

APPENDIX II - HIGHWAYS AND TRANSPORTATION LINKS

Highways

11.1

This section reviews the existing cycleway, footpath and bridleway provision for the Canal Head development site. Proposed improvements and developments to the existing cycleway, footpath and bridleway network are also discussed.

A location plan showing the existing and proposed cycleway, footpath and bridleway provision for the Ulverston Canal area is included in the report.

Existing Situation

The Ulverston Canal site is situated on the eastern fringe of the built up area of Ulverston, between the A590 Canal Street to the west and Ulverston Channel to the east. Canal Street is an urban section of the A590 trunk road that ultimately connects Barrow-In-Furness to the M6 motorway.

Canal Street is street lit and has footways on both sides of the carriageway, serving pedestrian access from the town centre and surrounding residential areas. The footways are of varying width ranging from approximately 2.5 metres in the vicinity of North Lonsdale Terrace, down to barely 1.0 metre wide at the narrow section of the Canal Street adjacent to the existing Canal Head entrance. On the opposite side of the A590 to the Canal access, there is very restricted footway width between the terraced property frontages and the pedestrian guard railing. The footways on the A590 continue eastwards to the roundabout adjacent to Booths foodstore and continue on further beyond the town boundary. The only controlled pedestrian crossing facility on the A590 in the vicinity of the site is a pelican crossing located just to the west of the junction with North Lonsdale Terrace.

The Cumbria Cycleway presently passes along

the A590 adjacent to the proposed Canal Head development. This route is, however, no longer promoted nor does it have its signage maintained. The traffic volumes, speeds and number of large vehicles do not make the carriageway a safe route for cyclists.

North Lonsdale Terrace/North Lonsdale Road is located along the southern fringe of the Canal study area and provides the main access route from the trunk road for GlaxoSmithKline employees. The route is generally street lit but towards the west end of the route has only a footway on the south side. No footway is provided on the north side of the road outside the auction mart and abattoir from the A590. North Lonsdale Road continues south-eastwards to the GlaxoSmithKline plant then joins the U5722 county road towards Canal Foot. There are generally no pedestrian facilities provided on the U5722 towards Canal Foot although traffic volumes are generally sufficiently low to permit relatively safe walking on the road itself. Similarly, access by cycling and horseback is reasonable via this relatively quiet road. At Canal Foot, the road continues over the lock gate to serve as an access-only route for vehicles to the parking area and also residential properties. Pedestrians, cyclists and equestrians can then enter the Canal towpath at the Canal Foot access point

Direct access to the west end of the Canal area is provided via an existing access road junction located immediately northwest of the Canal Head Basin. This affords the only vehicle access to existing Canal Head properties and businesses and also to Rame Farm and Meadow Cottage located further east along the surfaced Canal towpath, which runs along the north side of the water. Anglers also park in the verges along the towpath. The general level of vehicle use along the Canal towpath is very infrequent and the route is widely used by leisure walkers, cyclists, horse riders and anglers, without noticeable detrimental impact from motor vehicles. The existing Canal towpath is only

wide enough for single file traffic along most of its length.

In addition to the vehicular access routes described above, walking and cycling access onto the central section of the Canal towpath is also provided via the former sliding rail bridge crossing the Canal adjacent to the GlaxoSmithKline site, and which has now been converted to pedestrian footbridge use. From the bridge, the footpath turns northwest-wards along the south bank of the Canal before turning south-westwards and joining North Lonsdale Road.

There is a completed section of Greenway, 750 metres south of the study area named the Rope Walk. This off-road route is accessed from the U5722 county road which connects south Ulverston to Canal Foot. The Rope Walk provides an alternative non-vehicle route to a rural section of the road without footways between Fitz Bridge and South View Farm. The Rope Walk is essentially an isolated short section of Greenway but the connecting road sections are generally quiet in terms of vehicle volumes and provide a reasonably safe access route towards Canal Foot from Ulverston for pedestrian, cycling, and equestrian travel.

Ulverston Town is connected to the Cistercian Way and the Cumbria Way footpaths. The Cistercian way links Barrow in Furness with the Cumbria Way at Ulverston. The Cumbria Way continues North from Ulverston through the Lake District to Carlisle.

There are several public rights of way in the Ulverston Canal area. There is currently a section of right of way running through the proposed development site from Next Ness Lane, to the east of the existing glass centre, to the canal towpath. The canal towpath itself is also an existing public right of way. There are two public rights of way to the north of Canal Foot with one running adjacent to Ulverston channel and the other going through Riggs

Ancient Woodland. There are also informal footpaths along Next Ness Lane and the section of dismantled railway connecting this lane with the canal overbridge.

1.2 Proposed Extensions / Improvements

Cycle Routes

There are already two proposed extensions to the National and Regional Cycle Route network that will directly improve accessibility to the Canal head development:

Walney to Wear Cycle Route – This route will connect Walney Island with the Coast at Sunderland and would pass through the centre of Ulverston. The route is due to open in June 2005. This route would also be connected to the proposed National Cycle Route 72, which links to the proposed Canal Head development.

National Cycle Route 72 – It is proposed to significantly extend the National Cycle network in the Ulverston area with the implementation of National Cycle Route 72. This proposal would see the cycle route connect from the Walney to Wear Cycle route in Ulverston Town Centre, via the B5281 and A590, to Canal Head where it would separate into two off-road cycle routes. One route would then go directly north to Arrad Foot from Canal Head. The second route would proceed along the Canal Towpath to Canal Foot where it would go north adjacent to Ulverston Channel before connecting back to the original route.

1.3 Greenways

The Furness Greenways Project involves the construction of accessible paths in the Furness area to cater for walkers, horse riders and cyclists, which are known as Greenways. There are currently proposals to increase the existing Furness Greenways network in the Canal area, which will incorporate some of the proposed and existing cycleways and footways detailed previously. These proposals would include the formalisation of the Canal towpath as a

designated Greenway, which would link via Canal Foot and a section of road network into the existing Rope Walk Greenway section. It is also proposed to formalise a length of Greenway along a section of dismantled railway, between the pedestrian bridge over the Canal, northwards past Rame Farm to Next Ness Lane and beyond. The proposal would also see part of Next Ness Lane itself formalised as a Greenway, thereby creating a Greenway link to the northern fringe of the Canal Head development site. These proposed extensions to the Furness Greenways network in the area would greatly enhance non-vehicular access to and through the Canal site, and help to integrate the development more fully into a designated transport network in the area.

1.4 Ulverston Town Centre Development Proposals

As part of the Ulverston Town Centre masterplanning works, a signed pedestrian link has been proposed along the A590 from the town centre to Canal Head. The proposals include the possible provision of two uncontrolled pedestrian crossing points across the A590 in the vicinity of Canal Head. The first of these is a central refuge on the A590 adjacent to the existing Canal Head access road junction. If a suitable facility can be constructed along this confined section of carriageway, it would greatly assist pedestrians wishing to cross the A590 to what would be the start of the Greenway along the Canal towpath. A second possible A590 crossing point has been identified a short distance west of the Booths roundabout, and this would also benefit pedestrian crossing movements including visitors to the Canal Head development site.

1.5 Ulverston Canal Development Proposals

As part of the Ulverston Canal development, it is proposed to provide a new vehicle access route into the Canal Head area via the existing A590 roundabout adjacent to Booths. The existing

access from the A590 would then become an access-only vehicle route for properties/businesses fronting the Canal Head Basin. Vehicle access would terminate at the existing scrap yard, with the towpath continuing as a non-vehicular route for pedestrians, cyclists and equestrians.

The new vehicle access road into the Canal Head area could route around Cumbria Crystal and Heron Glass to serve the new development and visitor parking areas and also to provide a vehicle access-only link to the Canal towpath for Rame Farm and Meadow Cottage. Pedestrians, cyclists and equestrians will then have a fully vehicle-free section of the towpath at Canal Head whilst essential vehicle access to Rame Farm and Meadow Cottage will still be provided via the new access link and towpath Greenway.

Visitor parking would be included in the development site area adjacent to Canal Head and accessed from the new site access road. Visitors arriving by car would then have a short walk to the canalside and visitor facilities, from where they can choose to walk or cycle along the towpath, using the cycle hire facilities on offer. At Canal Foot, the development proposals include the provision of a new visitor car parking area adjacent to the GlaxoSmithKline car park. This would provide an extended parking area to the existing parking spaces at Canal Foot, and alleviate potential problems of roadside parking at busiest times of the year when all parking spaces may be occupied.

1.6 Draft Policy For Road, Cycleway, Footpath and Bridleway Provision In The Ulverston Canal Area

Clearly, there are a number of existing highway routes and individual schemes already identified for improving access for pedestrians, cyclists and equestrians, both within and connecting to the Canal development area. As part of the Canal development proposals, there is now clearly an opportunity to identify how the individual schemes can best be brought

together to create an integrated highway network serving both the Canal corridor and national routes

The first significant step would be the formalisation of the existing Canal towpath as a Greenway to provide the key corridor for connecting the existing and proposed footway, cycle routes and Greenways. With this in place, the other proposed Greenways improvements serving the site can then be implemented to provide a coherent network for shared pedestrian, cycle and equestrian facilities. These include provision of signing for an on-road Greenways link between the Rope Walk and Canal Foot, the implementation of a Greenways link along the former track bed from the Canal footbridge to Next Ness Lane linking to further proposed Greenway routes along Next Ness Lane itself and a new northeasterly route. The Next Ness Lane Greenway would then connect back to the Canal towpath through the proposed Canal development site. With all the proposed Greenways links in place, this will provide the core for the combined walking, cycling and equestrian networks.

Presently the footpath between the Canal towpath and South Ulverston on the south side of the canal needs improvement, and as part of the overall highways strategy to improve access by all users, it is recommended that this route be improved to provide full shared access by pedestrians and cyclists to and from the Canal area.

The proposed National Cycle Route 72 would

interconnect with the Greenways proposals for the towpath and Next Ness Lane. At Canal Foot, the NCN72 would then route northwards to connect with the existing public right of way along the coastline before rejoining the proposed new Greenways link across the Furness Rail Line towards Greenodd and other parts of the National Cycle Network. The proposed cycle hire facilities provided on-site as part of the Canal development would enable visitors to arrive by car and hire a cycle to ride along the Canal towpath and interconnecting routes, and could also provide an opportunity for longer distance cyclists to buy basic parts and refreshments en route.

Vehicular access to the main development area at Canal Head would be provided via a new access road linking to the A590 roundabout adjacent to Booths. A car parking area would be provided within the development area to serve visitors. At Canal Foot, the U5722 will continue to be used as the vehicular route towards the existing and proposed visitor car parking areas. The proposed new car parking area located to the east of the existing GlaxoSmithKline car park should reduce the likelihood of potential roadside parking problems at Canal Foot at busier times of the year and reduce potential conflict with pedestrians, cyclists and equestrians using the road.

It would be desirable to provide some form of pedestrian crossing facility over the A590 adjacent to the existing Canal Head access junction to integrate with the Town Centre masterplanning proposals and the proposed

Canal Greenway. This would most likely be provided in the form of a central pedestrian refuge as it is unlikely that the Highways Agency would permit a controlled crossing at this location. A signal controlled pedestrian crossing already exists across the A590, just west of the North Lonsdale Terrace junction but is not considered to be conveniently located for all pedestrian movements to and from the Canal Head area and it is likely that some pedestrians exiting the site at the existing Canal Head access would attempt to cross the A590 close by, rather than walk to the existing signal controlled crossing. A second possible pedestrian crossing point located closer to the Booths superstore should also be investigated to serve pedestrian crossing movements to and from the proposed development site access as well as the existing retail developments.

Overall, the strategic implementation of the above proposed highways improvement measures would enable the Ulverston Canal site area to be developed in a sustainable manner in line with DFT and Cumbria County Council policy. Tourism and leisure use of the area would be encouraged through the improvement of the cycleway, footway and bridleway routes at the site. In a regional context an improved transport network would also help to improve access to Ulverston and the Furness peninsula as part of the ongoing regional regeneration and development.

Transportation Links

2.1 Existing Road Network

The western limit of the Ulverston Canal study area is bounded by Canal Street, which is an urban section of the A590 trunk road connecting Barrow-In-Furness to the M6 motorway. This route carries relatively high volumes traffic throughout the day with a significant proportion of heavy goods vehicles. Canal Street provides the only existing vehicle access into the Canal Head site and is located on the southeast side of the A590 approximately 140 metres northeast of its junction with North Lonsdale Terrace. The section of A590 Canal Street bounding the study area is single carriageway and becomes confined in width in the vicinity of the site access, with narrow footways either side.

At the junction with North Lonsdale Terrace, the A590 widens to accommodate a ghost island right turn priority junction. Approximately 120 metres southwest of this junction, the A590 Quay Street reaches a staggered junction with Swan Street to the northwest and the A5087 Quebec Street to the southeast. A signal controlled pedestrian crossing is provided within the staggered junction layout with a central refuge, enabling pedestrians to cross the A590 in two stages.

Approximately 170 metres northeast of the Canal Head access junction, the A590 reaches a three-arm roundabout junction providing access to a petrol filling station, two Glassware producers (Crystal Glass and Heron Glass) and a Booths food store. A second (mini) roundabout located approximately 60 metres from the A590 roundabout feeds access to the individual developments listed above and also Next Ness Lane. The A590 Newland Road then continues northeast-wards from the roundabout as single carriageway to the town boundary before reverting to the national speed limit towards Greenodd.

North Lonsdale Terrace runs southeast-wards along the southwest boundary of the Canal Head area and serves residential areas to the southwest, and at South Ulverston, as well as being the main access route for the GlaxoSmithKline works located towards the southeastern section of the Canal. North Lonsdale Terrace runs from the A590 junction, passing the existing auction mart and abattoir areas of the Canal Head development site. This section of road only has a footway on the northeast side of the carriageway and none on the auction mart side. The road continues southwest-wards beneath the Ulverston rail bridge as North Lonsdale Road, passing numerous residential and business frontages and also a new housing development on the former Lund Farm site. Through South Ulverston, North Lonsdale Road has significant levels of roadside parking, frequently reducing the carriageway to single file working for passing traffic. To the southeast of South Ulverston, North Lonsdale Road serves several access roads to business units and GlaxoSmithKline before reaching the priority junction with the U5722 county road at the southern end of the GlaxoSmithKline works.

Vehicle access to Canal Foot is served by the U5722 county road which runs eastwards from the main southern residential area of Ulverston. The U5722 meets with North Lonsdale Road at the GlaxoSmithKline works then continues eastwards along the southeastern fringe of the works towards Canal Foot. The U5722 is a typical rural county road but is relatively lightly trafficked. No footways are provided between the works and Canal Foot. At Canal Foot, the U5722 continues across the lock gates to serve access to residential properties on the north side. The main public highway section of the U5722 effectively terminates at an informal roundabout south of the canal crossing and limited parking is provided for visitors and also patrons of the Bay Horse Inn.

The existing A590 access junction into the Canal

Head area lies between the property frontages of Canal Head House and Canal Head Court. The Canal Head Court frontages lies within one metre of the edge of the A590 running carriageway and this severely restricts visibility to the left from the access road. In combination with the uphill approach grade of the access road, drivers have difficulty creeping forward safely onto the A590 live carriageway to obtain sufficient vision of oncoming eastbound traffic. The view of oncoming traffic to the right from the access road is much less restricted. The restricted highway space available means that it is unlikely that an acceptable access junction arrangement could be found at this location without demolishing the properties at Canal Head Court to provide sufficient visibility.

Consultation with Highways Authorities

The Highways Agency (HA) and Cumbria County Council have been consulted in relation to access and potential traffic impact of the proposed Canal Head development. A copy of the correspondence received from the respective development control officers can be found at the end of this report

The HA is responsible for the trunk road network and are therefore concerned about the potential traffic impact of the development upon the existing A590 trunk road. In their response, the HA states the need to assess the highway impact of the development at 15 years after occupation of the final phase of development and state that "phasing will be a crucial element and have a direct bearing on the assessment year requirements". Initially, they would require a scoping note to be prepared in order to agree the parameters for the transport assessment.

Notwithstanding the general requirement for a transport assessment, the HA has specifically voiced concerns over intensification of use at the A590 Canal Street/North Lonsdale Terrace priority junction. Traffic volumes at this junction are expected to increase significantly as a result of a 118 dwelling residential development being constructed at Lund Farm, accessed from North

Lonsdale Road some 500 metres southeast of the A590 junction. However, it is understood that there are presently no major junction improvement proposals at the A590/North Lonsdale Terrace junction to mitigate against the additional housing development traffic. Any further development traffic would exacerbate the problems created at this junction. The HA goes on to state that "this junction could prove to be a major constraint to any development aspirations along the canal corridor, unless an appropriate solution can be achieved that will adequately mitigate the impact of your development traffic ..." Typically, this means that traffic queues and delays with the development in place should not be worse than those experienced without development traffic.

As regards to access into the site itself, the HA requests that consideration be given to routing access into the development site via the A590 roundabout, adjacent to Booths. In addition, the HA considers that the existing Canal Head access road junction would need to be improved if it is to be utilised for access into the proposed Canal Head development site.

The Cumbria County Council highways development control officer also indicated that suitable points of access into the site would need to be identified and that a transport assessment would be required to cover the whole site. In addition, access and links for pedestrians and cyclists should be explored.

2.2 Proposed Canal Access

The existing site access into the Canal Head area is substandard in terms of visibility from the access road, and is not considered a viable route into the main Canal Head development area. In order to provide a more appropriate access into the northern section of the Canal Head development area, it is proposed to construct a new road link from Canal Head onto the existing access road network serving the Booths and glass sites, and thereby connecting into the A590 at the existing roundabout as

suggested by the HA. The new access road would route around the east side of Crystal Glass and Heron Glass, connecting into the existing mini-roundabout, and then route via the existing road network onto the A590. The new access road would serve the proposed Canal Head development sites, a new visitor parking area, and also provide an access-only vehicle link onto the canal towpath for Rame Farm and Meadow Cottage. This would enable existing vehicle access onto the towpath from the A590 to be closed. The existing A590 access junction would however need to remain open to serve direct access to Canal Head Court, Canal House and the scrap yard site. Further vehicle access would be prevented beyond the scrap yard, thus providing a completely vehicle-free section of the Canal towpath between the scrap yard site and the new Canal Head access road.

Existing vehicle access into the Canal Head sites on the south side of the canal would remain largely unchanged except for some possible relocation of accesses into the auction mart and abattoir sites.

Vehicle access to Canal Foot would remain as existing via the U5722 county road.

2.3 Assessment of Traffic Impact

The Canal development proposals will generate some additional traffic on the local highway network and it will be necessary to carry out an assessment of roads and junctions likely to be significantly affected by the proposals. The HA typically considers that a significant impact occurs where traffic volumes on any part of the road network would increase by 5% or more as a result of the development. However, in congested conditions "as is the case on the trunk road network in this location", a lower threshold level could apply. Any junctions or links experiencing a significant impact would need to be subjected to a safety and capacity assessment to determine whether highway improvements are necessary to mitigate against the additional development traffic.

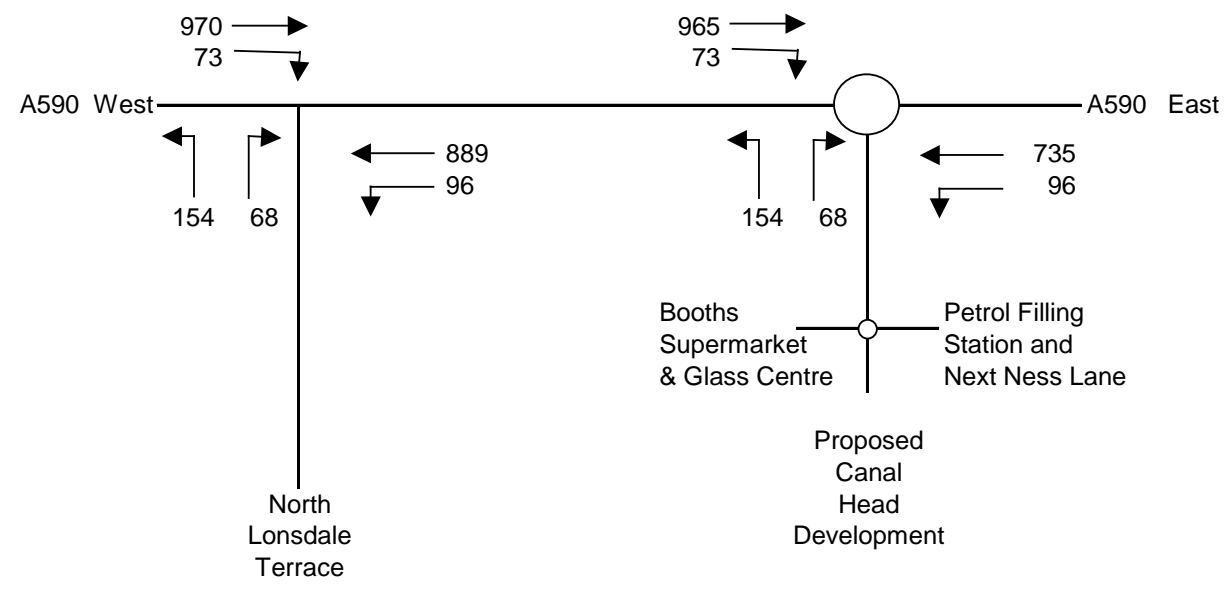
In order to calculate the proportional increase in traffic, it is necessary to know the base line traffic levels i.e. the traffic volumes on the existing road network without the development. In addition, the size and type of development at the site needs to be identified in order to estimate the levels of generated traffic. For the purposes of carrying out a provisional assessment of the level of traffic impact, it is considered that the affected road network should initially comprise the following:

- A590 Canal Street between and including its junctions with North Lonsdale Terrace and the roundabout adjacent to Booths
- North Lonsdale Terrace – North Lonsdale Road
- U5722 county road between North Lonsdale Road and Canal Foot

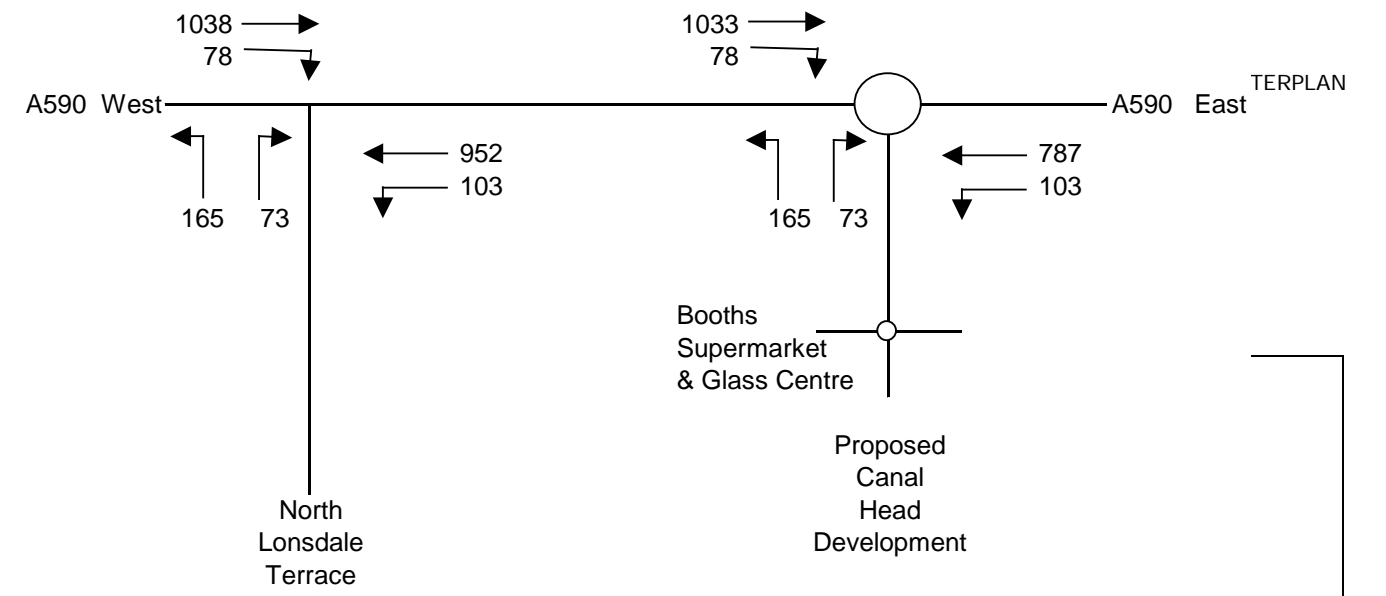
2.4 Base Traffic Levels

At this early stage of the Ulverston Canal masterplan development, it has not been possible to obtain comprehensive traffic flow information for the existing local road network. Data from a 2002 traffic turning count survey at the A590/ North Lonsdale Terrace junction (undertaken as part of the transport assessment for the Lund Farm residential development) is the only traffic survey information available. This can be used to give an indication of base traffic levels for 2006 on the A590 and North Lonsdale Road. The junction survey would not include traffic generated by the committed residential development at Lund Farm currently under construction. Therefore in order to represent all base and committed development traffic flows, the original trip generation estimates from the Lund Farm transport assessment have been added to the base traffic flows. The survey data covers the AM, PM and inter-peak periods for a weekday with the busiest period being the PM peak hour. There is no traffic data available for the A590 roundabout adjacent to Booths therefore it will be necessary to make an estimate of junction

turning movements based on the data from the North Lonsdale Terrace junction. It will however be necessary to undertake a traffic count at this location at a later date to provide actual turning movement data at what will be the main access junction for development. The 2002 pm peak base data has then been factored using National Road Traffic Forecast (NRTF) factors to provide estimates of 2006 base traffic levels. Although it is unlikely the development would be fully operational by 2006, the adoption of 2006 as the base year for traffic impact should provide a robust assessment of percentage impact during the busiest highway period. Flow diagrams showing the 2002 survey traffic and 2006 base traffic flows are shown over.



2002 Base Traffic Flows - PM Peak Hour



2006 Base Traffic Flows - PM Peak Hour



2.5 Development Traffic Levels

In order to assess the potential impact of Canal development traffic upon the road network, an estimate needs to be made of generated traffic volumes. Estimated traffic flow levels for the two scheme options have been calculated using trip rates from the TRICS computer database. This database contains traffic survey data for a wide range of existing development sites throughout the United Kingdom and enables an estimate to be made of hourly trip

generation based on the size and type of development.

At this early stage of the masterplanning process, precise details of the proposed individual developments along the Canal corridor site usage have not been finalised. However, it should be possible to estimate the general magnitude of generated trips using best-guess estimates of final site use. A summary of projected land use in the Canal area is given below. Where appropriate, individual sites have been split or combined into common land use categories for ease of estimating overall trip generation.

Estimates of Canal Development Land Use

Nature of Development	Estimated Employment	Nearest Equivalent TRICS Site Category
PHASE 1		
Sites A & B: Tourism Based industry, Light Industry, Craft Businesses	85	N.B This part of the canal head development was split into 3 separate land uses in order to get a representative trip estimate from the TRICS computer database.
		The TRICS computer database was searched for small non food retail units from 125 to 3000 m2 to provide a mean trip rate for the retail element of Sites A & B.
		The TRICS computer database was searched for small industrial units that employed between 15 to 150 employees. The survey trips from these sites were used to gain a mean trip rate that was then applied to 30 employees to give estimated trips for the light industrial element of Sites A & B.
		The TRICS computer database was used to find an existing retail craft centre with 25 employees. The survey trip amounts from this existing development were used to provide the craft centre trips to and from Sites A & B.
Site E: Business/ Technology Park	150	The TRICS computer database was searched for Business Parks in England, Scotland and Wales with between 75 and 300 employees. The surveyed trips from these sites used to gain a mean trip rate that was then applied to 150 employees to give estimated trips for this section of the Canal Head Development.
PHASE 2		
Site C: Hotel and Leisure / Pub Restaurants	35	The TRICS computer database was searched for combined Hotels, Public Houses and restaurants, in England, Scotland and Wales with between 30 and 41 guestrooms. The individual sites were checked to ensure that employee levels were similar to the Canal Head development and were then used to gain mean trip rate.
Canal Foot		
'Hearts of Oak' boat and viewing tower tourist attraction with new car park	2	The development at Canal Foot was too small to find representative sites in the TRICS computer database. To represent some traffic impact during the PM peak hour as a result of the overall Canal Foot development proposals, a nominal 10 arrivals and 10 departure trips from Canal Foot will be assumed.

Within the development area, there may also be a nominal increase in employment at Rame Farm and for canal maintenance. However, these have been excluded from the trip generation estimates due to their negligible material impact in relation to the other site developments.

The TRICS parameters outlined above were used to produce trip rates and calculated trips for the proposed Canal Head developments. The trip generation estimates for the critical highway PM peak hour are summarised over.

Canal Development Trip Estimates

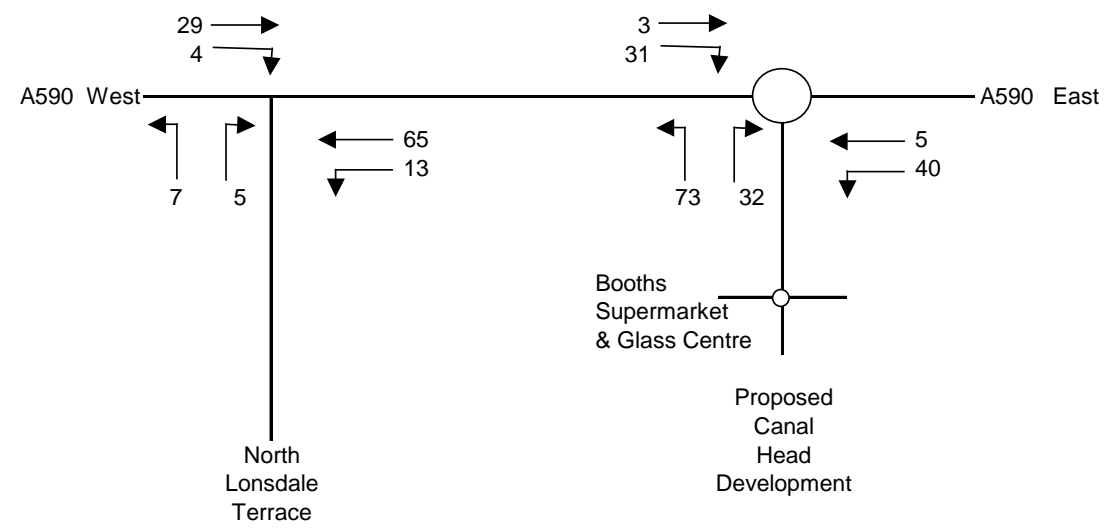
Proposed Development (Parameter used)	Arrivals		Departures		Total	
	<i>Trip Rate</i>	<i>Trips</i>	<i>Trip Rate</i>	<i>Trips</i>	<i>Trip Rate</i>	<i>Trips</i>
Non food retail (2000 m2)	0.99 (/ 100 m2)	20	0.85 (/ 100 m2)	17	1.84 (/ 100 m2)	37
Light Industry (30 employees)	0.05 (/ 1 employee)	2	0.33 (/ 1 employee)	10	0.38 (/ 1 employee)	12
Craft Businesses (N/A)	N/A	3	N/A	16	N/A	19
Business Park (150 employees)	0.07 (/ 1 employee)	11	0.27 (/ 1 employee)	40	0.34 (/ 1 employee)	51
Hotel/Pub/Restaurant (40 bedroom)	0.88 (/ 1 bedroom)	35	0.52 (/ 1 bedroom)	21	1.40 (/ 1 bedroom)	56
Totals		71		104		175

2.6 Impact of Development Traffic

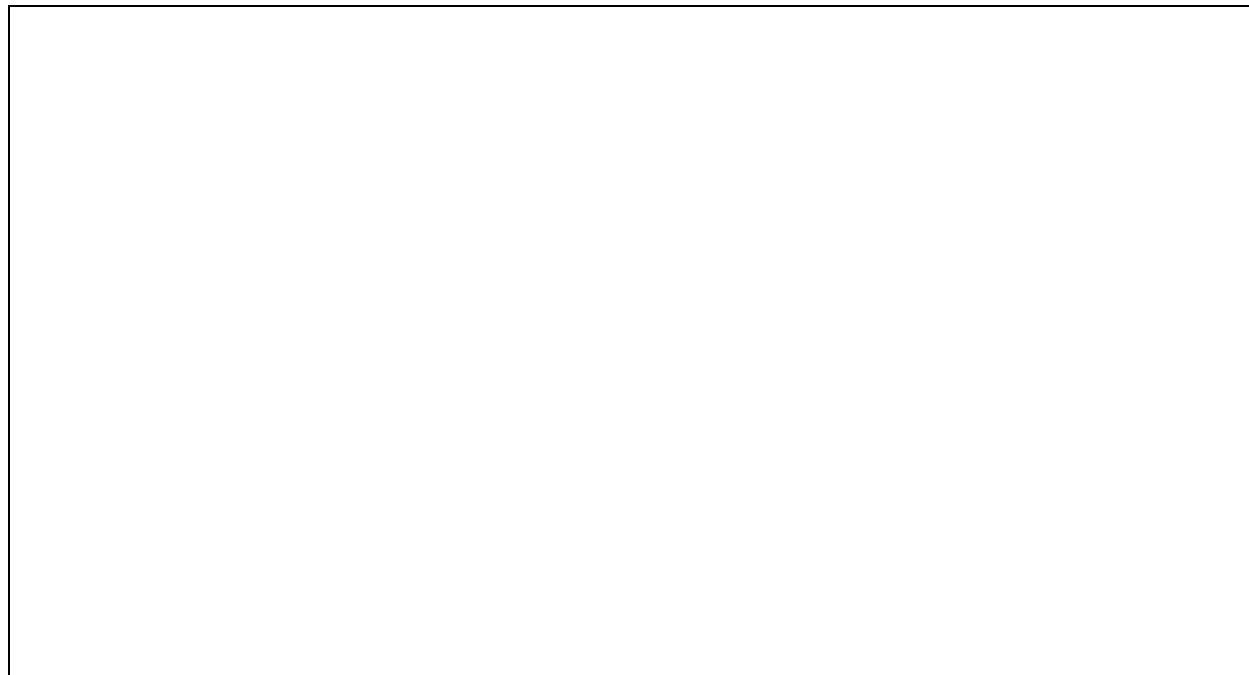
The peak hour development traffic flows then need to be assigned to the local road network. Given the limited amount of information currently available regarding likely origins and destinations of trips generated by the proposed

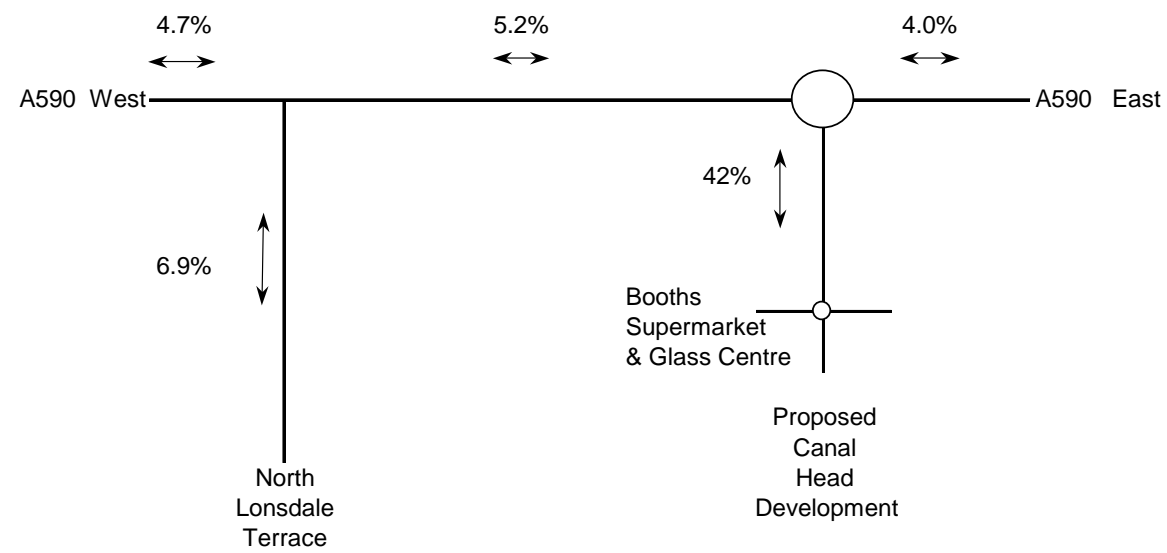
Canal developments, a best-guess estimate of trip assignment onto the road network will be made based upon existing turning movements derived from the A590/North Lonsdale Terrace survey. This indicates that most trips from the Canal Head developments would route onto the A590 towards Ulverston town centre. The

assignment of development traffic onto the A590 road network and impact in terms of proportional increase in base traffic are shown over.

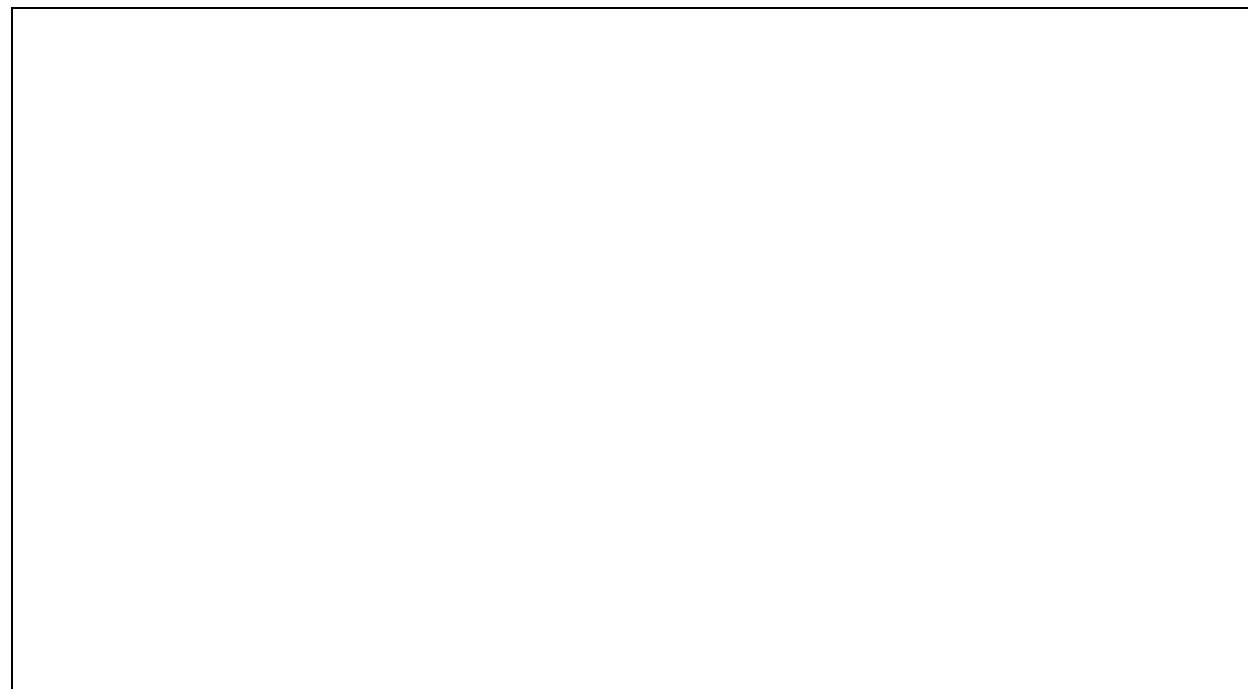


Assignment of Development Traffic - Highway PM Peak Hour





Impact of Development Traffic - Highway PM Peak Hour



Preliminary Assessment and Recommendations

On the A590 road network immediately adjacent to the Canal Head development area, the expected traffic impact is estimated to be between 4% and 5.2%. On North Lonsdale Terrace, the impact is estimated to be 6.9%. The indicated 42% increase in traffic levels on the access road serving the Booths supermarket et al is based on an estimate of existing retail park traffic levels, and would need to be validated with a detailed traffic count survey of existing traffic.

As part of a transport assessment for the

Ulverston Canal development proposals, the Highways Agency would require a detailed safety and capacity assessment at any junctions experiencing an increase in traffic volumes of 5% or more, and have also indicated that a lower threshold level (less than 5%) would apply at this location. The Highways Agency would therefore require a detailed assessment not just at the A590/North Lonsdale Terrace and A590/Booths roundabout junctions but also at any other junctions further afield where the development generated traffic could produce a material impact. However the Highways Agency has not been specific about what impact threshold would apply to other junctions, and without A590 traffic flows for the wider network, it has not been possible to determine how many

junctions would need to be assessed. Ultimately, for any A590 junction experiencing a material impact in traffic volumes as a result of the development, it would need to be demonstrated that safety and capacity would be no worse off than without the development in place. If either safety or capacity is compromised as a result of development traffic then it may be necessary to carry out mitigation measures in the form of junction improvements. This would very likely apply at the A590/North Lonsdale Terrace junction where the indicated impact of development traffic lies close to the 5% threshold level. The indicated impact level at the A590/Booths roundabout is also significant and a capacity assessment may show that a junction improvement is required at this

location to support development traffic.

The projected increase in traffic volumes on North Lonsdale Terrace – North Lonsdale Road is not likely to materially increase safety or capacity problems and therefore it is unlikely that any further highway improvements will be required as part of the Canal proposals.

It should be noted that this preliminary impact assessment has been carried out using basic estimates of development traffic. No allowance has been made for possible pass-by and diverted trips from the existing road network and therefore the impact levels may be overestimated.

Highway Improvements

The North Lonsdale Terrace/ A590 junction is likely to undergo intensification in traffic as a result of the Lund Farm residential development. This is likely to generate significant queuing at peak times for the junction in its present state. It is understood

that the Highways Agency have already investigated possible junction improvements at this location but there is presently not sufficient room for a suitable junction layout within the confines of the existing highway boundary. Any congestion problems created at this junction would be exacerbated by the additional traffic from the Canal Head development. In order to mitigate against the projected impact of Canal development traffic at the A590/North Lonsdale Terrace junction, it may be possible to implement a relatively minor junction improvement that would create a no-worse traffic scenario. However, this would not alleviate the congestion problems that would be created by the Lund Farm residential development and any natural growth in trunk road traffic flows. A far more practical proposition to put forward as part of the Canal development proposals would be to set some development land aside at Canal Head, adjacent to the A590 junction. This would enable the Highways Agency to implement a larger junction

improvement scheme to alleviate imminent congestion problems.

In addition to the North Lonsdale Terrace junction, a detailed capacity assessment will be necessary at the A590/Booths roundabout including undertaking a traffic count. It is possible that some form of junction improvement will be necessary if the capacity assessment indicates significant increases in queues and delays with the existing junction layout.

Further to the two A590 junctions identified above, a more detailed impact assessment will be required to determine how many other A590 junctions will experience a material impact and may require improvement. However, given that the impact on the A590 adjacent to Canal Head is approximately 5%, it is considered unlikely that any other junction improvements will be necessary unless the Canal proposals change significantly.

Date: 2nd March 2005
 Our reference: 2940/7850
 Your reference: TPA/RA/RA
 Your file ref: Mr D Whitehead
 Our file ref: (01539) 773045

Date:



**Cumbria
Highways**

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 Richard Arnott

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Dear Sir

ULVERSTON CANAL HEAD AND CANAL CORRIDOR MASTERPLAN

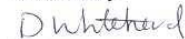
I refer to your letter of 28th February 2005.

You will need to identify suitable and acceptable points of vehicular access and undertake a Transport Assessment for the whole site.

You must refer to the relevant Cumbria Design Guides; Volume for Housing and Mark Goodwill Development control Engineer for Carlisle is in the final throws of preparing an Industrial Estate Guide. Other relevant documents are Parking Guidelines in Cumbria and The Cumbria Local Transport Plan which is still in draft form.

My initial thoughts are that good pedestrian and cycle provision must be provided beside the Canal and links (ideally separate from vehicles) and there will be opportunities to link in with other paths/ cycleway links to be explored.

Yours sincerely


 D Whitehead
 Highways Control Officer

Cumbria Highways hotline tel- 0845 609 6609
 email- contact@cumbriahighways.co.uk

A Partnership between Cumbria County Council and Capita

Safe roads, Reliable journeys, Informed travellers



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 Your ref: TP/RA/RA

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10 March 2005

**For the attention of Richard Arnott - Senior
Consultant**

Dear Mr. Arnott,

**ULVERSTON CANAL HEAD AND CANAL CORRIDOR MASTERPLAN, CUMBRIA
HIGHWAYS & TRANSPORTATION**

Thank you for your letter dated 28th February 2005 requesting the views of the Highways Agency in relation to the potential impact of the above-proposed development on the surrounding highway network.

As highway authority for the strategic highway network, we are, of course, interested specifically in how the A590 trunk road will be affected by the proposals. This area of interest will extend to the capacity and safety of all junctions and links on the A590 that it is considered will be materially affected by development-generated traffic. As you will be aware, our policy in relation to such issues is set out in the Department for Transport Circular 04/2001; "Control of Development Affecting Trunk Roads and Agreement with Developers Under Section 278 of the Highways Act 1980". I have attached a copy for your information.

The area that has been highlighted for development is extensive and, unfortunately, at this stage, I am unable to provide a fully considered response without further detailed information. However, I am pleased that you are tackling the regeneration of this area via a 'masterplanning' approach. This will allow the cumulative impact of the development to be considered from the outset, rather than on a piece-meal basis. Taking this into account, it is important to note that the above policy document requires developers to consider the impact of their development both at the opening year and at fifteen years after the occupation of the 'final phase' of the development. In the case of a masterplan, phasing will be a crucial element and it will have a direct bearing on the assessment year requirements. Initially, I would suggest that you will need to prepare a scoping note in order that we can agree the parameters for any subsequent transport assessment. In order to assist you, I have attached a 'note for developers' that sets out the Agency's requirements in this regard.

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Notwithstanding the above, we would obviously have particular concerns in relation to any intensification of use at the junction of the A590(T) / North Lonsdale Terrace. As you are probably aware, we have recently dealt with a planning application for the construction of 118 residential properties on North Lonsdale Terrace, at a site known as Lund Farm. This development is now under construction and the impact of development-generated traffic at the above junction was a major issue throughout the planning process. Concerns have been raised by both Ulverston Town Council and local residents that any intensification of use at this junction, as a result of development generated traffic, will lead to the potential for motorists to divert through adjacent residential areas in order to avoid queuing at the junction, especially during peak periods. Any further development proposals will obviously add to those concerns. You therefore need to be aware that this junction could prove to be a major constraint to any development aspirations along the canal corridor, unless an appropriate solution can be achieved that will adequately mitigate the impact of your development traffic to the satisfaction and agreement of all parties.

Undoubtedly, you will be undertaking full consultation throughout the area and, if you have not already done so, I would urge you to seek the views of Ulverston Town Council and local residents at the earliest opportunity.

Finally, I would also request that you give consideration to the possibility of taking access into the development site from the A590 roundabout, adjacent to the existing retail outlet. In addition, any improvements to the existing vehicular access at Canal Head House will, of course, need to be undertaken in line with the required standards as set out in the Design Manual for Roads & Bridges and you will need to identify where you consider that Departures from Standard or relaxations might be required. Please note, though, that there is no guarantee that departures will ultimately be approved.

I trust that the above information will assist you in the preparation of your masterplan for this corridor and please do not hesitate to contact me if you wish to discuss any of the issues raised in more detail or indeed if you feel that a meeting might be appropriate.

Yours sincerely,



David Wild
 Network Strategy North West
 Email: david.wild@highways.gsi.gov.uk

Cc: Ms. L. Alder - Highways Agency - Network Strategy
 Mr. S. Owen-Ellis - Highways Agency - Development Control Manager
 Mr. P. Hamer - Highways Agency - Project Sponsor
 Ms. M. Snow - Halcrow Group Ltd
 Ms. K. Lawson - South Lakeland District Council - Planning Officer

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