

WEST CUMBRIA SPATIAL MASTERPLAN

Transport

Working Paper 3: Transport

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Prepared for:

West Cumbria Strategic Forum

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1. INTRODUCTION

Background

- 1.1 Steer Davies Gleave has been commissioned to undertake a review of transport in West Cumbria and to ultimately feed into the West Cumbria Spatial Masterplan.
- 1.2 This working note provides the findings of our baseline review of transport conditions affecting West Cumbria and *provides our list of recommendations for those schemes that we believe are most likely to achieve real benefits, and that are likely to be affordable and deliverable.*

Consultation

- 1.3 Our recommendations consider the numerous previous studies undertaken, site visits, meetings with Council members and local knowledge. The recommendations also contain feedback from the two official Physical Infrastructure Working Group meetings held on 24th May and 13th June 2006.
- 1.4 There follows a sample of comments made at the Physical Infrastructure Working Group meetings.

Roads

- The key link to the regional and national strategic network is along the A595/A66 – routes to the M6 via Furness are unreliable and poorer standard.
- Journey times along the A66 are seen to be reliable but there is a need to reinforce and further improve connections to Penrith – i.e. more climbing lanes, but full dualling is not viewed as necessary in the short to medium term.
- As well as connections to the region, there are sub-regional issues around poor links to Furness, to Carlisle and to ensure that Millom does not become isolated.
- In daily traffic flow terms, capacity is not a problem BUT there are specific peak time congestion hotspots and the traffic mix generally ensures that on single carriageway roads, particularly south of Sellafield, the traffic only goes as fast as the slowest vehicle.
- Any roads proposals need to be sensitive to the environment but there is local community support for road schemes, such as bypasses.
- Inward investment is restricted by the time taken to reach West Cumbria – hotel and call centre proposals are hampered by issues surrounding ‘management time’.

Rail

- While rail freight is predominantly linked to Sellafield, there are also contracts out of Port of Workington. But there is substandard gauge on parts of the route to Carlisle, which is an issue for increased transshipment opportunities at Workington. There are also restrictions on rail freight heading north from Sellafield caused by the single track tunnel south of Whitehaven.
- Passenger services along the Coast Line are mainly focussed on tourism and leisure. To improve as a community service more services are needed and an expanded and better integrated timetable. Buses often offer more flexibility and can be quicker.

- The future of the line depends on Sellafield and it is acknowledged that the service is heavily subsidised (although precise figures for the level of subsidy cannot be provided).

Air

- The region would benefit from a new airport/airfield.
- Any air demand is likely to be to/from London although links to Manchester would also provide opportunities for onward travel to most worldwide destinations, including the United States – but can it compete (end to end journey times) with rail?
- Heliports – it can already be arranged for helicopters to come into the region for private business. A market needs to be generated locally if we are to justify a helicopter fleet to be based in West Cumbria. Recent work has identified that helicopter charter rates are likely to be in the region of £1000 per hour (or part of) for a 4 to 5 seat aircraft.

Ports

- Transshipment opportunities at Port of Workington (limited to 10k tonne vessel capacity), with transmodal facilities. But Workington is barely commercially viable at the moment and relies both on financial support and on the limited number (5) of local manufacturing bases using the port for freight. Freight income is not enough.
- Opportunities for Workington to serve the growing cruise market.

General

- It is the transport links that need to deliver the emerging Masterplan – but it needs to build on and exploit what is already there. Investment in transport is required to ensure that transport is not a barrier to growth.
- The DfT does not as a rule provide money for schemes to support things that might happen. Furthermore, the DfT funding pot is limited (2006-2011 has a total of £120million per year which is already allocated) and so infrastructure funding would need to be found from elsewhere. Beyond 2011 the figure is likely to be similar. For this money, West Cumbria is competing against Manchester, Liverpool, etc in Value for Money terms.
- The opportunity for economic growth exists here in West Cumbria more than elsewhere in the country.

1.5 This report considers accessibility to West Cumbria from the wider region and in particular from the main north-south corridor of the M6 motorway and West Coast Main Line railway. Within West Cumbria itself, consideration of access between major towns and employment locations is also required.

Regional Funding Allocations

1.6 The letter to the North West Regional Assembly and Regional Development Agency from the Secretary of State, Douglas Alexander, dated 7th July 2006 provides a discussion of transport proposals for the north-west region and, specifically, those where funding is allocated.

- 1.7 The only schemes approved for funding in West Cumbria within the next three years (2006/07 to 2008/09) are:
- A595 Parton – Lillyhall Improvement (approved scheme not yet underway). The cost of this scheme is £30 million and work is due to be started in January 2007 with a completion date of 2008; and
 - A590 High and Low Newton Bypass (scheme underway). The cost of this scheme is £35 million and is scheduled to be completed in Spring 2008.
- 1.8 These schemes are taken are regarded as committed.

Report Structure

- 1.9 Following this introductory section, the report goes on to consider the issues around access by road, rail, air and sea in turn, addresses access to employment sites and provides a summary of the transport priorities for West Cumbria required to facilitate the West Cumbria Spatial Masterplan.

2. ROAD ACCESS

Strategic Highway Considerations

- 2.1 The key link from West Cumbria (eg Sellafield, Whitehaven and Workington) to the regional and national strategic network is along the A595/A66 – routes to the M6 via Furness are unreliable and poorer standard.
- 2.2 The A66(T) has been improved in a number of locations by the installation of climbing lanes on some steep sections, which have reduced delays caused by slow moving HGVs, to the extent that journey times along the A66 are seen to be reliable but connections to Penrith should be reinforced.
- 2.3 Inward investment is restricted by the peripherality of West Cumbria and the time taken to reach the area is a real issue, to the extent that hotel and call centre proposals are hampered by issues surrounding ‘management time’. Taking Sellafield to represent a central point in West Cumbria, the journey time to the M6 is approximately 1 hr 20 mins. By road, the nearest international airport is around 3 hours.
- 2.4 Also, the economic difficulties faced in West Cumbria mean that Carlisle increasingly has a role to play in meeting the demand for employment generated by this area. The opportunity for Carlisle to be part of the solution to West Cumbria, needs to be supported through the provision of employment opportunities linked to better and improved transport communications.
- 2.5 Further improvements to the A66 between Penrith and Workington could take the form of complete dualling of the existing single lane sections. This would be a costly option and should therefore be seen only as a long term proposal for improving accessibility to West Cumbria in the long term.
- 2.6 Alternative options are likely to include more targeted improvements such as the provision of more climbing lanes to provide additional overtaking opportunities or smaller sections of dualling. It is acknowledged that any roads proposals need to be sensitive to the environment, particularly due to the proximity to the Lake District National Park.
- 2.7 High and Low Newton Bypass (A590) is part of the Highways Agency’s Targeted programme of Improvements (TPI) and will improve access between Furness and the M6. The proposed bypass will be a 3.8km dual carriageway road linking Lindale Bypass with Barrow Banks. The existing road is single carriageway, has substandard alignment and visibility and has a poor accident record. The road carries some 14-17,000 vehicles per day. Work started in July this year at a cost of £35.3 million, and is programmed to be completed in Spring 2008. There are no additional West Cumbria schemes in the Indicative List of Schemes 2009/10 to 2015/16.
- 2.8 Previous studies to consider a bridge crossing of the Duddon Estuary highlighted the high level of environmental protection afforded to the area and that the traffic case for the scheme in terms of flow was weak. Previous estimates predicted that the crossing

would be used by as few as 4000 vehicles per day. The full scheme would likely link the north side of Askham to south east of Millom, potentially cutting 30 minutes from the journey time from Sellafield to the M6 and it was thought that funding could be addressed through toll charges. A recent cost estimate for the scheme was reported to be in the region of £50m.

- 2.9 It is understood that a lower cost alternative to widen the existing Duddon Bridge and realign the existing carriageway, including land acquisition, was considered in the early 1990s and there would be merit in revisiting these proposals in the light of any overall package to improve links between West Cumbria and M6 Junction 36. The lower cost estimate is reported to be in the region of £3-4 million.
- 2.10 There are also proposals to build a 12-mile bridge linking Barrow and Heysham, North Lancashire, across Morecambe Bay. The plan also includes associated hydro-electric turbines to harness tide movements. It is understood that this is a private-sector proposal costing in the region of £400 million and should be considered long-term at best. Again, there are environmental considerations to be overcome.
- 2.11 The proposals for Morecambe Bay and new Duddon Estuary crossing are examples of the scale of infrastructure improvements that some feel are needed to make a real difference to the accessibility of West Cumbria. However, it must be recognised that any bridge proposals needs to be linked with major A595 upgrades between Furness and West Cumbria and beyond to maximise those benefits and would unlikely be deliverable through the usual DfT funding process.
- 2.12 Previous studies have also considered an Ulverston to Dalton Bypass Improvement and Wigton Eastern Relief Road.
- 2.13 It has been argued that improvements along the A5086 between Egremont and Cockermouth would have the dual benefit of reducing congestion along the A595 and providing enhanced investment opportunities in the deprived communities on route as journey times to the M6 were reduced. The nature of the road is such that the main capacity pinch points are created as the road passes through towns on route, such as Cleator Moor and Frizington. Terraced housing fronting onto the carriageway, without off-street parking, provide little opportunity for on-line improvements. As such, bypass schemes are likely to be required with an estimated cost for improving the A5086 set at £20 million.

Highway linkages within West Cumbria

- 2.14 The A595 not only forms the key strategic link along the coast, it also serves as a local distributor between coastal towns and Sellafield. The route is single carriageway and, particularly south of Sellafield, is very poorly aligned (horizontally and vertically) in places. As well as connections to the region, there are sub-regional issues around poor links to Furness, to Carlisle and to ensure that Millom doesn't become isolated.
- 2.15 North of Calder Bridge, the A595 retains its trunk road status. South of Calder Bridge

the road was recently de-trunked.

- 2.16 In traffic flow terms, 12-hour daytime traffic flows of around 14,000¹ vehicles does not indicate that capacity on the route is a problem BUT there are specific peak time congestion hotspots and the traffic mix generally ensures that on single carriageway roads, particularly south of Sellafield, the traffic only travels as quickly as the slowest vehicle.
- 2.17 As acknowledged in the Local Transport Plan, there is localised congestion on the A595 related to Sellafield commuters, and there is a particular problem relating to the lack of alternative routes on occasions when the A595 is obstructed by roadworks or accidents.
- 2.18 Nuclear decommissioning is arguably less safe than a nuclear generator and there needs to be a network capable of moving large numbers of people north or south in the case of any emergency. In addition, on occasions where the Sellafield site might be evacuated, there are recent examples of the network within the site having insufficient capacity, such that traffic is forced to queue to leave the site.
- 2.19 The only real alternative to the A595 for north-south movements through west Cumbria is provided by the A5086.
- 2.20 There are two distinct options for driving between West Lakes Science Park and Cockermouth, to access the A66. Drivers can either use the A595 or A5086 routes and the distance is almost identical. The measured distance via the A595 is 17.5 miles, against 17.1 miles for the A5086, despite first having to head south to access the A5086 route.
- 2.21 Since Sellafield is further south, the A5086 provides the shortest route for travel to and from the A66 at Cockermouth.
- 2.22 The Highways Agency has confirmed £30 million improvements to the section of the trunk road between Parton and Lillyhall Industrial Estate, north of Whitehaven, with the construction of a new 5.1km two-lane dual carriageway road. The present road experiences conflict between local and through traffic, has frequent junctions along its length and suffers year round peak hour congestion, principally related to Sellafield traffic. Traffic levels are around 17,000 per day. The proposals are intended to ease congestion, particularly bearing in mind future year forecast traffic levels, and to improve safety by removing through traffic from communities like Distington along the route. The existing road will be widened on-line between the A597 and A596 roundabouts.
- 2.23 The scheme is scheduled to start works in January 2007 and be completed in 2008.
- 2.24 The Parton-Lillyhall scheme will provide benefits to journey time reliability and both the County Council and Copeland Borough Council are promoting a Whitehaven

¹ Local Transport Plan 2006-11

Eastern Relief Road which will further improve journey times between West Cumbria and the A66. The Eastern Bypass will also provide better access to industrial sites at Cleator Moor.

- 2.25 There is local community support for road schemes, such as bypasses – in fact many people believe that Parton-Lillyhall isn't long enough.
- 2.26 The Borough Council has also considered local bypasses at Bootle and Calderbridge. Although these proposals have not been progressed at this stage, a detailed route review of the A595/A590 between West Cumbria and M1 Junction 36 should be undertaken, which would include consideration of improvements to Duddon Bridge and the Low and High Newton Bypass.
- 2.27 The high cost of the High and Low Newton Bypass proposals discussed earlier, over £9m per km, reflects the nature of the area through which the bypass will travel and should reasonably be seen as an upper limit to the cost of any similar bypass proposals to be promoted for the A595 between Furness and West Cumbria. With that in mind, Bootle and Calderbridge bypasses are likely to each cost in the region of £15-20 million.
- 2.28 In Workington, a number of proposed new highway linkages should be considered further. The Workington Southern Link (approximate cost of £7 million) would improve access to and from the town and also to reduce heavy goods traffic in residential areas of the town. A Curwen Park Link, between east and north of the town has been estimated to cost £2.75m for the 0.8km stretch of new road².
- 2.29 Also, in Whitehaven, a new spine road is proposed to offer better access to Pow Beck valley, the major development opportunity in the town.

Potential highway time savings

- 2.30 To establish what time savings might be achieved by dualling or providing climbing lanes on further sections of the A66 route to Penrith, it is necessary to consider the likely increases in speeds that might be achieved as a result. Reliability of journey times along the A66 is not considered an issue.
- 2.31 Firstly, climbing lanes will have little impact on journey times for the slower moving vehicles – heavy goods vehicles or bus/coaches.
- 2.32 It can be argued that, where benefits from additional lanes would be most felt, the average speeds for cars might improve from 40mph to 70mph. Over a 5km section of upgrade, this would provide a time saving of just 2 minutes. A 10 minute saving on the route between Workington and Penrith would require 25km of additional dualling/climber lanes.
- 2.33 At an estimated cost (based on costs from a similar upgrade scheme through environmentally sensitive areas) of £6million per km, achieving a 10-minute saving in

² Workington Movement Study, WSP

each direction would cost in the region of £150million, (compared to the current annual transport allocation of £120million for the whole of the north-west).

2.34 This is an estimated cost only covering a 25km section of the A66. Between Penrith and Workington, the total distance is 60km, of which approximately 11km is already to dual carriageway standard. Full dualing of the remaining single carriageway sections, at a cost of £6m per km, would therefore cost in the region of £300m. This estimate includes an element for junction improvement works but any major works, such as potential grade separation, would increase the total further.

2.35 Traffic flow information on the A66 at two separate locations; west of Keswick and west of Cockermouth, are provided in Table 2.1. As shown, similar flows are experienced along the length of the route, although flows are slightly higher further west.

TABLE 2.1 A66 TRAFFIC FLOWS (AUGUST 2005)

Direction	Time period	Traffic Flow	Direction	Time period	Traffic Flow
<i>West of Keswick (A5086-A591)</i>					
Eastbound	Peak hour (11-12:00)	729 / hr	Westbound	Peak hour (17-18:00)	830 / hr
	12-hr	7166		12-hr	6935
	24-hr	8346		24-hr	8210
<i>West of Cockermouth (A595-A595)</i>					
Eastbound	Peak hour (17-18:00)	798 / hr	Westbound	Peak hour (17-18:00)	883 / hr
	12-hr	7910		12-hr	7379
	24-hr	9369		24-hr	9056

2.36 The figure of £6 million per km for upgrading the A66 is an estimate only and would depend very much upon local conditions, environmental issues, structures, complexity of junctions, etc. Smaller sections of dualling in the North-west; A66 Greta Bridge to Stephen Bank Improvement and A66 Scotch Corner to Carkin Moor Dualling, are reported to cost a total of £22m for a combined length of 11km. This would provide a lower estimate of £2m per km. Alternatively the costs of local West Cumbria schemes, Parton-Lillyhall and High and Low Newton Bypass, suggest construction rates of £6m/km and £9-10m/km respectively. Upgrades to the A80 in Scotland, over a distance of 18km are forecast to to cost £150m, over £8m per km.

2.37 The range of potential costs for dualling can thus be summarised as follows:

- High and Low Newton £9m per km
- A80 £8m per km

- Parton-Lillyhall £6m per km
- Previous Steer Davies Gleave dualling study £6m per km
- A66 (Greta Bridge-Stephen Bank/Scotch Corner-Carkin Moor) £2m per km

- 2.38 Upgrading to dual carriageway standard would provide both time savings and significant benefits in accident costs along the route. Based on 2-way Annual Average Daily Traffic (AADT) flows of 16,500 (2005, west of Keswick), a simple, single link cost-benefit analysis has been undertaken using a range of cost per km values. At £6m per km, simplified analysis of the scheme would suggest a benefit-cost ration (BCR) value slightly more than 1.0 implying the scheme would provide limited value for money. However, if costs were subsequently found to be lower than £5m per km, there is potential for BCR to improve.
- 2.39 Clearly, there is potential for a dualling scheme which demonstrates value for money, but overall costs and the relatively low number of users benefiting from the proposals would continue to be prohibitive under current funding mechanisms.
- 2.40 Peak hourly traffic flows along the A66 (in August 2005) are shown in Table 2.1. Flows westbound, west of Cockermouth, reach a peak of just under 900 vehicles per hour per direction. Single carriageway roads can be expected to comfortably accommodate between 1500 and 1800 vehicles per hour by direction, the actual figure depending upon the proportion of heavy goods vehicles.
- 2.41 Taking the lower estimate of 1500 per hour, this would allow a minimum growth along that section of road of some 67%. National forecasts of traffic growth for the next ten years are a little under 1% per annum. Ignoring localised issues such as slow moving HGVs, this would imply that this section of single carriageway road could accommodate over 50 years growth before requiring an upgrade to 2-lanes.
- 2.42 For Whitehaven Eastern Relief Road, time savings would be achieved for all vehicles due to the bulk of the delays occurring at junctions, rather than attributed to poor alignment or geography.
- 2.43 Similarly to the above, average speeds for cars might improve from 20mph to 40mph. Over a 6km section of bypass, this would provide a time saving of around 5.5 minutes, approximately a one minute saving per kilometre. In addition, this is seen as the only part of West Cumbria's road network that suffers major peak hour congestion and, although an eastern relief road would improve journey time reliability through the day, potential time savings will be higher during the peaks. The relief road will also provide an alternative route in case this section of the A595 is obstructed or blocked by accidents or road works.
- 2.44 The Parton-Lillyhall scheme is currently estimated to cost £30 million for the 5.1km route. It seems reasonable to assume a similar cost for the Whitehaven Eastern Relief Road.

Drive time isochrones

- 2.45 Figures 2.1 and 2.2 provide drive time isochrones, indicating 30, 60, 90 and 120 minute catchment bands around Workington and Sellafield.

- 2.46 The figures show that Workington is some 60 minutes drive from Carlisle, Penrith and Millom – this appears reasonable. Interestingly, the figures clearly demonstrate the degree to which Sellafield, further south down the coast, is less accessible from the M6.

FIGURE 2.1 DRIVE TIME ISOCHRONE - WORKINGTON

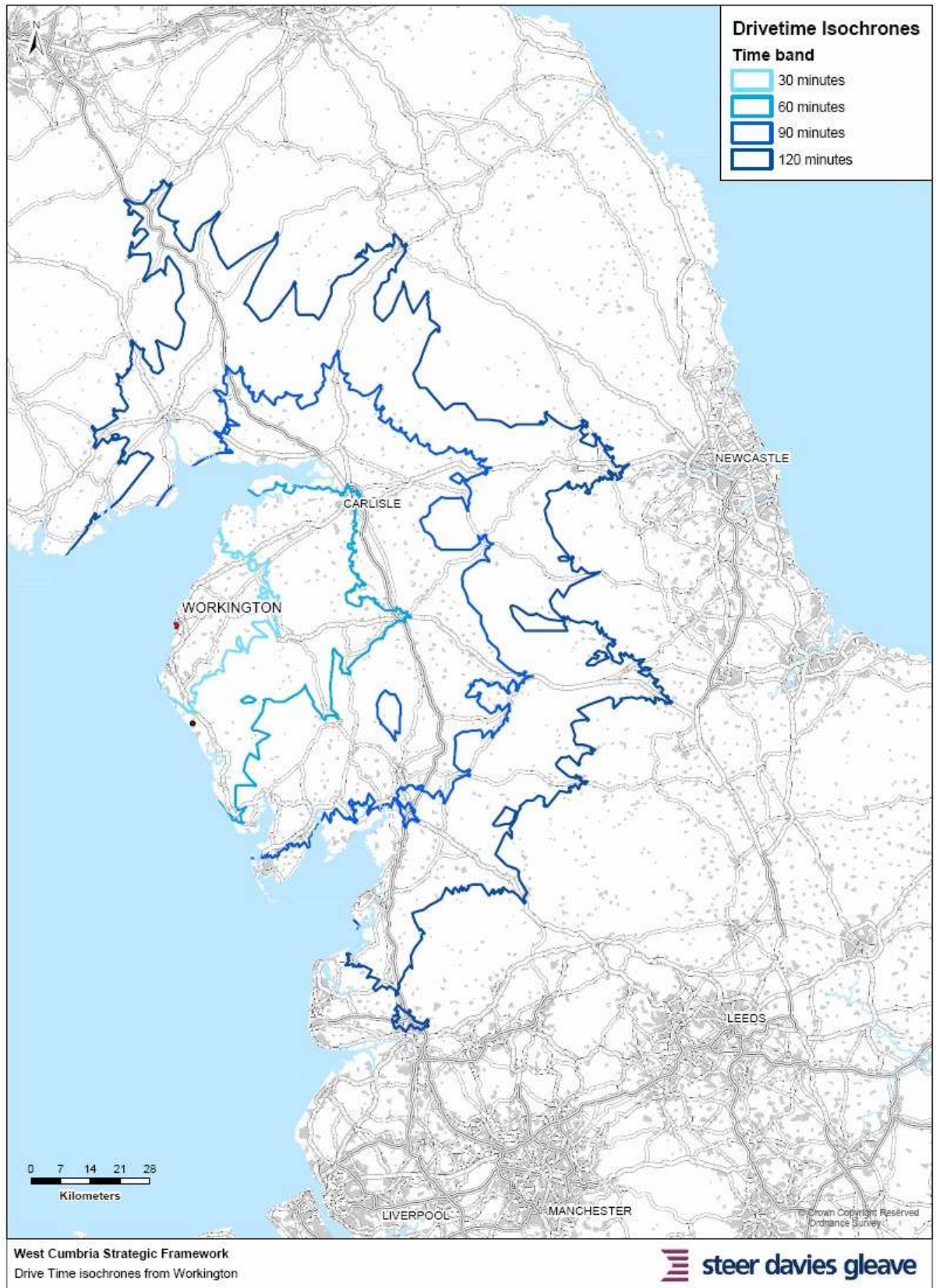


FIGURE 2.2 DRIVE TIME ISOCHRONE - SELLAFIELD



Buses

- 2.47 Whitehaven and Workington have services offering good daytime frequencies along key radial corridors, but have limited coverage in the evenings and at weekends. There are poor bus links between towns in West Cumbria generally and in rural areas.
- 2.48 Although 78% of Allerdale's households and 63.4% in Copeland are within 800m of a bus stop³ – traditionally seen as around a 5 minute walk – the percentages reflect a higher level of accessibility in urban areas and much poorer levels in rural areas.
- 2.49 Stagecoach are the main operator in West Cumbria although there are smaller operators running services which, it is claimed, are poorly publicised and where often information is obtained through 'word of mouth'. Better promotion of services run by smaller operators would be beneficial.
- 2.50 There is currently a DfT subsidy used to support bus services in West Cumbria. However, more money could be spent on local buses and it is understood that Stagecoach's whole West Cumbria operation is threatened by reduced passenger numbers on the Sellafield works buses.

Summary

- 2.51 In the short to medium term, most benefits are to be gained by improving access *within* West Cumbria and addressing the specific problems around peak hour congestion and accidents along the A595. The main access route to the majority of the area from the M6 corridor will continue to be the A66/A595 and although the distance is such that journey times will continue be high, we do not believe that the route suffers the same level of congestion as the A595 and as such journey time reliability is not an issue.
- 2.52 Priorities for roads in West Cumbria are:

Immediate priorities

- Ensure that the Highways Agency's TPI schemes are delivered – Parton to Lillyhall and Low and High Newton Bypass.
- Additional bypass schemes on the A595 – Whitehaven, Bootle, Calderbridge.
- Lower cost option for Duddon Bridge.
- Workington Southern Link.

Medium term considerations

- Improvements to the A5086 between Egremmont and Cockermouth.
- Further selective dualling on the A66 (and climbing lanes).

³ Cumbria County Council, Local Transport Plan 2006-11

Long term consideration with appropriate funding

- 2.53 The list of priorities for roads serving West Cumbria has been based on the criteria of providing benefit to the area while also being affordable and deliverable under existing funding mechanisms. If additional funding were to be made available outside of the regular mechanisms, the “transformational” impacts of full dualling of the A66 should then be given further consideration.

- Full dualling of the A66.

No further consideration

- 2.54 The following schemes, whilst undeniably “transformational”, are not considered to be viable within the 20 year time frame for the West Cumbria Masterplan.

- Morecambe Bay Bridge.
- Duddon Estuary Crossing.

3. RAIL ACCESS

Connections to the wider area

- 3.1 Workington to Carlisle, as an example, is a 50m minute journey by rail. Connection times at Carlisle for onward destinations vary considerably over the day. Heading south to London, the connection time can be as low as 8 minutes and as high as 44 minutes. There is a similar story for connections to Glasgow with a range of connection times from 8 minutes to 57 minutes through the day, and to Newcastle the range is from 9 to 43 minutes. There would seem to be scope to improve connection times.
- 3.2 Whilst not providing access to West Cumbria as such, there are proposals to re-open the Penrith to Keswick line. There are significant cost implications and it is understood that parts of the route are no longer available – it is unlikely that this proposal would be pursued.
- 3.3 There is current lobbying for the Maglev/High Speed Train proposals to serve the North West.

Journey times to London

- 3.4 For any part of the country, access times to London is an important factor.
- 3.5 The following table (Table 3.1) provides details of direct rail services between Cumbria and London Euston. The Table focuses on services to and from Carlisle, but also indicates the departure times from Penrith, Oxenholme, Lancaster and Preston where applicable.
- 3.6 As shown, there are 13 direct services to and from Carlisle per day, of which 9 also serve Penrith. The time taken to London varies between 3 hr 13mins and 4hrs 17mins, depending upon time of day and numbers of stops. The average time is 3hrs 52mins. Northbound journey times are more consistent, around the average of 3hrs 40mins.
- 3.7 From Penrith, the average time to London is 3hrs 45mins, with the average return journey taking 3hrs 27mins.
- 3.8 The first train of the day leaves Carlisle at 05:44 (Penrith at 05:58) and arrives in London at 09:52, allowing a little under 10 hours in London before setting back on the last train back to Cumbria at 19:46.
- 3.9 The journey time by rail can be compared to estimated time by car. Using an average speed of 60 mph on motorways and 30 mph on national and country roads, it is estimated that it would take in excess of 6 hours to drive into Central London.

TABLE 3.1 LONDON BY RAIL

Carlisle - London						Penrith	Oxenholme	Lancaster	Preston
First direct train in the morning	05:44	arriving in London	09:52	j time=	04:08	05:58	06:22	06:38	07:18
then at	06:09		10:26		04:17	06:23	06:47	07:23	07:43
	07:14		11:26		04:12	07:29	07:53	08:29	08:49
	08:21		12:26		04:05	n/a	n/a	09:29	09:49
	09:34		13:26		03:52	09:49	10:13	10:29	10:49
	10:50		14:03		03:13	n/a	n/a	n/a	11:52
	11:34		15:26		03:52	11:49	12:13	12:29	12:49
	12:34		16:26		03:52	12:49	13:13	13:29	13:49
	14:00		17:16		03:16	n/a	n/a	n/a	15:02
	14:34		18:27		03:53	14:48	15:12	15:28	15:48
	16:34		20:25		03:51	16:49	17:13	17:29	17:49
	17:59		21:47		03:48	n/a	18:35	18:51	19:10
last train direct to London	19:06		23:13		04:07	19:20	19:44	20:00	20:20
			average time		03:52				
			no. per day		13	13	13	13	13

London-Carlisle						Penrith	Oxenholme	Lancaster	Preston
first direct train in the morning	06:46	arriving in Carlisle	10:30	j time=	03:44	10:12	09:48	09:34	09:19
then at	08:46		12:28		03:42	n/a	11:47	11:34	11:19
	09:46		13:36		03:50	13:23	12:47	12:34	12:19
	10:29		13:42		03:13	n/a	n/a	n/a	12:42
	11:46		15:30		03:44	15:12	14:47	14:34	14:19
	13:46		17:30		03:44	17:12	16:47	16:34	16:19
	14:46		18:25		03:39	n/a	n/a	17:34	17:19
	15:46		19:30		03:44	19:12	18:47	18:34	18:19
	16:46		20:29		03:43	20:12	19:48	19:34	19:18
	17:15		20:39		03:24	n/a	n/a	n/a	19:40
	18:08		21:42		03:34	21:24	20:59	n/a	20:34
	18:45		22:37		03:52	22:14	21:49	21:36	21:19
last train direct from London	19:46		23:45		03:59	23:22	22:53	22:39	22:24
			average time		03:40				
			no. per day		13	13	13	13	13

3.10 The West Coast Main Line has been upgraded over recent years, with the first phase of long distance speed and journey time improvements completed in December 2005. The bulk of the time savings to and from London have now been achieved with the main works between now and the end of 2008 focussing on signalling works, station enlargements and increasing capacity. Enlargement of Milton Keynes and Rugby stations and widening of the Trent Valley route are examples of capacity improvements to be delivered by 2008.

3.11 There will be a revised timetable implemented at the end of 2008 which is likely to include increased frequencies between London and Cumbria. Whilst the changes in journey times likely to be introduced in 2008 have not yet been published, there is an indication that there will be a further 10 minute saving on journey times on the end-to-end route between London and Glasgow⁴.

The Coast Line

3.12 To improve the Coast line as a community service will require more services and an expanded and better integrated timetable, particularly with West Coast Main Line services at Carlisle.

⁴ Route 18 West Coast Main Line, Network Rail Route Plans 2006

- 3.13 Upgrading the rolling stock, or providing additional rolling stock to support more frequent services, would likely be achieved through leasing vehicles. Lease costs can be up to £150,000 per unit per year. Two additional units would be required to introduce more frequent services. There is also scope to introduce First Class sections on one carriage, similar to the layout used on Trans Pennine service.
- 3.14 Whilst figures relating to levels of subsidy for specific routes are commercially sensitive and not publicised, it is acknowledged that the infrastructure on the Coast Line is heavily subsidised, partly in relation to necessary sea defences, but money is not generally spent on rolling stock or station facilities. The operating company, Northern Rail, was paid a total of £81 million in subsidies in 2004/05.
- 3.15 If new rolling stock were leased to improve service frequency, further subsidies to support those additional services would also be required.
- 3.16 Main stations such as Whitehaven and Workington should consider introducing fast-ticketing machines. The latest machines, incorporating internet collections, cash and credit payments and offering tickets to all destinations, can cost approximately £35-40,000 each.
- 3.17 These improvements would not only benefit regular users, but would also enhance the line's attractiveness as part of the regions tourism offer.
- 3.18 The future of the line depends on Sellafield and its local importance as a key transport destination. However, other high flows along the Coast Line are accounted for by employment trips from Millom, both to Sellafield and Barrow. Of the total population in Millom, over 8% use the train every day⁵. This illustrates the importance of rail links through West Cumbria not only for Sellafield but also in relation to the 'isolation' of Millom.
- 3.19 There are a number of proposals for improved transport interchanges at key stations along the route, an example of which is Whitehaven Railway Station Improvements, where the proposed integrated transport facility is expected to cost £1.1million. Passenger transport interchanges are also proposed for Workington and Maryport.
- 3.20 Between Carlisle and Barrow, there are a total of 26 stations on the Coast Line; Carlisle, Dalston, Wigton, Aspatria, Maryport, Flimby, Workington, Harrington, Parton, Whitehaven, Corkickle, St Bees, Nethertown, Braystones, Sellafield, Seascale, Drigg, Ravenglass, Bootle, Silecroft, Millom, Green Road, Foxfield, Kirkby-in-Furness, Askam and Barrow. Many services stop at each station.
- 3.21 The following table provides a matrix of average journey times between each of the major destinations.

⁵ Access to Furness and West Cumbria Study, Final Report, Mouchel Parkman 2004

TABLE 3.2 AVERAGE JOURNEY TIMES - WEST CUMBRIA COAST LINE

Ave Time	Carlisle	Workington	Whitehaven	Sellafield	Millom	Barrow
Carlisle		47	67	89	117	150
Workington	50		20	42	70	103
Whitehaven	66	16		23	51	84
Sellafield	87	37	20		28	61
Millom	115	65	48	28		33
Barrow	142	92	75	55	27	

3.22 Similarly, the following table provides a matrix of the number of trains per day between each major destination.

TABLE 3.3 AVERAGE DAILY FREQUENCY - WEST CUMBRIA COAST LINE

Freq.	Carlisle	Workington	Whitehaven	Sellafield	Millom	Barrow
Carlisle		14	14	7	7	7
Workington	14		15	7	7	7
Whitehaven	14	14		7	7	7
Sellafield	7	7	7		7	7
Millom	7	7	7	7		7
Barrow	7	7	7	7	7	

Use for freight

3.23 Rail freight is predominantly linked to Sellafield, with nuclear materials moved by specialist operator Direct Rail Services, a subsidiary of BNFL. In addition, there are also rail freight contracts out of the terminal at Port of Workington. However, there is an issue in relation to the loading gauge on parts of the route to Carlisle limiting container units to a maximum of 8'6" high, which is an issue for increased transshipment opportunities at Workington since a significant number of intermodal containers are now higher and wider than the standard unit. There are also restrictions on rail freight heading north from Sellafield caused by the single track tunnel south of Whitehaven. The detailed study into the cost of gauge enhancements would need to be undertaken but an initial estimate of around £10 million would not be unreasonable.

Summary

3.24 Improvements to the Coast Line should both provide benefits to regular users and encourage new users. The package of measures to be taken forward should consist of:

- new rolling stock and re-branding (possible First Class section);
- station improvements – including fast ticketing machines; and
- re-scheduling for better connection times with WCML.

3.25 In addition, direct links between West Cumbria and Manchester airport, via Barrow,

should be introduced.

Longer term considerations

- 3.26 Increased capacity on the Coast Line for rail freight should be provided through gauge enhancements and tunnel widening.

No further consideration

- 3.27 We understand that lobbying is taking place for the Maglev/High Speed Train proposals to serve the North West. This is encouraging but the final decision will be beyond the remit of this Masterplan.

4. ACCESS BY AIR

Current situation

- 4.1 West Cumbria is dependent upon facilities in adjacent regions for access to air services, such as Glasgow, Prestwick, Newcastle and Manchester.
- 4.2 There are direct rail services between Kendal (1 hr 45 min), Windermere (2 hr) and Barrow (2 hr 20 min) with Manchester Airport, but no direct links to West Cumbria. Rail passengers wishing to access Manchester airport from Workington or Whitehaven must change either at Barrow or at both Carlisle and Lancaster. There are no direct rail services between West Cumbria and Newcastle Airport (via Metro) without changing at Carlisle.
- 4.3 Although the nearest airport is Newcastle the largest variety of both tourist and business destinations is provided by Manchester. Newcastle is better suited for package holidays and scheduled flights to London or Europe, where as Manchester offers worldwide destinations and will be better suited to business users flying in from the United States.
- 4.4 There are currently no commercial airline services within West Cumbria, although Carlisle Airport does provide for private facilities, as does Walney Island airfield. In addition, there are facilities for helicopters at West Lakes.
- 4.5 There is therefore no direct scheduled flight option to London. A drive to either Manchester or Newcastle, followed by a flight to London City Airport has been calculated to take 3hrs 30mins, excluding check in times. From Penrith the average time to London by rail is 3hr 45mins and, as such, rail is currently the most attractive option, in terms of journey times, for business travel between Cumbria and London. If direct flights were introduced between Carlisle and London City, it is estimated that the flight time would be in the region of 1hrs 35mins (comparable to flight times from Newcastle), plus a minimum of 1 hour of 'airport activities' (check-in etc) at either end of the journey.

Proposals

- 4.6 It has been acknowledged⁶ that investment in Carlisle Airport is required before it can handle commercial traffic. Earlier proposals existed for the development of Carlisle Airport. These can be summarised as:
- Full length runway allowing full range of scheduled and charter services = £18.6 million
 - Short runway allowing smaller aircraft to London and near European destinations = £8.4 million
- 4.7 In addition, support would be required for a Public Service Obligation on a route to

⁶ Appraisal of the Potential Economic Benefits of North West development Agency Support for Carlisle Airport, Presentation to Cumbria Vision Board, 12th August 2004, York Aviation

London, at a cost of up to £2 million.

- 4.8 In April 2006, WA Developments International acquired the airport and it is now under the management of Stobart Air Ltd. The current owners now wish to bring the airport facilities up to international standards with either a possible second runway or strengthening and resurfacing the existing runway, and plans for a multi-million pound arrivals/departure terminal with access from the A689. The planned infrastructure will cost approximately £20m.
- 4.9 The airport also plans to expand into air freight and distribution, although plans are still at an early stage.
- 4.10 A new terminal linking directly to the A689, combined with Carlisle Northern Development Route through to the A595, would have much improved links to West Cumbria. Links to Carlisle railway station are by taxi, and the airport operates its own taxi concessionaire service.
- 4.11 Recent growth in services from low cost airlines offers additional destinations and opportunities from regional airports and there could be demand in the future for the introduction of low cost flights from Carlisle.
- 4.12 Any demand for air travel is likely to be predominantly to/from London, but there remains a question as to whether it could still compete (end to end journey times) with rail. Shorter connections to Manchester however will also provide access to worldwide destinations.
- 4.13 It has been suggested that a suitable location for a new airport could be found in West Cumbria. Bearing in mind the current proposals for expansion at Carlisle, a new airport in West Cumbria competing for the same market would not be appropriate. However, even if the proposal could be justified commercially, the topography of the area, thermals, overhead wires and flight restrictions around Sellafield all provide difficulties for new airport development.
- 4.14 A much smaller airfield operation is likely to provide a more appropriate solution to addressing the lack of air links into West Cumbria. Whilst more feasibility work is required with regard to potential sites, the use of airfields linked to larger airports has been successful in Ireland and it is acknowledged that airstrips provide a solution to the remoteness of many Scottish Islands. To provide onward connections to the greatest range of destinations, it would be most appropriate to link to facilities at Manchester.
- 4.15 Notwithstanding the costs of acquiring a site and building facilities associated with airfield operations (terminal buildings, baggage handling, waiting areas, etc), analysis of airfield costs in the Highlands and Islands indicate operating costs of around £1m per year. If it is assumed that a return fare, linking the airfield with Manchester, would cost in the region of £100, a total of 10,000 return journeys would need to be made per year or 40 per day (based on 250 weekdays per year) to cover costs.
- 4.16 With future employee levels at Sellafield and the NDA predicted to be to approximately 4,000, this implies that each employee would need to travel 2.5 times

per year to cover operational costs of the airfield, or 1% of the total workforce travelling by air on a daily basis. Although other businesses and private enterprises in the area would also be likely to make use of an air link to Manchester, these demand levels would appear to be unsustainable without subsidies.

- 4.17 In a similar way to air services in the Scottish Islands, West Cumbria may be eligible for Public Service Obligations (PSO). PSOs can be considered for scheduled air service serving a peripheral or development region where a service is considered vital for the development of the region but would not be provided on a commercial basis with acceptable regularity, capacity, frequency or pricing⁷. Typical subsidies on PSO routes in Scotland ranged between £100k and £400k per year (2002 levels).
- 4.18 It can already be arranged for helicopters to come into the region for private use but these occasions are currently infrequent. Also, these instances are where helicopters are flown into the area and then leave again, they are not based locally. A market needs to be generated locally to justify a helicopter fleet to be based in West Cumbria. Recent work has identified that helicopter charter rates are likely to be in the region of £1000 per hour (or part of) for a 4 to 5 seat aircraft.

Summary

Short term considerations

- New or upgraded runway at Carlisle Airport and new terminal facilities.
- Expansion of Carlisle Airport into air freight and distribution.

- 4.19 Other than improving rail access to both Manchester and Newcastle airports, we do not believe that any further air proposals should be considered in the short term.

Medium term considerations

- 4.20 If commercial viability of helicopter services can be demonstrated, a local helicopter fleet should be established, most likely to be based at West Lakes.

Longer term consideration

- 4.21 A new airfield in West Cumbria would undoubtedly be seen as a transformational project. However, we believe that there are serious questions over commercial viability. Simple analysis of passenger numbers required to cover operating costs of a small airfield suggests that there is likely to be insufficient demand generated locally.

⁷ European Council Regulation No. 2408/92

5. ACCESS BY SEA

Ports

- 5.1 At present, Workington, Silloth and Barrow principally handle cargo traffic for local and regional industries. Workington is the most significant port in volume terms, handling localised traffic for customers in the immediate vicinity of the port such as Iggesund Paperboard. Workington has facilities for bulk commodities, general cargo, ro-ro and container traffic. There are also transshipment opportunities at the port (limited to 10k tonne vessel capacity).
- 5.2 However, Port of Workington is barely commercially viable at the moment and relies both on financial support and on a limited number of local manufacturing customers using the port for freight. Freight income is not enough and in fact the volume of traffic handled by the port has recently taken a hit following the closure of the Rhodia plant in Whitehaven, which previously imported phosphoric acid. This highlights the danger of over-reliance on a small customer base.
- 5.3 There is a similar story at Silloth. The port is vulnerable to a small customer base, with imports reduced recently due to the closure of one of their export customers in Northern Ireland.
- 5.4 The New Copeland Economic Strategy and Action Plan refers to potential opportunities to link Copeland with other areas along the north-west coast such as Liverpool, Morecambe and Barrow with some form of 'sea-bus' facility. More work is needed to establish the likely demand for such a service and to look at how short-sea services have been developed elsewhere.
- 5.5 A 2005 study⁸ into the potential cruise market for Cumbria ports, identified that the Irish Sea market has seen steady growth over recent years with some 69 cruises making port of call in the Irish Sea during 2004 with an estimated 40,000 passengers disembarking. The average number of ports of call per cruise in 2004 was 3.2. Currently ships pull into the Isle of Man but very few come to West Cumbria and it is suggested that Workington (and Barrow) could play a larger role in the future if the necessary infrastructure was in place. This would bring tourists directly into West Cumbria and with an increase in the tourism offer in the area, there would be opportunities for the tourists to visit local attractions, rather than simply see them taken on trips to the Western Lakes.
- 5.6 There are difficulties at Workington both in terms of tidal access constraints and the level of dredging required to navigate larger ships through the approach to the port. It is estimated that initial dredging would cost around £3.9 million with a further £500,000 per year required for maintenance.
- 5.7 An option to help support cruise activities commercially would be to also offer ferry services to the Isle of Man and/or Ireland. However, tidal constraints affect

⁸ A Plan for developing Cumbria Cruise Terminals, Working draft April 2005 (Genecon)

accessibility for roll-on/roll-off ships and would not naturally fit with fixed-hour schedules which operators prefer. Possibly linked with the tidal constraints is the proposal of a seacat service between Workington and/or Whitehaven and the Isle of Man.

- 5.8 While the distance from the motorway network could possibly restrict the catchment for ferry services to the immediate West Cumbria and Furness region, it is worth considering that many passengers destined for Stranraer, do so via the M6, passing Junction 40. From Junction 40, it is a little under 200 miles to Stranraer. It would be closer in time and distance for ferry passengers to use either Workington or Whitehaven.

Marinas

- 5.9 Whitehaven and Maryport cater for marine leisure and fishing interests with proposals for similar facilities at Harrington. There are also proposals for a marina and associated housing at Port of Workington.
- 5.10 Whitehaven has been converted into a leisure marina – with a waiting list for berths – from its old use as an importer of phosphates for the chemical industry. Whitehaven has all the necessary icing and cooling facilities required for fishing and there is a £1.8-2 million per year turnover in fishing at the port. However, there has been a decline in fishing which reflects the decline in the industry generally.
- 5.11 At Maryport, a new road has provided greater access to the marina and has helped facilitate residential developments at the marina. Further improvements will include new footbridges and better pedestrian links. A relatively minor issue with Maryport is that the harbour is tidal.
- 5.12 Tourism infrastructure near the marinas is essential to capturing economic benefits from the facilities.

Summary

- 5.13 There should be continued development of marinas for leisure and tourism, particularly moving forward the current proposals for Harrington and at Workington. Wherever applicable, the development should be supported by the associated local access proposals.

Longer term considerations

- 5.14 While there remain doubts over commercial viability, further studies should be made to establish the level of infrastructure required to support proposals for cruise ships and ferry operators to the Isle of Man and Ireland.

No further consideration

- 5.15 We do not believe that sea bus proposals should be considered further.

6. ACCESS TO EMPLOYMENT

To facilitate the Masterplan

- 6.1 It is the transport links that need to support the delivery of the emerging Masterplan and investment in transport is required to ensure that transport isn't a barrier to growth.
- 6.2 A number of key sites have been identified as the focus for increased investment in employment locations within West Cumbria. These are;
- Pow Beck Valley, Whitehaven
 - West Lakes Science Park
 - Sellafield
 - Lillyhall Business Park
 - Port of Workington
- 6.3 For each site, current accessibility has been assessed, by car and public transport, and where applicable the need for improved transport links are identified.

Pow Beck

- 6.4 The Pow Beck Valley has been identified as a location for a proposed 'Sports Excellence Area', with other sites identified for business, light industry and retail in the valley. A new Spine Road would replace a sub-standard section of the B5345 approach from the south towards the town centre.
- 6.5 There are a small number of existing local bus services running through Pow Beck, linking the development site with Whitehaven. One service links the area to Egremont via the hospital and Cleator Moor. There is no direct service to Whitehaven railway station.
- 6.6 The nearest railway station is at Corcickle, a 'stop on request' station close to the junction of Coach Road and the A5094. There are no current bus connections at the station and we believe Pow Beck Valley would be better served by ensuring good walking/cycle routes are established into the development site.
- 6.7 As the proposals become more advanced, and transportation assessments are produced, it is likely that a number of local junctions will need to be improved to cater for additional traffic levels. Based on the West Lakes Science Park Extension assessments, junction improvements can be expected to cost between £1-2 million per junction.

Derwent Forest

- 6.8 The Derwent Valley site has been described⁹ as one of the largest brown-field sites in

⁹ Derwent Forest Development Guide, Donaldsons

the UK, sitting prominently between the towns of Workington, Maryport and Cockermouth. As such, there are currently no transport linkages into, or through, the site.

- 6.9 The current proposals will provide a new leisure, tourism and commercial destination on the site of the old Royal Navy armament storage facility situated between the A66 and A597.
- 6.10 It is proposed that the principal access route to the site will be via a new junction with the A597 Maryport-Cockermouth road, the cost of which is likely to be up to £1 million. However, the southern edge of the site boundary is within 2km of the A66 trunk road and a new junction here would provide a more direct link to Workington and the West Cumbria coast to the west, and to the M6 and beyond in the east.
- 6.11 The closest railway station is Workington. A dedicated bus service between the site access and Workington Station should be provided. Other potential public transport solutions for accessing the Derwent Forest site are likely to include new dedicated services linking the site to local towns, diversion of existing services, increased service frequencies and the provision of employee buses.

West Lakes Science Park

- 6.12 At West Lakes, there are proposals to increase the number of jobs on site from 700 to 1,500 in the next 5-10 years. It is anticipated that West Lakes will continue to be the home of the Nuclear Decommissioning Authority.
- 6.13 The Science Park is accessed by a major signal controlled junction with the A595. It is understood that a recent transport assessment¹⁰ undertaken to quantify the likely impact of additional traffic associated with expansion, identified the need for improvement measures at four junctions on the A595 (with A5084, B5295, Meadow Row and Mirehouse Road), at a cost of £1-2 million per junction.
- 6.14 The nearest railway station is at Whitehaven, 10 minutes away by taxi (according to the Science Park's website).
- 6.15 There are bus services along the A595 passing the entrance to the Science Park. To support plans for expansion on the site, with an aim to reduce the need to travel by car, services into the site should be introduced, either by diverting existing A595 services or providing new direct services from Whitehaven and the railway station.

Sellafield

- 6.16 Sellafield is accessed by road from the A595. From the north, access is via the roundabout junction close to Beckermeth. From the south, access is via a signal controlled junction north of Calder Bridge. Both routes have previously catered for higher levels of employment at the site and, as such, it is reasonable to assume that the current infrastructure can accommodate higher flows associated with any increase in

¹⁰ Westlakes Science and Technology Park, Transport Assessment, Final Report (Capita Symonds, May 2005)

job opportunities at Sellafield.

- 6.17 Sellafield railway station is approximately a 10 minute walk from the entrance to the site. The station operates on a ‘stop on request’ basis. The station can be used by both employees and tourists.
- 6.18 Stagecoach operate works buses to Sellafield. There are no commercial bus services available for use by visitors to the site.

Lillyhall Business Park

- 6.19 There are proposals for further expansion of workspace at Lillyhall. The business park is located on the A595 and served by buses operating along that route and along the A597. The Parton-Lillyhall bypass will offer improved access to the site.
- 6.20 The nearest railway station is at Harrington on the Coast Line. The nearest direct bus services from Harrington station passes through the A595/A597 roundabout junction, at the southern part of the business park site.

Port of Workington

- 6.21 Port of Workington has good access to the A66, via the A596. It is understood that the roundabout on access to the port has been recently upgraded to allow for extra development. The Masterplan for the site promotes a new road link between the A596 bridge over the River Derwent, direct to a new junction with the A66 at the western side of Stainburn. This would provide a more direct route to the A66, and would relieve pressure on the westernmost part of the A66 as it approaches Workington.
- 6.22 The port is close to Workington station, although the station is at the other side of the river to the main port activities.
- 6.23 There are numerous buses serving the town centre, although the existing route from the centre to the port, via Station Road, is unattractive when compared to improvements made in the town centre. There are proposals for a Workington Transport Interchange on vacant land adjacent to the railway station which would result in more bus services serving the railway station and, therefore bringing bus passengers closer to the port. The Interchange development should include better walking and cycle routes to the port.

7. SUMMARY

Existing Transport Proposals

7.1 There are a number of proposed transport schemes that are already programmed for delivery.

- A595 Parton-Lillyhall
 - Cost = £30 million
 - Work scheduled to start in January 2007, completion in 2008
 - Impact/Benefit: Journey time reliability benefits and improved safety for some potential 17,000 daily users
 - Delivery Agent: Highways Agency
 - Rationale: The A595 is the key strategic north-south route through west Cumbria and experiences peak time congestion.

- A590 High and Low Newton Bypass
 - Cost = £35.3 million
 - Work started in July this year and is scheduled to be completed in Spring 2008
 - Impact/Benefit: Improved journey times between Furness and the M6 and improved safety for some 14-17,000 daily users
 - Delivery Agent: Highways Agency
 - Rationale: Apart from the A66, the A590 provides the only link between West Cumbria and the M6. Journey time reliability and high accident rates are key issues for the A590.

- Carlisle Airport Improvements
 - Cost = £20 million for infrastructure
 - The plans are at an early stage and require consultation with local residents, the planning authorities and government bodies.
 - Impact/Benefit: the improvements will facilitate the reintroduction of scheduled passenger services to Carlisle, both domestic and international.
 - Delivery Agent: Stobart Air
 - Rationale: West Cumbria is currently dependent upon Manchester, Newcastle, Glasgow, etc for access to commercial air services

- Carlisle Northern Development Route
 - Cost = in excess of £30m
 - PFI funding has been approved, procurement is underway
 - Impact/Benefit: to improve strategic links between West Cumbria, Scotland and the north-east of England.
 - Delivery Agent: Cumbria County Council (sponsor)
 - Rationale: As well as improving links to West Cumbria, the scheme will maximise opportunities for strategic development sites and will permit a significant amount of traffic constraint in the city centre.

7.2 One role of the Masterplan is to ensure that the above schemes are delivered.

Future Proposals

7.3 The following table provides a summary of the transportation schemes proposed for West Cumbria, described in more detail in previous sections. The table provides indicative costs, where available, and an indication of the potential benefits of those schemes and the rationale for delivery. The schemes are listed by proposed timescale with the most immediate requirements listed first.

TABLE 7.1 TRANSPORT PROPOSALS FOR WEST CUMBRIA

Scheme description	Cost	Impact/ Benefit	Delivery Agent	Timing	Rationale
Whitehaven Eastern Relief Road	£30m	Peak hour time savings in excess of 5.5 minutes per vehicle	County Council	Immediate	Quick win – addressing specific problems of accessibility <i>within</i> west Cumbria
A595 bypass schemes (Bootle/ Calderebridge)	£15-20m each	Reduced localised congestion and safety benefits for approx 15,000 vehs/day	County Council	Immediate	Quick win – addressing specific problems of accessibility <i>within</i> west Cumbria
Workington Southern Link	£7m	Improved access to Port and reduced numbers of hgvs in residential areas	County Council	Immediate	Quick win – addressing port attractiveness and environmental issues
Low cost Duddon improvements	£3-4m	Journey time savings and accident benefits for	County Council	Immediate	Quick win – lower cost alternative to Duddon Estuary Crossing
A595 Junction improvements – (A5084, B5295, Meadow Row and Mirehouse Road)	~£6m	Junction improvement works required to facilitate growth in traffic associated with West Lakes proposals	West Lakes	Immediate	Site specific – unlocking the potential of the West Lakes site
Rescheduled rail services	minimal	Better and more consistent connection times at	Train operating company	Immediate	Quick win – inconsistent connectivity with West Coast Main Line services

Scheme description	Cost	Impact/ Benefit	Delivery Agent	Timing	Rationale
		Carlisle for onward rail journeys			
Station improvements (Whitehaven, Workington, Maryport)	£3-4m	Improved transport interchange opportunities		Immediate	Quick wins offered by introduction of fast-ticketing machines
Pow Beck Spine Road		Improved access to major development sites in Pow Beck valley	County Council / developer	Short term	Site specific
New A597 junction	Up to £1m	Access to major Derwent Forest site	Developer	Short term	Site specific
Derwent Forest Bus Service		Dedicated service between site and nearest rail station (Workington) to encourage non-car use	Developer	Short term	Site specific
New rail rolling stock	£150k per unit per yr		Operator	Short term	Improvements to service frequency wouldSubsidy required
A5086 Improvements (Egremont-Cockermouth)	£20m	Journey time savings and alternative route to the A595 for n-s movements through West Cumbria	County Council	Medium term	Lack of alternative routes to the A595
A66 selected dualling (climbing lanes)	£3m per km in each dir ⁿ	Local improvements in journey time for around 20,000 vehs per day. Limited impact on total times to/from M6. Environmental impacts to be considered.	DfT / HA	Medium term	Cases to be made for further isolated improvements on grounds of time savings and accident benefits.
Locally based helicopter fleet	Lease costs £1000 per hr	Expansion of current arrangements for private	Masterplan	Medium term	Alternative to new airfield – likely to be accommodated on west lakes site

Scheme description	Cost	Impact/ Benefit	Delivery Agent	Timing	Rationale
		users			
A66 – Full dualling	£300m	Potential savings of 20 minutes for journeys from Penrith to Workington	DfT / HA	Long term	Potential value for money scheme but high costs of delivery and relatively low demand are prohibitive under current funding mechanisms.
Coast Line capacity (guage)	~£10m	Transshipment opportunities at Workington for higher, wider container units	Masterplan/ Network Rail	Long term	Larger containers would need to be carried by road if capacity constraints not addressed
West Cumbria airfield	Op costs ~£1m per yr	Services linked to Manchester for onward international connections. Significant time savings over road and rail.	Masterplan	Long term	Transformational – would likely require subsidies in excess of £500k per year
Cruise Ship infrastructure	£3.9m dredging + £500k per year maintenance	Tourists brought direct to West Cumbria	Masterplan	Long term	Capitalising on recent growth in Irish Sea cruise market
Ferry services – Isle of Man / Ireland	As above	Time savings in excess of 1 hour for drivers currently using M6 to access Stranraer	Masterplan	Long term	Real alternative to Stranraer for Irish Sea crossings
Morecambe Bay Crossing	£400m	Potential savings of 1 hour between Barrow and North Lancashire. High environmental impact	-	Beyond scope	Transformational project – likely to be linked to power generation.
Duddon Estuary Crossing	£50m	Potential to cut 30 mins from journey time between Sellafield and M6 but forecasts of	-	Beyond scope	Transformational project – potential funding through toll charges

Scheme description	Cost	Impact/ Benefit	Delivery Agent	Timing	Rationale
		only 4000 users/day. High environmental impact			

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