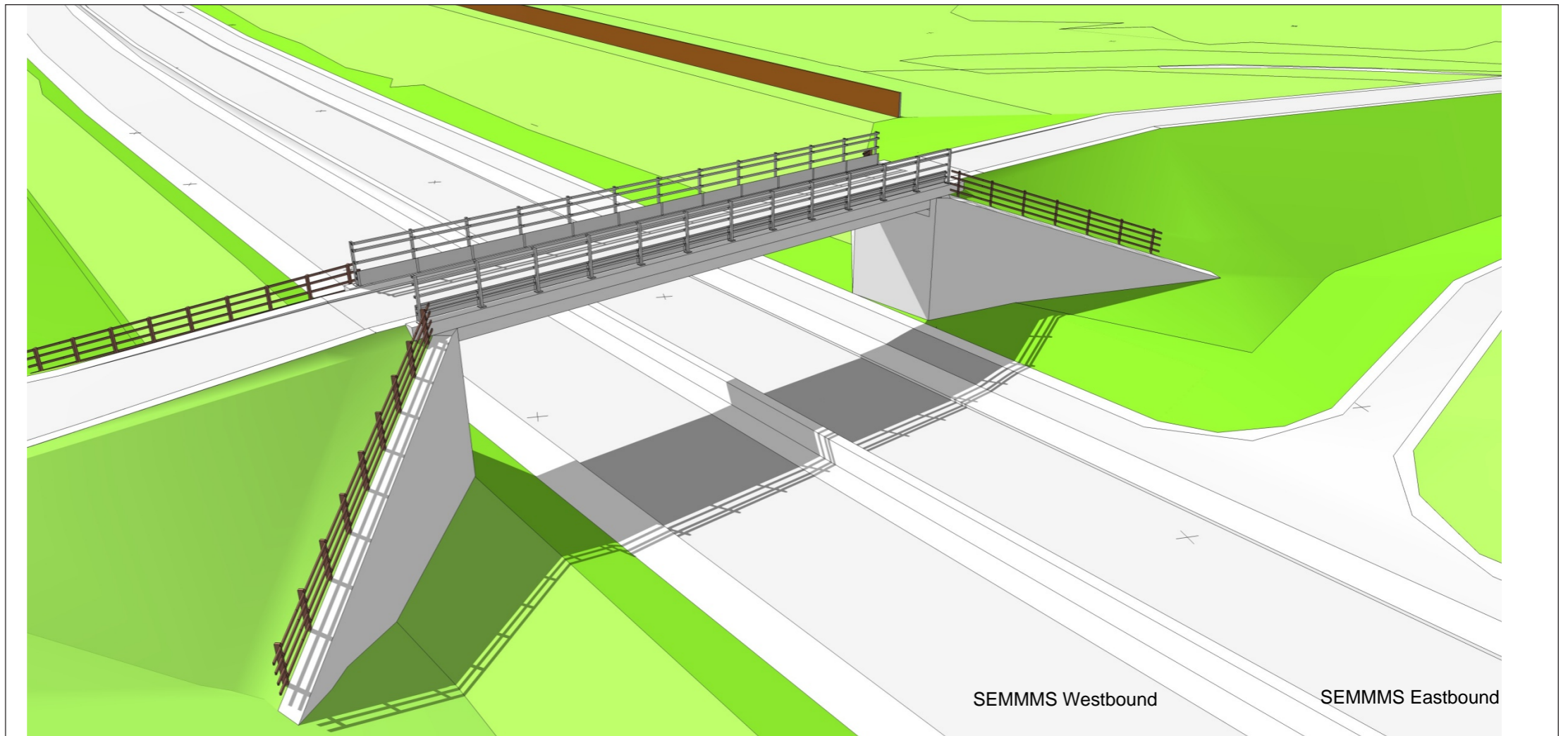
Timber post and three rail fencing with a pvc coated mesh infill are to be provided at the bridge approaches. Steel tubular hand rails are to be provided at the tops of the wingwalls.

Materials - The bridge is proposed to be comprise of approximately 1.5m deep precast beams and 0.67m string course spanning across the A6MARR.

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-B006-706

FIGURE 3.20 PROPOSED BRIDGE (HILL GREEN ACCOMMODATION BRIDGE) B006



B006 – Hill Green Accommodation Bridge

View Looking West

Proposed Bridge B007 (Woodford Road Bridge)

Context
The proposed Woodford Road Bridge, Poynton is located 300m north of the existing Woodford Bridge which crosses the West Coast Mainline Railway Line. There are a number of residential and commercial properties in the vicinity of the site and along Woodford Road, North and South of the proposed bridge. The immediate surrounding area is generally open farm land.

Function
The proposed Woodford Road, Poynton Bridge is required in order to ensure that the proposed relief road can pass under Woodford Road.

Appearance
Headroom clearance - A minimum headroom of approximately 5.3m is provided.

Span – Single skewed span of 33.7m measured between abutment faces. Skew angle is approximately 47 degrees.

Parapet details – Type N2 steel parapet with mesh infill is in accordance with TD 19/06. The parapet height is to be 1.0m at both North and South Verges.

Materials – The bridge is proposed to be comprised of approximately 1.5m deep steel beams and 0.67m string course spanning across the A6MARR. The abutment and wing wall facing at the bridge location will be of concrete finish.

Relevant Plan
Plan number 1007-3D-DF7-A6-MA-B007-707

FIGURE 3.21 PROPOSED BRIDGE (WOODFORD ROAD BRIDGE) B007



Woodford Road Bridge
Aerial View



3.0 / DESIGN

Proposed Bridge B008 West Coast Mainline Rail Bridge

Context

The proposed West Coast Mainline (WCML) Rail Bridge is to the South of the Bramhall Golf Club and located approximately 350m East of Bramhall Oil Terminal. There is a residential area approximately 300m to the South of the proposed bridge. The immediate surrounding area is open farm land to the West and to the East. The WCML is an electrified line and is comprised of two tracks. At the crossing the railway is in a cutting.

Function

The proposed WCML bridge is required in order to ensure that the proposed relief road can cross over the existing WCML.

Appearance

Headroom clearance - Taking into account the latest highway alignment and the proposed construction depth, the provided headroom above the existing tracks is 7.0m. This is much greater than the headroom required above an electrified line.

Span – A single span of 44.0m is planned between abutment faces. This will allow the existing footpath on the West side to be intact and also enough distance on the East side for inspection and possibly replacing the bearings without the need for possession times.

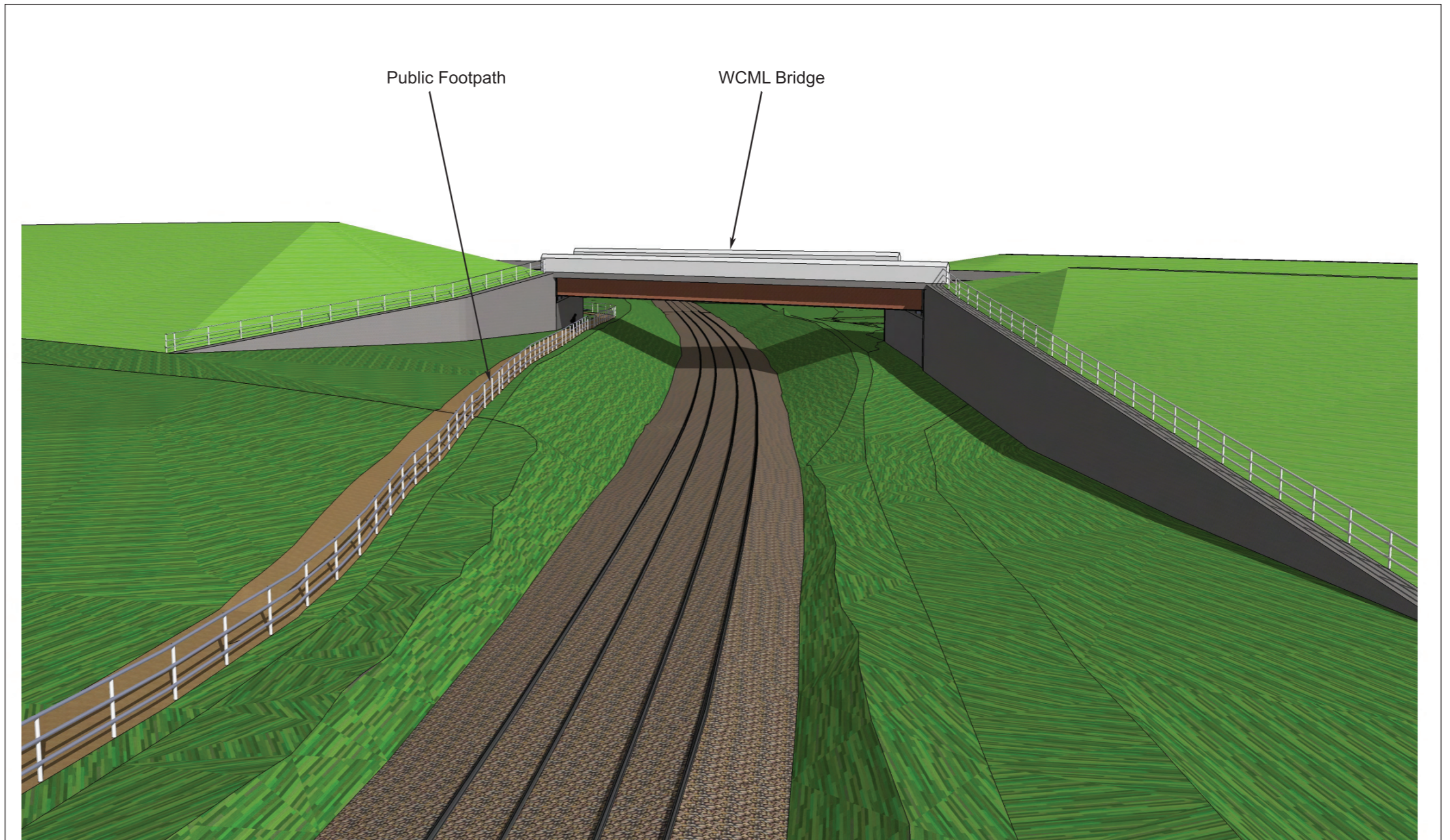
Parapet details – Type H4a parapet is in accordance with TD 19/06. The system consists of 1.5m high safety barrier covered in steel units attached together to form a 1.8m high restraint system. The steel used is to conform with BS EN 10025 and BS EN 10219. The standard finish is galvanised finish to BS EN ISO 1461.

Materials - The bridge beams will be constructed using 1.9m steel beams.

Relevant Plan

Plan Number 1007-3D-DF5-A6-MA-B008-708

FIGURE 3.22 PROPOSED BRIDGE (WEST COAST MAINLINE RAIL BRIDGE) B008



West Coast Mainline Over Bridge
View from Woodford Road

Proposed Bridge B010B (Woodford Road Bridge)

Context

Woodford Road Bridge is located between Woodford Recreation Ground and Moored Golf Course and will be constructed at the existing roundabout connecting the eastern end of the A555 and Woodford Road (A5102).

There are a number of residential and commercial properties in the vicinity of the site mainly along the Woodford Road before and after the bridge. The proposed structure will be a single span fully integral construction bridge.

A structure, independent of the highway bridge superstructure (pipe bridge), is proposed in order to maintain the existing level of the water mains pipes beneath Woodford Road.

Function

The proposed Woodford Road bridge is required in order to ensure that the proposed relief road can cross under the existing Woodford Road.

Appearance

Headroom clearance - The headroom provided to the propping structure beneath the bridge and services is 5.5m as determined by the invert level of the foul sewer.

Span - Single skewed span of B010B is 23.7m measured between abutment faces.

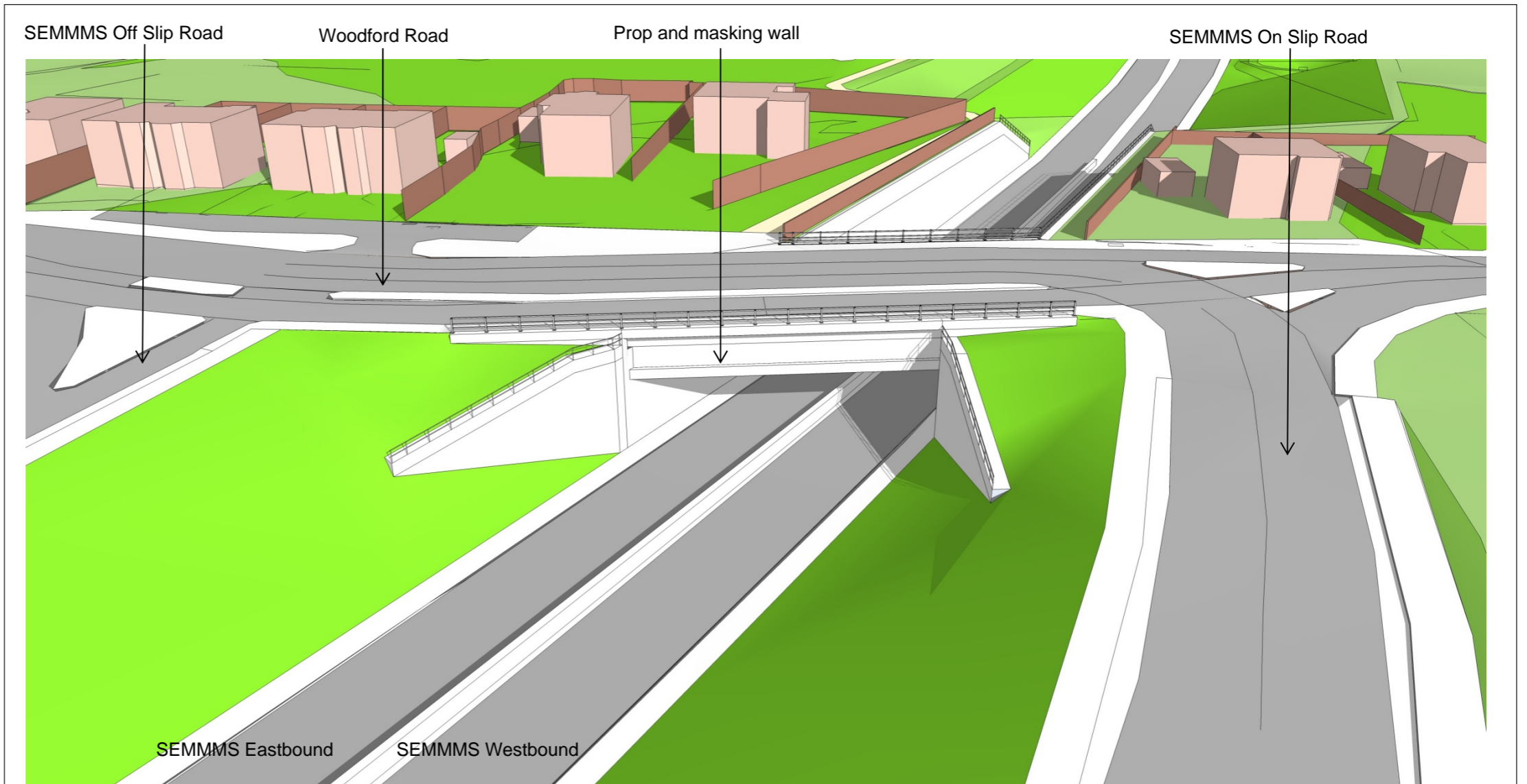
Parapet details - Type N2 steel parapet with mesh infill is in accordance with TD 19/06. A parapet height of 1.1m on the west verge and 1.4m on the east footway to accommodate cyclist usage will be provided. Tubular handrails 1.0m high will be provided on the west facing splayed wing walls.

Materials - The appearance of the exposed faces of the contiguous bored pile retaining walls and abutments will have a ribbed concrete finish. Plain concrete finishes will be used for bridge beams and the masking walls.

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-B010B-707

FIGURE 3.22 PROPOSED BRIDGE (WOODFORD ROAD BRIDGE) B010B



B010B – Woodford Road Bridge (Bramhall)

Elevation Looking East

3.0 / DESIGN

Proposed Bridge TR1 11 (Dairy House Lane Culvert)

Context

The culvert is to be located approximately 300m west of Hall Moss Lane Bridge over the A555.

The bridge is to be located approximately 300m west of Hall Moss Lane Bridge over the A555. There are no residential properties in the immediate vicinity of the proposed crossing. The surrounding area is woodland.

Function

The Dairy House Lane Culvert is proposed to give pedestrians, cyclists and equestrian access across an existing water course between the A555 and Dairy House Lane.

Appearance

Headroom clearance – The unnamed watercourse is non-navigable and therefore minimum headroom limits do not apply. The top of the culvert will be constructed above the anticipated high water table.

Span – The culvert with a single span of 2.4m, measured between the vertical faces of the box section, running approximately perpendicular to the existing A555.

Pedestrian Safety Fence - It is proposed to use timber fences that shall be 1.1m above the top of the culvert.

Materials - A timber post and rail fence (post with 3 rails- open structure) will be mounted on the edge of the culvert. Exposed concrete faces of the culverts are to be plain concrete

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-TR1-11-701

FIGURE 3.23 PROPOSED BRIDGE (DAIRY HOUSE LANE CULVERT) TR1 11



Proposed Bridge TR1 12 Spath Brook Twin Culvert Extension

Appearance

The location of the proposed works is approximately 50m east of Spath Lane Accommodation Bridge over the A555. There are a number residential properties about 200m north-east of the proposed extension and the surrounding area is woodland.

Function

The Spath Brook twin culvert extension is proposed to accommodate a path to give pedestrians, cyclists and equestrian access across Spath Brook, adjacent to the A555.

Context

Structure description - The proposed structure will be a new in-situ reinforced concrete headwall and extensions to two existing 600mm diameter pipes, currently transferring Spath Brook beneath the A555.

Pedestrian Safety Fence – It is proposed to use timber fencing that shall be 1.1m above the adjacent footpath level and mounted to the top of the headwall

Materials - Timber parapets (post with 3 rails- open structure) to match the surrounding fences are proposed to be mounted on the top of the headwall and exposed faces of headwall is to be plain concrete.

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-TR1-12-701

3.0 / DESIGN

Proposed Bridge B012 Yew Tree Footbridge

Context

Yew Tree Footbridge is proposed to cross the scheme to allow the diversion of footpath FP11. The bridge is situated north of Styal Golf Course and south of Yew Tree Farm.

Function

The function of the footbridge is to accommodate the diversion of footpath FP11.

Appearance

Headroom clearance – The provided headroom over SEMMMS is greater than 5.3m. Over a highway, the vertical clearance under a new bridge is required to be at least 5.3m (TD27/96). Therefore, with this clearance the superstructure need not be designed for impact loads.

Span – A span of approximately 29.8m is measured between bearing centrelines.

Parapet details – Type P4 steel parapets conforming to the requirements of TD19/06 with a height of 1800mm above finished surfacing level are required for equestrian usage. A 600mm high solid infill panel will be provided in order to obstruct an animal's view of the road below.

Timber post and three rail fencing with a pvc coated mesh infill are to be nprovided at the bridge approaches. Steel tubular hand rails are to be provided at the tops of the wingwalls.

Materials – The bridge is proposed to be comprised of approximately 1.28m concrete beams steel beams and 0.49m string course spanning across the A6MARR.

Relevant Plan

Plan Number 1007-3D-DF7-A6-MA-B012-712

FIGURE 3.24 PROPOSED BRIDGE (YEW TREE FOOTBRIDGE) B012



B012 – Yew Tree Footbridge

View of West Elevation

Proposed Bridge B013 Styal Railway Bridge

Context
The Styal Mainline Bridge is proposed to cross over the Styal Railway Line. The proposed road passes to the South of the Styal Electricity Sub-Station and located approximately 150m east of existing Styal Bridge. There is a residential area 300m to the North of the proposed bridge crossing and a few residential houses to the South. The immediate surrounding area is open farm land to the West and to the East.

Function
The proposed Styal Mainline Railway bridge is required in order to ensure that the proposed relief road can cross over the Styal Railway Line.

Appearance
Headroom clearance – The proposed construction depth, the proposed headroom above the existing tracks is 7.7m. This is much greater than the headroom required above an electrified line.

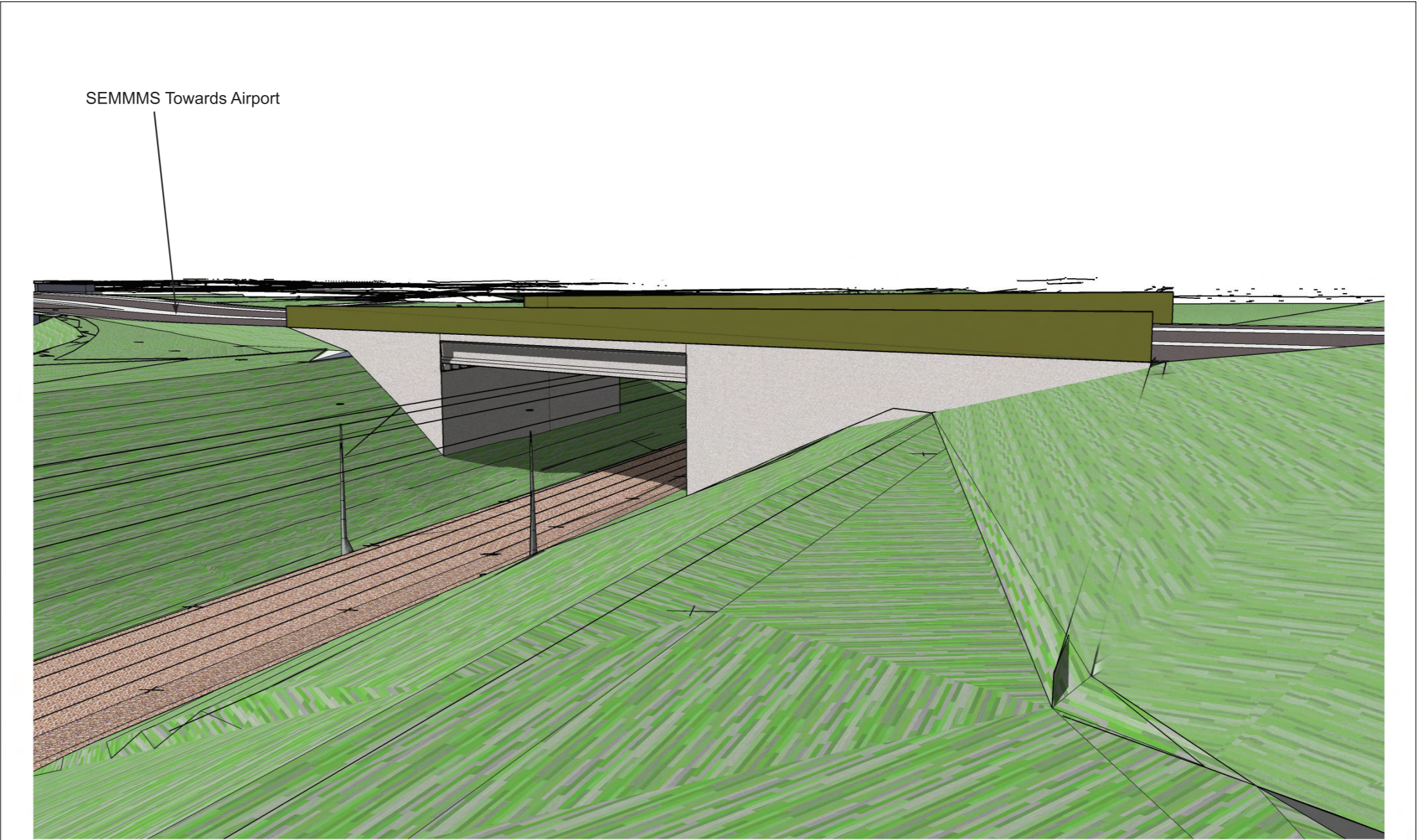
Span – Single span of 30.0m measured between abutment faces. The skew angle is approximately 36.2 degrees. The abutments will be inside the Network Rail Boundary.

Parapet details – Type N2 steel parapet with mesh infill is in accordance with TD 19/06. The system consists of 1.5m high safety barrier covered in steel units attached together to form a 1.8m high restraint system. The steel used conforms to BS EN 10025 and BS EN 10219. The standard finish is galvanised finish to BS EN ISO.

Materials – Precast prestressed concrete beams will be used to construct the bridge structure.

Relevant Plan
Plan Number 1007-3D-DF5-A6-MA-B013-713

FIGURE 3.25 PROPOSED BRIDGE (STYAL RAILWAY BRIDGE) B013



Styal Railway Bridge
Elevation from South East Embankment



3.0 / DESIGN

Proposed Bridge Widening B014 Styal Road Airport Spur

Context

The Airport Spur line forms the northern arm of a railway triangle which connects the Styal line to the airport. The proposed road runs approximately parallel to the southern arm of the triangle and crosses both the spur and the main Styal line as shown on the figure below.

Function

The widening of the existing bridge is proposed to ensure that the proposed A6MARR can be accommodated in this particular location. The widened structure will enable a suitable crossing to be utilised at this location. This will be an at grade traffic controlled junction between the proposed road and the existing Styal road at the point where the spur is crossed.

Appearance

Headroom clearance – The headroom provided at the existing structure over the tracks is 4.640 metres minimum.

Span – The clear span of the bridge extensions is anticipated to be in the region of 24.2m between bearings.

Parapets – The configuration of the highway and the railway at this location is such that in addition to provision of type H4a (in accordance with TD 19/06) very high containment parapets on the deck edges, H4a parapets will be required on all wing walls as well.

Materials – The proposed structure will be constructed using precast pre-tensioned concrete beams supported on conventional reinforced concrete abutment walls on bored pile foundations with a fully integral connection between the deck and abutments.

Relevant Plan

Plan Numbers 1007-3D-DF5-A6-MA-B014-714-1 and 1007-3D-DF5-A6-MA-B014-714-2.

FIGURE 3.26 PROPOSED BRIDGE WIDENING (WIDENING OF EXISTING STRUCTURE 526) B014



PROPOSED RETAINING STRUCTURES

R002A – Pumping Station Retaining Wall

A steel sheet pile retaining solution is proposed for Retaining wall R002A. The retaining wall runs parallel to the westbound carriageway of the relief road. It is located approximately 40m from the Woodford Road Bridge. The retaining wall is approximately 21.0m in length and the top of the retaining wall is at the 84.0mAOD with an approximate 2.0m retained height and a 1v:3h slope, approximately 3m high above it.

The relief road is in a cutting at this location and a proposed pumping station (to be located below ground) is required to be constructed. Wall R002A is required to create an area outside of the main carriageway to locate the pumping station compound.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/R002A/004

R003 & R004 – Woodford Road Retaining Walls

The proposed relief route alignment cuts below the existing junction between the A555 (which is being incorporated into the scheme) and Woodford Road (A5102). This junction is being fully reconfigured to accommodate the proposed development. To the east of Woodford Road the proposed highway alignment is significantly lower than existing ground level and in close proximity to residential properties.

The appropriate solution for this location is for reinforced concrete contiguous bored pile walls to retain the ground at either side of the scheme. The walls will be adjoined to the abutments to Woodford Road Junction Bridges B010B. The walls will be propped at 1 level for approximately 115m at level slightly below road level.

R003 - This wall will retain the ground adjacent to the westbound relief road carriageway. The wall will be approximately 100m in length. The retained height is approximately 10m.

R004 - This wall will retain the ground adjacent to the eastbound relief road carriageway. The wall will be approximately 100m in length. The retained height is approximately 10.0m.

The proposed pedestrian/cycle route connects to Woodford Road at this location and is located between the top of the retaining wall and the boundary of the private property in this location.

R009 – A34 Retaining Wall Adjacent to Eastbound off Slip

A reinforced concrete contiguous bored pile retaining solution is proposed for Retaining wall R009. The retaining wall is positioned adjacent to the eastbound off slip road at the junction between A555 (which is incorporated into the proposed relief road) and the A34. The total length of the retaining wall is 63m. The maximum retained height is approximately 3.7m. The wall is required to retain ground in order to accommodate a proposed new footpath/cycle route link between the relief road and Earl Road. The existing embankment slopes from the slip road down to the boundary of a retail park so re-grading the slope is not possible.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/R009/726

R010 – Wilmslow Rd Junction Adjacent to Eastbound Off Slip Retaining Solution

A reinforced concrete contiguous piled wall is proposed to retain the eastbound slip road off the SEMMMS route to the junction with Wilmslow Road (B5358). At this location the relief road will be in a cutting. The total length of the retaining solution is approximately 160m. From the available cross section the top of the retaining wall is assumed at 78.0mAOD and the retained height is estimated to be 4.1m.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/R010/008

R011 – Styal Road Electricity Sub Station

A reinforced concrete "L" shaped cantilever retaining solution is proposed for Retaining wall R011. The retaining wall is positioned on the eastbound side of the proposed relief road. The total length of the wall is approximately 20m. The relief road will be on a low embankment at this location. The retaining wall is required to minimise the encroachment of the embankment into the boundary of the electricity substation. The top of the retaining wall is at 78.3mAOD with a maximum retained height of 1.8m.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/R011/009

R016 - Retaining Wall Associated with the Existing Styal Road Rail Bridge (Airport Spur South)

Retaining wall R016 is positioned south of the intersection of the A6MARR route and Styal Road (B5166). It is situated in close proximity to the north east wing wall of the existing bridge over the Airport Spur South railway line.

Wall R016 is within the cutting for the railway line. It is therefore proposed to retain imported fill supporting the westbound left turn lane from the relief road onto Styal Road. The total length of the wall is approximately 21m. The maximum retained height, at the interface with the existing bridge wing wall, is approximately 7m.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/R016/729

TR1 B – Retaining Wall for Attenuation Pond

A sheet pile wall is proposed to retain the embankment above an attenuation pond adjacent to Mill Hill Hollow. The top of the retaining wall is at 80mAOD with an approximate 3.0m maximum retained height (including the attenuation pond depth) and a 1v:2h slope, 1m high to the rear of the retaining wall. Behind the small slope there is a narrow unsurfaced road beyond which there is a shallow slope about 5m high. 2.0m in front of the wall there is an attenuation pond approximately 1.0m deep.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/TR1B/003

TR1 G – Retaining wall to support widened path

The retaining structures parallel to, and in between the A555 and Dairy House Lane are proposed to be sheet pile walls. The length of the longer (northern) wall retaining the footway will be approximately 244m long. There is an existing U shape concrete channel at the toe of a slope on the passive side of this wall. The maximum retained height is 1.2m but there is also a slope down to a U shaped channel. The top of this channel is 2.5m below the crest of the slope. The shorter (southern) wall retaining the western end of Dairy House Lane will be approximately 70m long. The maximum retained height is 1.5m.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/TR1G/006

TR1 M – Retaining Wall for Landing Light

The proposed retaining wall is located on the south side of existing landing lights, adjacent to the east bound side of the relief road. The retained height adjacent to the landing light is less than 1m. An L-shaped pre-cast concrete gravity retaining wall is proposed. The total length of the wall is approximately 22m. This includes a line parallel to the road with wing walls at either end returning into the banking. The wall is proposed to be 22m long.

Relevant Plan

Plan Number 1007/3D/DF7/A6-MA/TR1M/011

3.0 / DESIGN

ADDITIONAL PROPOSED STRUCTURES

Proposed Culverts C1

Concrete open culvert located between the realigned A6 and Hazel Grove Golf Course.

The proposed culvert comprises an in-situ concrete U channel 0.9m wide, average depth 0.6m. A concrete finish is proposed. The proposed length of the culvert is 109m.

Proposed Culverts C2

The culvert is required to route a water course under the realigned A6 from United Utilities Land. The diameter of the pipe is proposed to be 300mm and a concrete finish will be applied. The proposed culvert is 62m in length.

Proposed Culverts C3

The purpose of the culvert is to maintain the connection between two ponds in land in front of Bramhall Oil Terminal. The diameter of the pipe is proposed to be 300mm and a concrete finish will be applied. The proposed culvert is 140m in length.

Proposed gantries (G1/G2)

Gantries are proposed in two locations:

- The A34 north bound entry to A34/A555 roundabout; and
- Stanley Green Roundabout northbound.
- The gantries will be constructed using a concrete base and a steel framework. The gantries will span 21m across the highway plus lateral safety clearance and 5.7m vertical clearance to the underside of illuminated signs. The gantries will also carry Traffic signals.

FIGURE 3.27 ADDITIONAL PROPOSED STRUCTURES (PROPOSED GANTRIES) G1/G2



04

ACCESS

SECTION	PAGE	TITLE
4.1	70	Introduction
4.2	70	Objectives for Scheme as relates to Access
4.3	70	Applicable Design Standards and Planning Policy Requirements for Access
4.4	70	Access for Vehicular Traffic
4.5	74	Access needs and provision in relation to pedestrians, cyclists and equestrians

4.0 / ACCESS

4.1 INTRODUCTION

This section of the DAS highlights how the accessibility of the development includes access for all users and measures taken to provide availability of access. Details relating to accessibility to different modes of travel along the route of the proposed development (most notably the shared use footpath and cycleway along the route) are also provided within this section.

4.2 OBJECTIVES FOR SCHEME AS RELATES TO ACCESS

The key objectives for the A6MARR scheme as they relate to access are identified below:

- **Reduce the impact of traffic congestion** on local businesses and communities.
- **Support lower carbon travel:** reallocate road space and seek other opportunities to provide improved facilities for pedestrians, cyclists and public transport.
- **Improve the safety of road users, pedestrians and cyclists:** reduce the volume of through-traffic from residential areas and retail centres.

4.3 APPLICABLE DESIGN STANDARDS AND PLANNING POLICY REQUIREMENTS FOR ACCESS

The applicable design standards applied throughout the proposed development have been set out in detail in chapter 3 above. Planning policies requirements as they relate to access are outlined below. These policies have been taken into consideration when designing the proposed development.

NATIONAL PLANNING POLICY FRAMEWORK (2012)

The NPPF sets out the need to deliver a transport system throughout the country that is balanced in favour of sustainable transport modes. As part of the proposed development, new and existing footpaths/cycle links will be provided / upgraded, linking the new development to neighbouring villages and the wider green infrastructure in the area. This will ensure that sustainable transport methods are available for people living and working adjacent to the proposed development to utilise, which will in turn support reductions in greenhouse gas emissions and congestion. In addition, the proposed development will improve the safety of road users, pedestrians and cyclists through reducing the volume of through-traffic from residential areas and retail centres.

STOCKPORT CORE STRATEGY DPD

Objective 6 of the Strategy set out within the Core Strategy for the future of the Borough relates to transport. The objective states that 'The Core Strategy will seek an efficient and extensive transport network which enables services and opportunities to be accessible by all, whilst also reducing congestion and minimising the environmental impact of transport.' In order to achieve this, the Core Strategy identifies the need to implement the SEMMMS relief road (the proposed development set out in this planning application).

Core Policy CS9 (Transport and Development) and Core Policy CS10 (An effective and sustainable transport network) highlight the importance of requiring new development and transport networks that promote safe, good quality walking and cycling opportunities throughout Stockport.

STOCKPORT SUSTAINABLE TRANSPORT SPD

The purpose of the Sustainable Transport SPD is to help developers understand the full range of possible interventions for the mitigation of effects of additional traffic that can result as a consequence of new development. The SPD highlights the need to address congestion, environmental issues, and improving infrastructure to support economic growth, increase social inclusion and address issues surrounding human health, through delivering new development.

MACCLESFIELD BOROUGH LOCAL PLAN

Part of the strategy set out within the Local Plan is to improve access and movement in and around the Borough to benefit pedestrians, public transport users, private road users and other mobility groups, with special emphasis on reducing the need to travel. Policies within the Local Plan that specifically address access are as follows:

- **Policy T1 (General Transportation Policy)** highlights that the importance of enhancing integration of modes of transport, encouraging the use of public transport and ensuring that a balance is maintained between safety and movement and the need to protect and enhance the natural and built environment;
- **Policy T3 (Pedestrians)** highlights that the council will seek to improve conditions for pedestrians through improving the existing footpath network; and
- **Policy T5 (Provision for Cyclists)** sets out the need for development proposals to make provision for cyclists.

MANCHESTER CORE STRATEGY DPD

Through Policy DM 1 (Development Management), the Core Strategy requires all development to have regard to a number

of specific issues. This includes the need to ensure that accessibility to new development is delivered by sustainable transport methods.

Furthermore, Policy T 1 (Sustainable Transport) highlights the need to deliver a sustainable, high quality, integrated transport system to encourage a modal shift away from car travel to public transport through improving pedestrian routes and the pedestrian environment and throughout further developing the cycle network in the area.

4.4 ACCESS FOR VEHICULAR TRAFFIC

The new junction arrangements along the route of the proposed relief road is set out in detail within the block plans submitted as part of the planning applications. Motorists will access the relief road from the existing road network via these junctions.

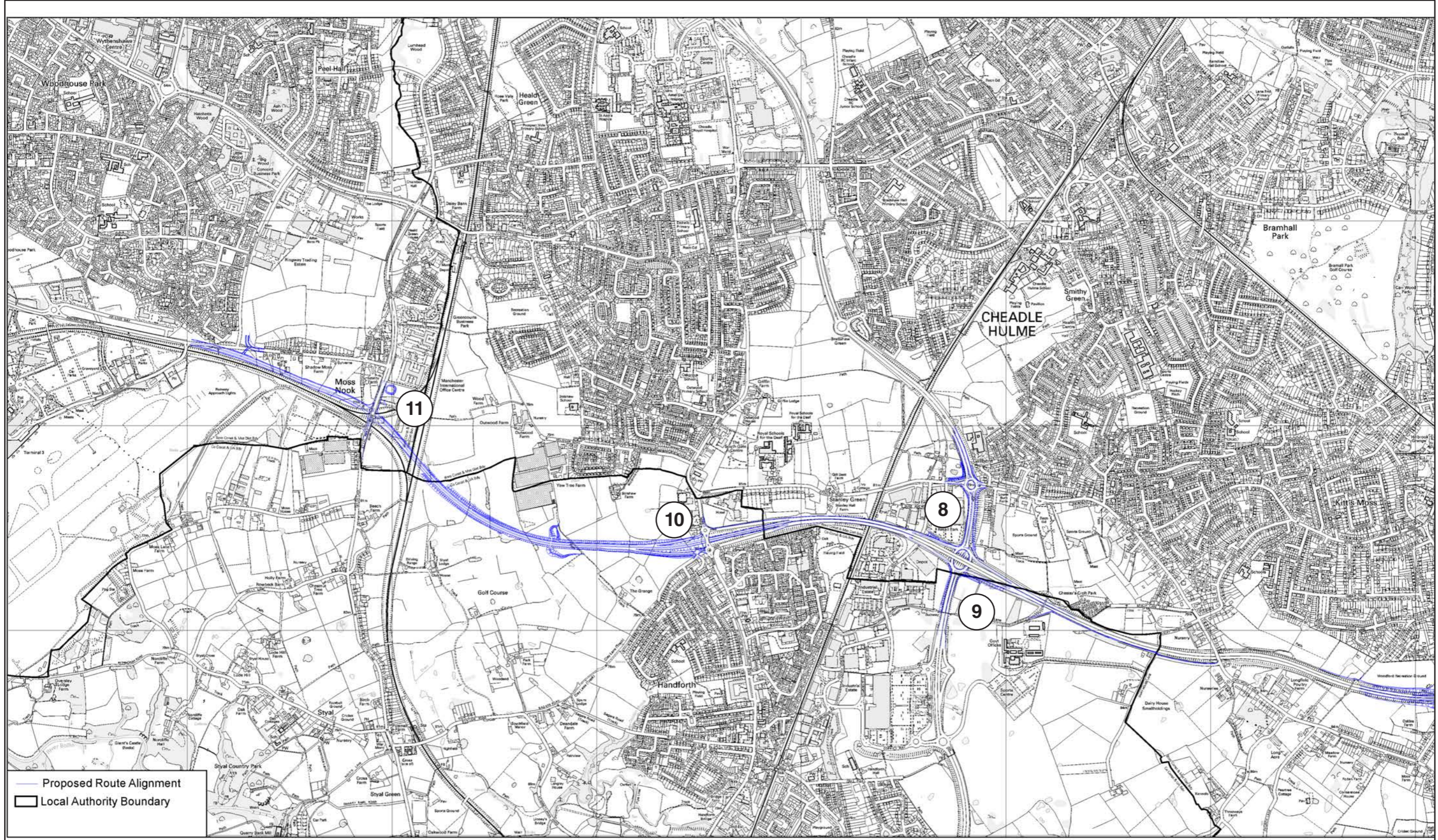
Table 4.1 schedules the 7 new junctions and 4 modified existing junctions included along the line of the proposed dual carriageway and the off-line junction modification proposed on the A34.

The location of these junctions is shown below in Figure 4.1.

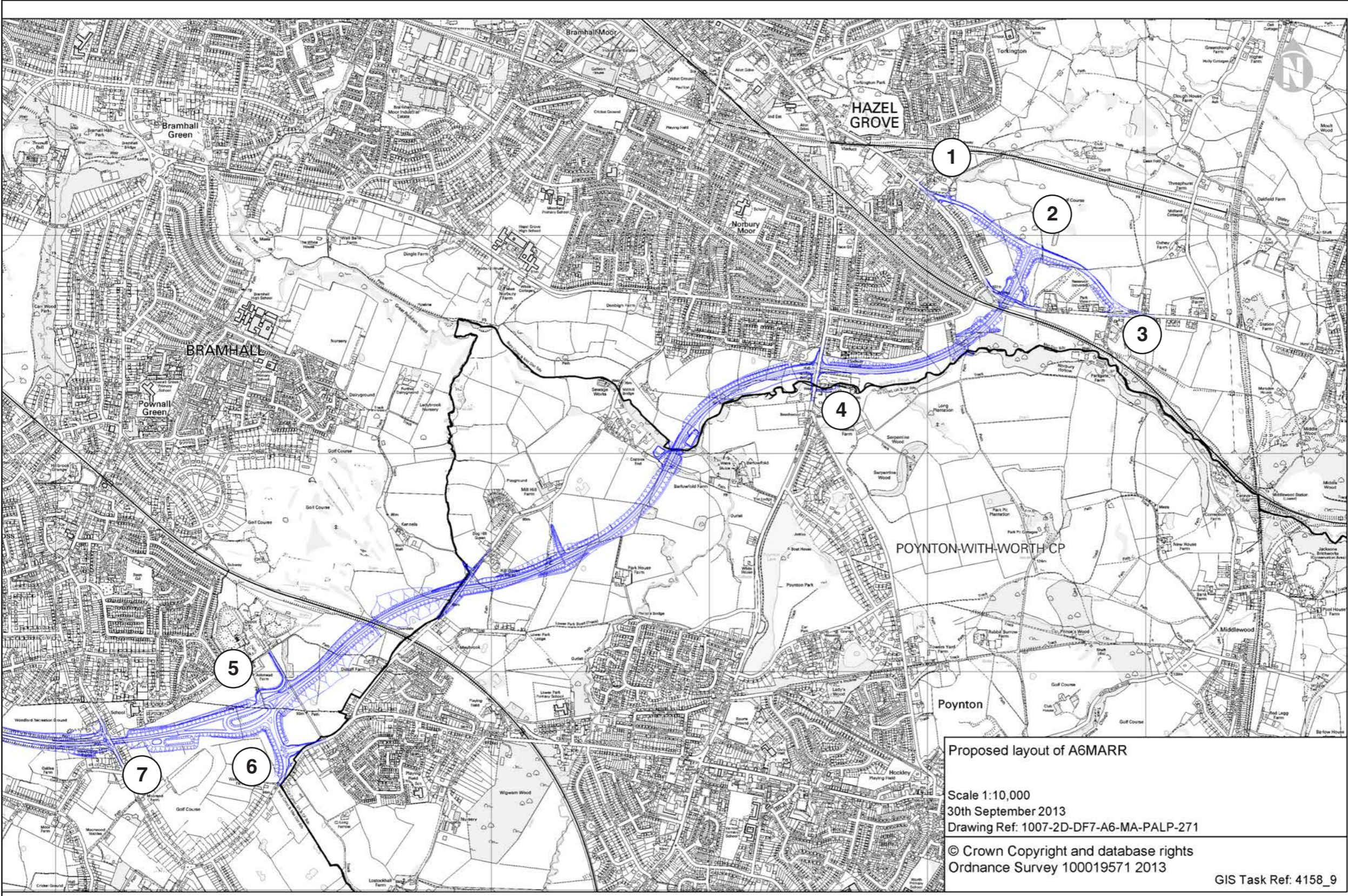
TABLE 4.1 PROPOSED JUNCTION

Junction Number	Location	Design Change
1	At grade priority T-junction	New junction at the proposed A6 West tie in with the existing A6
2	At grade signalised T-junction	New junction at the proposed A6 diversion
3	At grade signalised T-junction	New junction at the proposed A6 East tie in with the existing A6
4	At grade signalised crossroad junction	New junction connecting to the A523 Macclesfield Road
5	At grade signalised roundabout	New junction connecting to the Woodford oil terminal and the proposed link connecting to Chester Road
6	At grade signalised T-junction	New junction connecting the proposed Chester Road link to Chester Road
7	Grade separated T-junctions with west facing slips	Modified junction to replace the existing roundabout connecting the A5102 Woodford Road and the eastern end of the A555
8	Large signalised roundabout junction	Modification of existing junction linking the A34 and B5094 Stanley Road to increase capacity
9	Large signalised roundabout junction	Modification of the existing junction linking the A34 and the A555 to increase capacity
10	Grade separated junction with mini-roundabouts in a dumbbell arrangement	Modification of the existing junction at the B5358 Wilmslow Road and the western end of the A555, to accommodate new west facing slips
11	New signalised crossroads over the proposed Styal Road over airport spur rail bridge	New junction over the proposed new rail bridge to connect to the B5166 Styal Road

FIGURE 4.1 JUNCTION LOCATIONS



A6 TO MANCHESTER AIRPORT RELIEF ROAD / DESIGN & ACCESS STATEMENT



4.0 / ACCESS

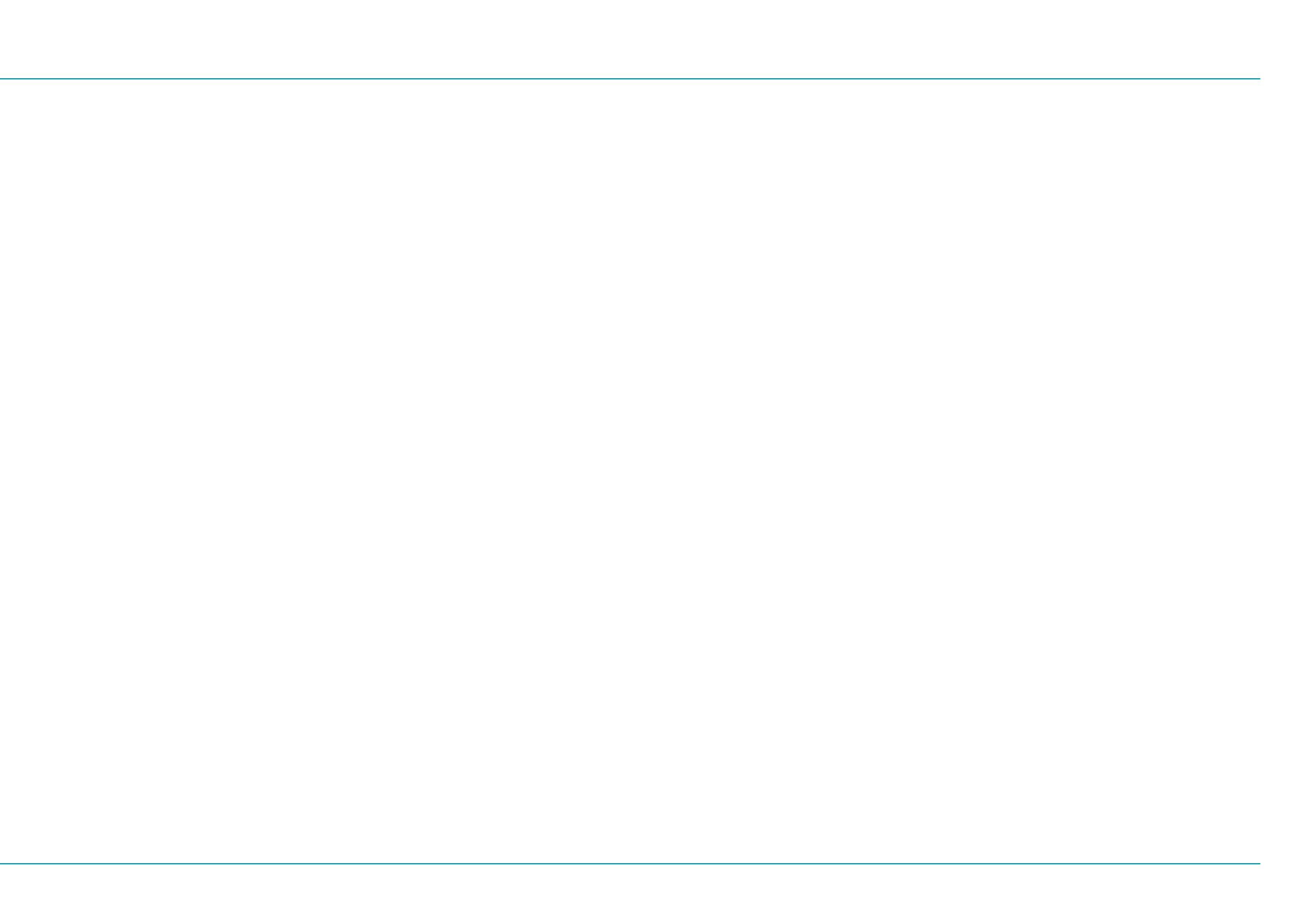
4.5 ACCESS NEEDS AND PROVISION IN RELATION TO PEDESTRIANS, CYCLISTS AND EQUESTRIANS

The scheme will include provision of a segregated pedestrian and cycle route adjacent to the new road and existing length of the A555, providing a new orbital link for the strategic cycle/pedestrian network. This new orbital link will be fully integrated with the existing local cycle and pedestrian network to maximise access to the new route and therefore the benefits associated with the scheme.

The proposed development will connect the scheme's pedestrian and cycle route with the existing local network to deliver an integrated and accessible new east-west link for pedestrians and cyclists.

The provision of these new links to the existing network is an important component of the overall scheme. The pedestrian and cycle network will provide a high-quality, safe and direct east-west link, supporting the step-change in provision of infrastructure for non-motorised modes required to encourage more people to choose cycling and walking as an alternative to the car.

Plan Numbers 1007/3D/DF7/A6-MA/PROW/210-214 submitted as part of this planning application show the proposed pedestrian/cyclist routes and bridleways proposed along the route of the relief road.



05

SUSTAINABILITY

SECTION	PAGE	TITLE
5.1	78	Overall Vision
5.2	78	Local and Sustainable Materials
5.3	78	Recycling/Waste Disposal During Construction
5.4	78	Flooding
5.5	78	Sustainable Drainage
5.6	78	Health and Wellbeing
5.7	78	Sustainable Transport - Pedestrian and Cyclists
5.8	78	Natural Habitat Creation and Ecology

5.0 / SUSTAINABILITY

5.1 OVERALL VISION

Sustainability plays a significant role in the creation of new developments, as established through the requirements reinforced in the development plans for the three LPAs and the NPPF. The term 'sustainability' applies across a broad range of areas, including supporting economic growth and incorporating measures which reduce environmental impacts.

Generally, sustainable development is conceptualized as having three dimensions: environmental; social; and economic. These dimensions are considered to work in unison, with each dimension having no negative effect on the other. In terms of the proposed development:

- Environmental – minor negative effect on the surrounding environment. Several mitigation measures (as explained in section 3.4) are being introduced and specific attention is being paid to the environmental impacts of the scheme so as best to minimise these impacts and improve the environment where possible.
- Social – The proposed development aims to improve transport links and reduce journey times through a reduction in traffic on local roads. The introduction of the footway/cycleway along the length of the scheme promotes physical activity and therefore health and wellbeing.
- Economic – The proposed development aims to increase employment and generate economic growth by providing efficient surface access and improved connectivity to, from and between Manchester Airport, local, town and district centres, and key areas of development and regeneration (e.g. Manchester Airport Enterprise Zone). Furthermore, the proposed development aims to boost business integration and productivity by improving the efficiency and reliability of the highway network to reduce the conflict between local and strategic traffic and provide an improved route for freight and business travel.

The planning applications have a number of accompanying statements such as the ES, TA, FRA and Drainage Strategy that highlight the key sustainability measures the development has to offer. In particular, a sustainability statement and a CEEQUAL assessment are submitted as part of this planning application, which both highlight how sustainability has been considered in the design of the proposed development.

5.2 LOCAL AND SUSTAINABLE MATERIALS

A significant amount of energy can be used in the transportation of building materials. This can be reduced through the use of local construction materials and local builders. The proposed development will endeavor to source local materials which meet these aims and help to strengthen the local economy through their manufacture, supply and

construction.

5.3 RECYCLING/WASTE DISPOSAL DURING CONSTRUCTION

A draft Site Waste Management Plan (SWMP - see appendix 13 of the Environmental Statement) 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.

It is expected that during the construction of the scheme the contractor will take all the appropriate measures 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.

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.

The top soil intended to be used as part of the proposed development 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.

5.4 FLOODING

The Flood Risk Assessment (FRA) submitted as part of the planning applications has considered all potential sources of flooding to the proposed development including sea, river, groundwater, land drainage, overland flow, artificial sources, water mains, sewers and surface water drainage arrangements. Climate change has also been considered, which is projected to increase the peak rainfall intensity by 20% and increase the peak river flow by up to 20% over the lifetime of the development. Examination of the Environment Agency flood map confirms the route to be located predominantly in Flood Zone 1, with isolated sections in Flood Zones 2, which are:

- Norbury Bridge, adjacent to Norbury Brook at the proposed point of realignment (located within the SMBC council boundary); and
- At the existing A555/A34 roundabout north of Handforth Dean (located within both the CEC and SMBC council boundaries).

As the vulnerability of the proposed highway scheme, based on the guidance given in the NPPF Technical Guidance, is predominantly 'Essential Infrastructure' with some 'Water Compatible' features, the highway scheme is considered appropriate within the planning context without the need for the Exception Test. The route lies in a protected corridor identified for such a scheme, and is predominantly located in Flood Zone 1. It is therefore assumed that the Sequential Test is considered to be passed for the scheme.

5.5 SUSTAINABLE DRAINAGE

The 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.

5.6 HEALTH AND WELLBEING

The proposed development will incorporate a number of measures that aim to ensure the health and wellbeing of the surrounding community is protected, including:

- 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.
- Acoustic barriers and bunds are proposed at various points along the route to mitigate any negative impacts associated with noise emanating from the proposed development.
- The scheme will include provision of a segregated pedestrian and cycle route adjacent to the new road and existing length of the A555, providing a new orbital link for the strategic cycle/pedestrian network.

Furthermore, 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 identifies where mitigation is required to ensure the health and wellbeing of the local community is protected.

5.7 SUSTAINABLE TRANSPORT – PEDESTRIAN AND CYCLISTS

It is expected that traffic in local areas will be reduced as a consequence of the proposed development. It is expected that bus services will become more reliable with shorter journey times.

One of the main objectives of the scheme is to provide a cycle route along the full length of the proposed relief road and retrofitted to the existing A555. This new orbital link will be fully integrated with the existing local cycle and pedestrian network to maximise access to the new route and therefore the benefits associated with the scheme.

The proposed development will connect the scheme's pedestrian and cycle route with the existing local network to deliver an integrated and accessible new east-west link for pedestrians and cyclists.

The provision of these new links to the existing network is an important component of the overall scheme. The pedestrian and cycle network will provide a high-quality, safe and direct east-west link, supporting the step-change in provision of infrastructure for non-motorised modes required to encourage more people to choose cycling and walking as an alternative to the car.

5.8 NATURAL HABITAT CREATION AND ECOLOGY

Where the 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. These surveys have identified any areas where wildlife, particularly protected species such as Great Crested Newts, are present within the vicinity of the scheme, and identifies ways in which the local wildlife can be protected. Several existing habitats will have to be removed as a result of the scheme, however where this takes place suitable replacements are being installed as close as possible and any wildlife that resides within the existing habitats will be relocated whilst trying to cause as little disturbance as practicable.

REFERENCES

- ¹ Department for Communities and Local Government (2010) Guidance on Information Requirements and Validation. <https://www.gov.uk/government/publications/planning-applications-information-requirements-and-validation>
- ² Stockport Metropolitan Borough Council (2010) Design and access statements. Available from: <http://www.stockport.gov.uk/2013/2994/developmentcontrol/14406/14409/statementguide> (accessed 06/2013)
- ³ Cheshire East Council (unknown) Making the best use of design and access statements. Available from: http://www.cheshireeast.gov.uk/environment_and_planning/planning/view_a_planning_application/making_a_planning_application.aspx (Accessed 06/2013)
- ⁴ Although this guidance note was prepared by the former Crewe and Nantwich Borough Council, it is applicable to all development throughout Cheshire East.
- ⁵ Manchester City Council (2007) Guide to Development in Manchester. Available from: http://www.manchester.gov.uk/info/200074/planning/1528/the_guide_to_development_in_manchester (Accessed 06/2013)
- ⁶ Further details relating to the DMRB are provided on the Highways Agency website <http://www.dft.gov.uk/ha/standards/dmrb/>
- ⁷ Communities and Local Government (2012) National Planning Policy Framework. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf (accessed 07/2013)
- ⁸ Stockport Metropolitan Borough Council (2011) Stockport Core Strategy Development Plan Document. Available at: http://www.stockport.gov.uk/2013/2994/developmentcontrol/planningpolicy/LDF/ldfcorestrategydpd?bcsi_scan_AB11CAA0E2721250=0 (accessed 07/2013).
- ⁹ Cheshire East Council (2004) Macclesfield Borough Local Plan. Available at: http://www.cheshireeast.gov.uk/environment_and_planning/planning/spatial_planning/saved_and_other_policies/macclesfield_local_plan.aspx (accessed 07/2013)
- ¹⁰ Manchester City Council (2012) Manchester Core Strategy DPD. Available at: http://www.manchester.gov.uk/downloads/download/4964/core_strategy_development_plan (accessed 07/2013)
- ¹¹ Stockport Metropolitan Borough Council (2012) Sustainable Design and Construction SPD. Available at: <http://www.stockport.gov.uk/2013/2994/developmentcontrol/planningpolicy/LDF/SPD/susdesconspdpdf> (accessed 07/2013)
- ¹² Manchester City Council (2007) Guide to Development in Manchester SPD. Available at: http://www.manchester.gov.uk/site/scripts/download_info.php?fileID=1424 (accessed 07/2013).

KEY ABBREVIATIONS

A6MARR	A6 to Manchester Airport Relief Road
AGMA	Association of Greater Manchester Authorities
CABE	Commission for Architecture and the Built Environment
CEC	Cheshire East Council
CEMP	Construction Environmental Management Plan
DAS	Design and Access Statement
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
DPD	Development Plan Document
EIA	Environmental Impact Assessment
ENWL	Electricity North West
ES	Environmental Statement
FPA	Full Planning Application
FRA	Flood Risk Assessment
GIRV	Guidance on Information Requirements and Validation
GMAU	Greater Manchester Archaeology Unit
GMCA	Greater Manchester Combined Authority
ha	Hectares
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
LDD	Local Development Document
LDF	Local Development Framework
LLCA	Local Landscape Character Area
LLF	Local Liaison Forums
LPA	Local Planning Authority
MAELR	A555 Manchester Airport Eastern Link Road
MAG	Manchester Airport Group
MCC	Manchester City Council
NERC	Natural Environment and Rural Communities
NMU	Non-motorised Users
NPPF	National Planning Policy Framework
PAULA	Poynton Against Unnecessary Link Roads to the Airport
PRoW	Public Right of Way
RSA	Road Safety Audit
SBI	Sites of Biological Importance
SCI	Statement of Community Involvement
SCS	Sustainable Communities Strategy
SEMMMS	South East Manchester Multi Modal Strategy
SMBC	Stockport Metropolitan Borough Council
SPD	Supplementary Planning Documents
SSSI	Sites of Special Scientific Interest
SUDS	Sustainable Urban Drainage Systems
SWMP	Site Waste Management Plan
TA	Transport Assessment
TCPA	Town and Country Planning Act
TfGM	Transport for Greater Manchester
TSRGD	Traffic Signs Regulations and General Directions
UMAU	University of Manchester Archaeology Unit
VRUG	Vulnerable Road Users Group
WCML	West Coast Mainline Railway

GLOSSARY OF TERMS

Term/ Acronym	Definition
CEEQUAL Assessment	The award scheme for improving sustainability in civil engineering and the public realm.
Culvert	A sewer or drain crossing under a road or embankment.
Gantry	A bridgelike overhead structure with a platform supporting equipment such as a crane, railroad signals, lights, or cameras.
Green Belt	Is a land use designation set by the local authority. The fundamental aim of the Green Belt is to prevent urban sprawl by keeping land permanently open. The essential characteristics of Green Belts are their openness and their permanence.
Green Infrastructure	A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.
Local Plan	The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community.
Locally Important Sites	These are non-statutory areas of local importance for nature conservation that complement nationally and internationally designated geological and wildlife sites.
National Planning Policy Framework	The national planning document which sets out the Government's planning policies for England and how these are expected to be applied.
Non-Motorised Users	Non-Motorised Users (NMUs) are considered to be pedestrians, cyclists and equestrians including electrically assisted pedal cycles and scooters.
Public Right of Way	A Public Right of Way is a route over which the public have a right to pass and repass, whether or not the land that it crosses is privately-owned.
Scoping Opinion	Developers write to the local planning authority requesting an opinion on what information should be included within an Environmental Statement (ES).
Sequential Test	A test to steer new development to areas with the lowest probability of flooding.
Statement of Community Involvement	The Statement of Community Involvement (SCI) provides a summary of the consultation held in preparing the planning application.
Sustainable Urban Drainage Systems	A sequence of water management practices and facilities designed to drain surface water in a manner that will provide a more sustainable approach than what has been the conventional practice of routing run-off through a pipe to a watercourse.

