

## 2 EXISTING CONDITIONS

The existing conditions within the study area were described in the Stage 1 Report. The following is a synopsis of the Stage 1 and Stage 2 Reports and communicates any further information obtained since the publication of the Stage 1 and Stage 2 Reports.

### 2.1 Engineering Conditions

The A6 Castledawson Bypass/Hillhead Road from Castledawson Roundabout to the Toome Bypass is shown in Figure 2.1a. The 5.4km long single carriageway road is part of the Key Transport Corridor linking Belfast to Londonderry. From Castledawson Roundabout to the Toome Bypass Creagh Roundabout, the existing A6 comprises 5.4km of A-class road. The Castledawson Roundabout is a 100m diameter, 4-leg roundabout at the junction with the A6 and A31. The Creagh Roundabout at the western end of the Toome Bypass is 3-leg 45m diameter, located just north of the Creagh Business Park.

The average density of accesses along the A6 Castledawson Bypass/Hillhead Road is 4 per kilometre. Although defined as a 'Low Access' layout constraint in 'Highway Link Design' (DMRB, Volume 6, Section 1, TD 9/93), this is considered less than desirable for a 'Key Transport Corridor'. A large number of the current accesses along the route are road junctions and private accesses. Advice in DMRB states that accident rates increase with the number and form of accesses. The mix of strategic and local traffic gaining access on to the route is considered a safety concern which needs to be addressed in any upgrading strategy.

The existing landform in the study area presents some engineering challenges and is predominantly gently undulating till covered terrain for the majority of the route. However, east of Castledawson and north of the existing A6 the landform is more complicated. Geological mapping indicates a large expanse of peat of indeterminate depth located on the north side of the A6 and further east there is an area of possible reclaimed land. Uncertainty over these two areas poses the main engineering challenges for this study area.

In addition to the many natural features affecting the choice of alignment, there are also many man-made constraints, including:

- Numerous individual dwellings scattered throughout the area;
- Dense commercial/residential environments south of Castledawson and at The Creagh;
- The Business Park Development south east of The Creagh; and
- The local road network.

The local road network is characterised by a series of A class and B class roads, radiating from Toome and Castledawson, including: the A6 to Randalstown; the A6 to Londonderry; the A31 to Moneymore; the A54 to Castledawson; the B182 to Magherafelt; and the B182 to Ballyronan.

These are interspersed with numerous C class and unclassified roads serving many villages, hamlets, farms and individual dwellings in the area.

The study area is largely rural in nature with a fairly dense scattering of housing and commercial properties, typical of the Northern Ireland landscape. The housing is denser south of Castledawson and at The Creagh. There are also a number of commercial properties around The Creagh.

Numerous main services traverse the study area forming potential constraints upon any improvement scheme, including water mains and buried electricity cables. There are also numerous local services (electricity, sewerage, cable, water etc) linking to the many commercial and domestic properties lying within the study area. There are a number of overhead electricity cables crossing the A6 at the western end of Toome Bypass including a 275kV pylon electricity transmission line, which is part of the primary electricity distribution network for the province. There is also an electricity sub-station south of the A6 and east of the Creagh Road junction.

## **2.2 Environmental Conditions**

This section gives an overview of the existing environmental conditions, more detailed information on this subject can be found in the Environmental Statement.

The study area lies within the Lower Bann Valley, where the land is relatively low-lying, with a transition from shallow drumlins on the edges of floodplains, to extensive flat pastures, bog and wet woodlands on the fringes of Lough Neagh and Lough Beg. The landscape is generally secluded, with a prominent network of hedgerows containing numerous trees, particularly oak. Farms and villages are concentrated on shallow drumlins, which often form prominent 'islands' with a relatively diverse landscape pattern with numerous trees. In recent years the area has become increasingly overwhelmed by ribbon development around the main road, especially near Toome, experiencing extensive loss of hedgerows and general degradation of the landscape character.

To the southeast of Castledawson, the lower reaches of the Moyola River flows towards Lough Neagh, often hidden from view by extensive woodlands on wet, low-lying land. These carr woodlands are generally dominated by willow, alder and birch and generally close to the river channel.

Throughout the study area, there are a number of known sites of cultural heritage significance. A number of designated ecological sites are located in close proximity to the proposed alignments including Lough Beg Ramsar site, Lough Beg Area of Scientific Interest (ASI), Lough Beg Area of Special Scientific Interest (ASSI), Lough Beg National Nature Reserve (NNR), Lough Neagh Area of Scientific Interest (ASI), Lough Neagh Area of Special Scientific Interest (ASSI), Lough Neagh Ramsar Site, Lough Neagh Special Protection Area (SPA) and Toome ASSI.

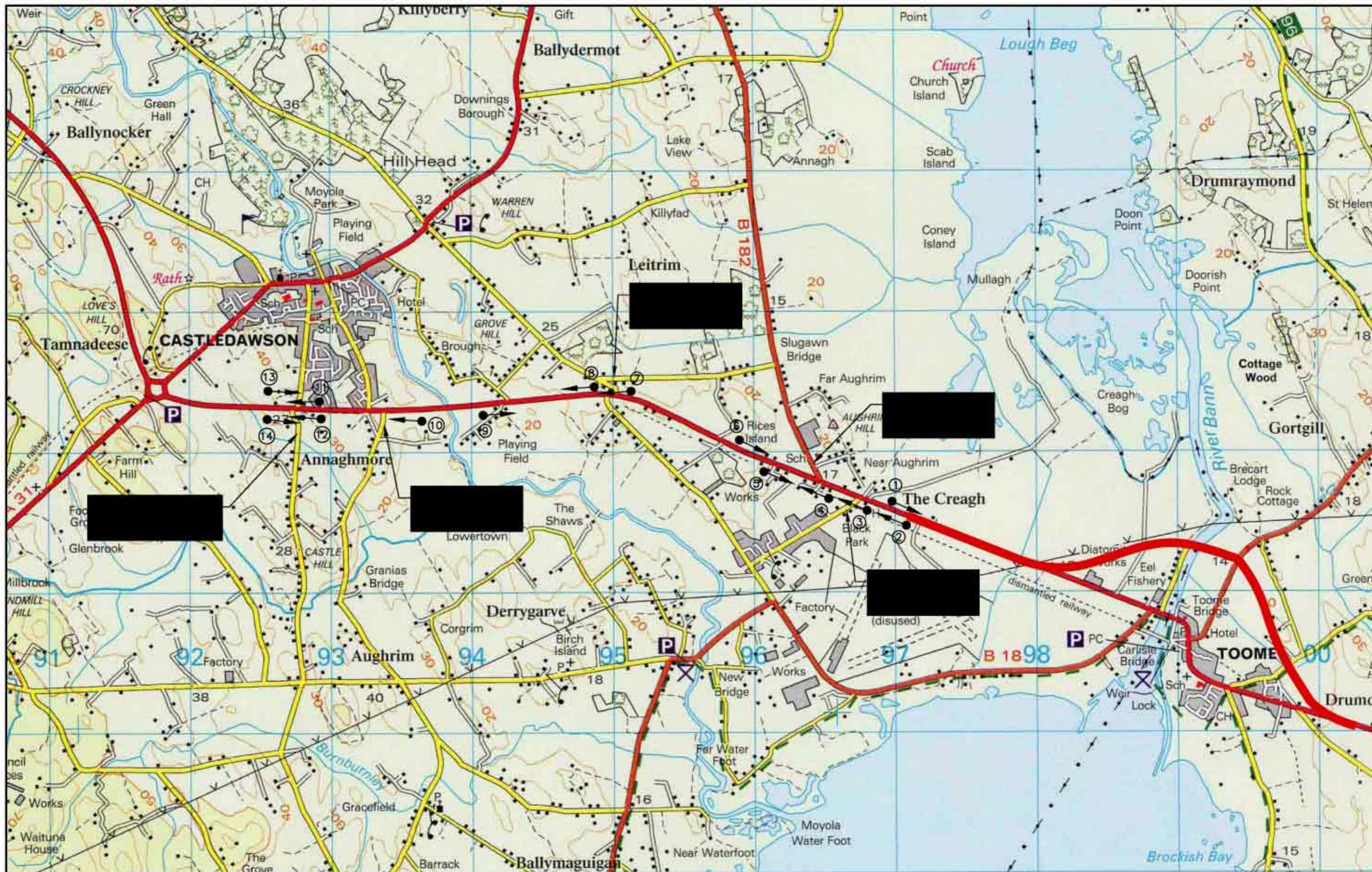
## 2.3 Traffic Conditions

A programme of manual classified counts (MCCs) was undertaken at eleven locations along the A6 between Castledawson and Randalstown to establish current traffic volumes and turning movements at key locations along the route. The surveys were undertaken in October 2003 and recorded traffic flows during three discrete time periods to provide a record of turning movements during peak and off-peak periods. The standard COBA (COst Benefit Analysis) 5-vehicle classification was adopted for the surveys, namely; cars; light goods vehicles (LGV); other goods vehicles 1 (OGV1); other goods vehicles 2 (OGV2); and buses and coaches (PSV). As the surveys were undertaken over a 10-hour period (3hrs+4hrs+3hrs), the missing data was in-filled based on adjacent time periods to provide an equivalent 12-hour flow.

The estimated 12-hour traffic flows ranged from 11,800 vehicles to the east of the Castledawson Roundabout, increasing to 14,500 vehicles to the west of Toome.

During the same programme of traffic surveys in October 2003, an automatic traffic counter (ATC) was installed on the A6 at Rices Island to provide a short-term continuous record of prevailing traffic flows on the route. The 12-hour flows recorded at the ATC site on the day of the MCC survey indicate that the ATC flows are within 2% of the MCC flows recorded at the neighbouring junctions.

Collision data for the A6 between Castledawson and Toome was examined for the four-year period from 1998 to 2001. Analysis of the data indicates that in 2000 there were thirteen accidents of unknown severity. Further details of existing traffic conditions along the A6 are presented in Chapter 5 of this report.



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Location of Photographs (Figure 2.1b)

A6 Toome to Castledawson Dualling

Existing A6  
Location of Photographs

Figure 2.1a



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**A6 Toome to Castledawson Dualling**

**Existing A6  
Photographs**

**Figure 2.1b**