



A5 WTC

Western Transport Corridor

Section 1

New Buildings to South of Strabane

Volume 3

Site Information

OJEU Ref: 09/S35-50924/EN

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1.0 Introduction

1.1 General

The A5 WTC Site Information at is limited to the data collected and developed for the selection of the Preferred Route. However due to the process of announcing the Preferred Route, the *Contractor* will be given a Preferred Route Briefing and the Preferred Option Report 2 (POR2) will be uploaded to the Data Room together with the Engineering Drawings relating to the Preferred Route once the Preferred Route has been announced. It is anticipated that this will happen at the end of July.

The information provided in the Site Information is general to all three Sections of the A5 WTC Project. Since there is a common goal to deliver the Project in a collaborative manner, the Information for all three sections will be available in the Data Room.

The *Contractor* should only consider the information relevant to the section he is tendering for when preparing his tender submission. The A5 WTC Project has been divided into three sections of approximately equal size and value.

The characteristics of each Section are summarised below:

Section 1 - New Buildings to South of Strabane

Approximately 21 to 25km of dual carriageway including approximately 4 major junctions depending on the preferred route option selected. Estimated cost between £150 million and £200 million.

Section 2 - South of Strabane to South of Omagh

Approximately 33 to 34km of dual carriageway including approximately 4 major junctions depending on the preferred route option selected. Estimated cost between £150 million and £200 million.

Section 3 - South of Omagh to Aughnacloy

Approximately 31 to 36km of dual carriageway including approximately 3 major junctions depending on preferred route option selected. Estimated cost between £150 million and £200 million.

The exact boundaries of the sites will be confirmed during Phase 1 of the contract. The location of the boundaries will be entirely at the discretion of the *Employer*. The indicative boundaries are shown on the Engineering Drawings developed for the Preferred Route and will be available in the Data Room after the Preferred Route Announcement. However they will be broadly similar to the Sections described in the POR1 document.

1.2 Introduction to the A5WTC Scheme

Proposals to upgrade the A5 between Londonderry and Aughnacloy have featured prominently in recent strategy documents produced by the Department for Regional Development. In July 2007, the Irish Government indicated its intention to make available a contribution of £400m to help fund major roads programmes in Northern

Ireland, providing dual carriageway standards on routes serving the Northwest Gateway and Eastern Seaboard Corridor from Belfast to Larne. The Northern Ireland Executive has confirmed its acceptance, in principle, to taking forward these two major roads projects, which have been included in the Investment Delivery Plan (IDP) for Roads, which was published in April 2008.

A number of milestones have been agreed, the first of which is the announcement of the Preferred Corridor in late 2008. The production of this Preliminary Options Report is a key part of the process and includes the rationale behind the decisions that contribute to the defining of the Preferred Corridor.

1.3 **Background**

In September 2001, the Department for Regional Development (of which Roads Service is part) formulated "Shaping Our Future: the Regional Development Strategy for Northern Ireland 2025".

An integral feature of the Regional Development Strategy (RDS) was the requirement to develop a Regional Transportation Strategy having a vision of "a modern, integrated and sustainable transportation system which benefits society, the economy and the environment and which actively contributes to social inclusion and everyone's quality of life". In July 2002, the Assembly approved the strategic direction and underlying principles of the 'Regional Transportation Strategy for Northern Ireland 2002-2012' (RTS).

Delivery of the RTS is being progressed through three multi modal transport plans, one of which is the Regional Strategic Transport Network - Transport Plan (RSTN - TP), published in March 2005.

A number of priority schemes to improve the Regional Strategic Transport Network (RSTN) were ongoing and appraisal work (based on the Government's five key criteria of environment, safety, economy, accessibility and integration) was undertaken to identify further SRI schemes for inclusion in the RSTN TP.

Delivery of the RDS received a boost in 2005 with the announcement of the Investment Strategy for Northern Ireland (ISNI). The £16bn strategy set out a high level view of planned investment up to 2015 with proposals for up to £1.4 billion of strategic road improvement schemes. In July 2006, Roads Service published the consultation document 'Expanding the Strategic Road Improvement Programme

2015' which included schemes to the value of the ISNI programme as well as a list of schemes that performed well in assessment but were not affordable within anticipated ISNI funding for the period 2005 - 2015.

The strategy has recently evolved further in conjunction with the Executive's Programme for Government. Earlier this year the Northern Ireland Executive agreed it's first (three year) Budget and endorsed a revised ten year Investment Strategy, covering the period 2008 – 2018. This strategy indicates proposals to invest over £3bn (which includes a contribution of £400m from the Irish Government) in our roads infrastructure.

The RSTN TP has 8 primary objectives including the need “to examine access to regional gateways and cross border links with an emphasis on improving connections from the 5 key transport and 4 link corridors”. One such corridor identified in the RSTN TP is the A5 Western Transport Corridor (A5 WTC).

The A5 Western Transport Corridor (A5 WTC) is one of five key strategic corridors in Northern Ireland as defined in the RTS. The corridor starts in the North West of the province at Londonderry and runs 88km south to the border, close to the village of Aughnacloy. The A5 WTC feeds into the N2 in the Republic of Ireland at the Moy Bridge border crossing and together the A5 and N2 provide a strategic link between Dublin and the North West. Within the extent of the scheme itself there are the strategic links between the urban centres of Londonderry, Strabane, Omagh, and Aughnacloy. The existing corridor in addition provides crucial links from both Dublin and Northern Ireland to urban centres in County Donegal.

The route is intersected by four key routes, including the A4 Key Transport Corridor (Belfast - Enniskillen – Sligo), the A32 Trunk Road (Enniskillen – Omagh), the A505 Trunk Road (Omagh - Cookstown) and the A38/N14, Lifford/Strabane link Road. The A5 also links to the A6 Key Transport Corridor (Londonderry - Belfast) and the A2 Key Transport Corridor (Londonderry – Limavady) within the city of Derry.

1.4 **The Existing A5 Corridor**

The existing A5 WTC is ‘patch work’ of differing width single carriageway roads with intermittent stretches of climbing lanes and overtaking opportunities. This lack of consistency in the road design parameters leads to the use of inappropriate high speeds through the good lengths of the road resulting in a lack of appreciation for the poorer conditions of the road ahead. In excess of 200 side road junctions currently connect with the A5 with over 420 domestic/commercial access, excluding those in the various urban settlements, along the route.

Over the past twenty years a series of local upgrades have been carried out along the length of the A5 Western Transport Corridor in an attempt to improve both safety and journey times. These upgrades have not achieved a significant reduction in accident risk and journey times along the corridor.

The existing A5 carriageway runs south from Londonderry, initially travelling adjacent to the River Foyle. It passes through the villages of New Buildings and Magheramason before continuing through the hamlets of Bready and Cloghcor and village of Ballymagorry. The A5 passes through Strabane on the bypass around the western edge of the town.

Between Strabane and Newtownstewart the road runs in close proximity to the western banks of the Mourne and Strule rivers before by-passing the town of Newtownstewart. Newtownstewart Bypass, opened in 2002, follows a route to the north east of the town. South of Newtownstewart, the road continues to run in close proximity to the western banks of the River Strule before passing close by the Ulster

American Folk Park. From here the route continues south onto the Omagh Throughpass.

The A5 continues south of Omagh town along the flood plain of the Drumragh River to Doogary. From here it continues through to Gortaclare and follows the valley of the Routing Burn through a section of the Sperrin Mountains, around Slievemore, via Garvaghy and continues to Ballygawley roundabout. The road heads south from the A4 to Aughnacloy. At the southern end of Aughnacloy, the A5 continues south to the border with the Republic of Ireland where it becomes the N2.

The existing A5 route is single carriageway. The carriageway is generally a standard 7.3m in width although the provision of hardstrips is intermittent and verge widths vary considerably along the length. There are also a number of lengths of 2+1 climbing lane/overtaking sections. Footpath provision is also intermittent.

The A38/N14 single carriageway road is a cross border link between the roundabout on the A5 in Strabane and the N14/N15 roundabout in Lifford. Donegal County Council and the National Roads Authority (NRA) have developed proposals for dual carriageways for both the N14 and N15 which includes an upgrade of the A38/N14 cross border link.

Monaghan County Council and the NRA are currently in the process of appointing consultants to determine the preferred route for an upgrade of the N2 between the border crossing at Moy Bridge and Clontibret.

1.5 Existing Constraints

Geotechnical

A preliminary assessment of the key geological & geotechnical constraints within the study area has been undertaken based on information available from published sources and consultations with statutory authorities.

The underlying geology falls into 3 specific regions within the study area. In the north, ancient Precambrian rocks lead to the high mountains and steep sided river valleys of the Sperrin Mountains north of Omagh. Further south, Devonian & Carboniferous age sandstones, lead to a plain rising southwards from Omagh towards Slievemore. In the far south this forms a rocky ridge, but in the north the low lying ground is blanketed by drumlins. There is also the Drumlin terrain of the low lying Clogher Valley, with underlying Carboniferous age mudstone, sandstone and limestone.

There are a number of geo-environmental constraints within the Study Area that have had an impact on corridor selection.

In the north of the study area (Section 1 – New Buildings to Strabane), there is the high ground of the Sperrins to the east and the floodplains of the rivers, notably the River Foyle (to the west) and River Mourne, which can be expected to be formed of soft soils. The raised peat bogs on the Foyle floodplain and upland peat can be

particularly unstable and easily destabilised by construction activity as well as difficult and expensive to cross.

In the central section of the study area (Section 2 – Strabane to Omagh), there are the summits of Owenreagh Hill, Slieveard, Bessy Bell or Pollnalaght and Cavancau Gold Mine west of Omagh is a significant physical constraint. Extensive alluvial and peat deposits associated with the Fairy Water floodplain present soft ground conditions and potential settlement problems, as do and extensive peat issues south east of Omagh.

In the southern section of the study area (Section 3 – Omagh to Aughnacloy) there are the summits of Slievemore and Slievedivena and the ridge between Knockmany and Slievemore. Peat is extensive to the south and east of Omagh and the floodplain areas will typically comprise soft material.

Structures

There are 42 existing bridges and 21 retaining walls along the current A5 route. The majority of the bridges (32) carry the existing A5 over watercourses and vary greatly in type, form and construction. Only 4 of the bridges are deemed to be in poor condition, with the majority (21) deemed to be in fair condition with the remaining to be either in good or very good condition. Potential proposed structures have been identified in broad terms for outline cost estimate purposes.

Pavements

The existing road pavement is in a variable state, with some sections having been recently resurfaced and upgraded, while others are showing signs of deterioration. From surveys carried out and survey data held by Roads Service it is estimated that approximately a third of the length of road has a residual life of less than five years and approximately two-thirds of the road has skid resistance below the investigatory level set for this road.

Environment

Section 1 of the study area is dominated by the broad valley landform of the Foyle River. There are several towns, villages and hamlets within this section of the study area which form key environmental receptors (in terms of air quality, visual, land use, noise and community) in addition to the scattered farmsteads and dwellings that occur throughout. These include Strabane, New Buildings, Magheramason, Bready, Ballymagorry, Artigarvan and Dunamanagh. Outside of settlement limits, a number of other public lands are located throughout the area, including Forest Service Estates and Public Angling Estates. These include Baronscourt, Knockmany, Favour Royal and Dunmoyle Forests and the Sperrin Mountains.

A number of features of natural, landscape, or cultural significance are contained within Section 1. There are a significant number of individual sites with heritage designations of varying periods and types within the study area, including the Scheduled Monuments of Dunalone Fortified Town and the former Strabane Canal. Registered Parks, Gardens and Demesnes of Historic Interest within the study area

include Ashbrook, Beechill, Brook Park, St Columb's Park, Ardmore, The Oaks Government House and Molenan House.

An Air Quality Management Area (AQMA) has been declared by Strabane District Council for the town of Strabane.

There are a number of watercourses flowing through this section of the study area. The whole of the River Foyle and its tributaries are well known in Northern Ireland for game and coarse fishing and support a diverse mixture of fish and river dynamics. The River Foyle and its tributaries, the River Finn and the River Faughan and its tributaries are all designated as Special Areas of Conservation (SAC) (internationally protected sites) for the flora and/or fauna they support. In addition there are a number of nationally protected ecological sites throughout the study area. There is only one active or disused inland navigation feature within the study area, the Strabane Canal (scheduled monument).

Strabane and Lifford lie at the confluence of two main rivers; the landform is dominated by the steeply rising lower slopes of Owenreagh Hill to the east and local hills to the west.

Section 2 of the study area comprises a number of hills and upland areas that are afforded expansive views across the broader farmland and settlements contained within. Omagh is the main town within this section of the study area. In addition, the towns of Sion Mills and Newtownstewart and villages of Clady, Ardstraw, and Gortin form key environmental receptors (in terms of air quality, visual, land use, noise and community). Outside of settlement limits, a number other public lands are located throughout the area, including Forest Service estates and Public Angling Estates.

A number of features of natural, landscape, or cultural significance are contained within Section 2, including the Sperrins Area of Outstanding Natural Beauty (AONB), Harry Avery's Castle (State Care Site, southwest of Newtownstewart), and the Ulster-American Folk Park (north of Omagh). The River Foyle and Tributaries SAC and Owenkillew River SAC are designated for the Annex I habitats and Annex II species they support. Tully Bog SAC, Fairy Water Bogs SAC & RAMSAR and Monegal Bog SAC are designated for the Annex I habitats they support. In addition there are a number of nationally protected ecological sites throughout the study area.

There are a significant number of individual sites with heritage designations of varying periods and types within the study area. Registered Parks, Gardens and Demesnes of Historic Interest within the study area include Barons Court, Moyle House, Lisnamallard House, Beltrim Castle. The towns of Sion Mills, Omagh and Newtownstewart are designated Conservation Areas.

The principal watercourse in this section of the study area is the Mourne / Strule River which flows in a south to north direction from Omagh to Strabane via the towns of Newtownstewart, Victoria Bridge and Sion Mills.

The Strule River incorporates nine designated watercourses as well as numerous undesignated watercourses as it flows towards Strabane.

There are two concentrated areas of Forest Service managed woodland and private grant-aided woodland. East of Sion Mills, several tracts of managed woodland are situated in the Ligfordrum Forest Estate, and southwest of Newtown Stewart there are several managed and grant-aided woodlands associated with the Baronscourt Forest. Beyond these two regions, areas of Forest Service managed woodland and private grant-aided woodland are scattered sparsely throughout the area.

There are no large towns within Section 3 of the study area. The villages / hamlets of Sixmilecross, Beragh, Seskinore, Fintona, Carrickmore, Ballygawley, Augher, Garvaghy, Clogher, Ballyreagh and Aughnacloy are also included within this section of the study area and comprise key environmental receptors (in terms of air quality, visual, land use, noise and community). The study area also comprises the gentle uplands associated with Slievemore to the north of Ballygawley that are afforded expansive views across the broader farmland and settlements contained within. These smaller settlements generally exhibit a limited range of land uses, often functioning as "dormitory settlements" to larger towns and/or centres for agricultural interests of the surrounding countryside.

A number of cultural, landscape and nature conservation areas are promulgated through the local area plans, both within and beyond settlement limits. In addition to international and national designations (SACs, ASSIs, AONBs, etc.), a number of natural, landscape, and cultural areas/features are protected from development under local area planning policies.

There are a significant number of individual sites with heritage designations of varying periods and types within this section of the study area. Registered Parks, Gardens and Demesnes of Historic Interest within the study area include Clogher Park, The Thistle and Favour Royal. Deroran Bog SAC, Cranny Bog SAC and Tonnagh Beg Bog SAC are all designated for their Annex I habitats. In addition there are a number of nationally protected ecological sites throughout the study area.

Section 3 incorporates five main catchment areas; the Camowen basin, the Quiggery Water basin and the Drumragh basin all of which all feed into the main River Foyle catchment basin and flow north towards Lough Foyle. The River Backwater catchment in the southern region of the study area feeds water into the principal River Blackwater and transfers it in a southerly direction towards Lough Neagh.

The Camowen watercourse is approximately 20.5km in length and flows from its source in Carrickmore to the east of Omagh to its point of discharge into the River Strule at Drumragh Bridge in Omagh. The Camowen intercepts numerous minor watercourses including the Cloghfin, the Recarson River and the Cranny Burn and generally crosses most of the eastern Corridors in the study area.

The Owenreagh and Quiggery Water Rivers converge at Ballynahatty approximately 4km south of Omagh to form the Drumragh River which then flows for 8km in a northerly direction until its confluence with the Camowen River to form the Strule River. The Quiggery Water is formed when the Seskinore and Fintona Rivers converge in Tattyreagh, between Omagh and Fintona. The Seskinore River is formed when the Routing Burn and the Eskragh River converge approximately 2.5km south east of Seskinore. In general these watercourses flow from a south east to north west direction and in doing so cross most of the western Corridors in the study area. The principal watercourse in the River Blackwater catchment basin, is the Ballygawley River.

Inland water features within Section 3 of the study area all lie within the catchment of Lough Foyle and the River Blackwater. Many watercourses within Section 3 are known to be used extensively by anglers.

Forest Service managed woodland and private grant-aided woodland parcels are well-distributed throughout this section of the study area.

Traffic

The traffic flows on the existing A5 within urban areas lead to congestion at peak times. Flows are typically in the range 10,000 – 15,000 vehicles per day (vpd) between Londonderry and Omagh, and 19,000 vpd on the Omagh Throughpass. Flows south of Omagh are lower, e.g. 10,000 vpd between Omagh and Ballygawley and 6,000 vpd between Ballygawley and Aughnacloy. Speeds and journey times on the existing A5 are variable due to the combination of road standard and the level of HGV and agricultural vehicles that use the route.

Between the towns, the speed of light vehicles is frequently held up by slow-moving agricultural vehicles, which sometimes leads to inappropriate overtaking and accidents. Despite this, the A5 appears to have an accident rate which is similar to the UK average for equivalent road types.

The A5 has a higher ratio of serious and fatal accidents (i.e. the proportion of Personal Injury Accidents that are serious or fatal) than the average for Northern Ireland.

Utilities

Electricity, potable water, foul water, and various telecommunications suppliers are the main services found throughout the study area. These are more concentrated within the main settlement areas, although major water mains (up to 600mm diameter), sewers (up to 600mm diameter) and overhead electricity lines (33kV and 110kV) can be found crossing the more rural areas of the study area. There are also numerous pumping stations and sewage treatment works within the study area.

1.6 The Preferred Route

The Preferred Route selection process has been completed and a report has been prepared by the *Employers* Agent. The details of the Preferred Route are described in the Preferred Option Report 2 (POR2). This will be available through the Data Room following the Preferred Route announcement.

2.0 Reports and Surveys

2.1 Location of Data

The reports contained in the Site Information are available for downloading from the Virtual Data Room. These are stored in the Data Room Site Information.

The information such as MX Models, Landform Data, Pavement Videos for the existing A5, LIDAR Surveys, Aerial Photography etc will be made available to the successful *Contractor*.

The majority of the information developed for the A5 WTC have been summarised in the POR1 and POR2 documents. The POR1 Document is available in the Data Room. The POR2 Document will be uploaded to the Data Room once the Preferred Route has been announced.

The *Employers Agent* maintains a Web Based GIS Data system which has the information contained in the POR documents in a digital format, together with more sensitive information. The successful *Contractor* will be give access to the live site. Access has to be restricted at this time because of the sensitive and confidential information on the Database.

2.2 Traffic Information

A traffic model has been prepared for the forecasting of the future traffic flows, together with a Wider Economic Benefit Study to assess the benefits of regeneration as a result of a Project of this scale. The traffic model has been developed by the *Employers Agent* and it will be maintained and updated to support the statutory processes by the *Employers Agent*.

A summary of the initial Traffic Forecasts can be found in the POR1. An updated Traffic Forecast has been prepared and is summarised in the POR2.

2.3 Geotechnical Information

The Geotechnical Investigation records are summarised in the following reports:

796036/0600/R/005 Geotechnical Preliminary Sources Study Report: Section 1

796036/0600/R/006 Geotechnical Preliminary Sources Study Report: Section 2

796036/0600/R/007 Geotechnical Preliminary Sources Study Report: Section 3

An Initial Geotechnical Investigation has been completed and the information is being collated. This has been used to guide the selection of the Preferred Route.

Three main Ground Investigation Contracts have been Tendered and it is anticipated that the work will commence after the Preferred Route has been announced and the affected landowners have been contacted. The Ground Investigation will cover all three sections.

The initial assessment of the Geotechnical issues have been summarised in the POR1 and POR2 documents.

2.4 Environmental Information

A number of environmental constraints and opportunities have been identified to date through a series of desk studies, site visits and environmental assessments.

The *Contractor* will be required to fulfil all environmental commitments set out in the environmental statement to ensure protection of the environment during construction. The *Contractor* will be responsible for providing detailed construction information to the environmental assessment team to ensure that construction impacts are robustly identified and assessed. The *Contractor* will be responsible for providing information for and contributing to the development of a detailed Construction Environmental Management Plan (CEMP).

The initial assessment of the Environmental issues have been summarised in the POR1 and POR2 documents.

2.5 Statutory Bodies and Consultees

A list of the statutory bodies and Statutory Undertakers can be found in the Data Room. The C2 enquiries have been issued, however the statutory utility companies will only provide the C3 information for the Preferred Route. The responses to the C2 Enquiries can be found in the Data Room.

The information has been received in a digital format with the exception of the telecommunications. This has been digitised by the *Employers Agent*, however the accuracy of this information cannot be relied upon and is indicative only.

2.6 Drainage Information

Flood models are being prepared for the primary water courses to assess the impact of the Preferred Route on the river systems. The initial assessment of the drainage issues have been summarised in the POR1 and POR2 documents.

2.7 Lands Information

The Land Reference Plans and Schedules have been prepared and they are continually being updated by the *Employers Agent*. Due to the sensitive nature of these documents they will not be made available in the tender period; however they will be made available to the successful *Contractor*.