GMCA
GREATER MANCHESTER
COMBINED AUTHORITY

hs2 engine for growth

High Speed 2 – Phase Two Consultation

Response of:

GREATER MANCHESTER COMBINED AUTHORITY

January 2014

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1 Greater Manchester Support for HS2

1.1 Introduction

1.1.1 This document is the Greater Manchester response to the current consultation for HS2 Phase 2. The Greater Manchester Combined Authority (GMCA), Greater Manchester Local Enterprise Partnership, Transport for Greater Manchester Committee (TfGMC), and Manchester Airport Group (MAG), welcomes and fully supports the Government's intention to progress with the proposed High Speed 2 (HS2) Phase 2 extension from the West Midlands to Manchester, which will include new stations at both Manchester Airport and Manchester Piccadilly and a new depot at Golborne in Wigan.

1.1.2 GMCA recognises the significant potential that HS2 offers for economic growth in Greater Manchester. We are committed to working with Government, DfT, HS2 Ltd and rail industry partners to ensure that appropriate arrangements are put into place to allow this potential to be maximised by ensuring that the optimum regional connectivity investment is identified to complement HS2. Furthermore, GMCA welcomes the recent comments by the chairman of HS2 Ltd expressing an intention to explore opportunities for delivering the project quicker and subsequently bringing forward the benefits to the North. Greater Manchester partners will continue to engage with HS2 Ltd to seek opportunities to accelerate the delivery of Phase 2, with a particular focus on the early delivery of the required station facilities in Greater Manchester; and by ensuring that the skills and business support arrangements are put into place to maximise the employment and supply chain opportunities for local residents and businesses across the city region.

1.1.3 GMCA endorses Government's position that the proposals for HS2 represent the only feasible option to overcome the future capacity

constraints to growth, by providing unique levels of increased capacity, journey speed, service reliability and support for agglomeration and long-term job creation. GMCA and Greater Manchester partners are committed to playing their full part to ensure that all the necessary legislation and policies are put into place to safeguard the timely delivery of the programme.

1.1.4 We also welcome the initial report of the HS2 Growth Task Force, and fully recognise the unique growth potential of HS2 and the focus of the Growth Task Force's on-going work to ensure that the right connectivity, regeneration/development and industry/workforce conditions are put into place to maximise the impact of HS2.

1.2 The Transport Case for HS2

1.2.1 GMCA and its partners understand the critical role of long-term infrastructure certainty in creating the right conditions for sustained growth through inward investment. This is the basis for our strong support for HS2. It is our clear view, evidenced by analysis, that the opportunities for sustained growth offered by HS2 cannot be delivered by any other alternative. Economic and population growth has seen demand for rail travel across the UK increase significantly, growing on average by around 5% per year across the UK in the last 10 years alone (2002/3-2012/13), from 1 billion to 1.5 billion annual rail passenger journeys. The number of passenger miles made by train in the UK is now almost twice that of the early 1990s.

1.2.2 This growth in rail demand has helped to manage the levels of traffic growth on the strategic road (motorway) network, which nonetheless rose by 14% from 2000 to 2012 according to the Government's *Action for Roads* White Paper (July 2013). However, the growth in rail demand now

means that demand risks outstripping available capacity, as Government analysis has shown, with current conditions, traffic on the strategic roads network will have grown by between 46% and 72% by 2040.

1.2.3 Alongside passenger services, the national rail network now plays an increasingly important role in supporting freight, driven by a growth in intermodal freight and new logistics approaches taken by the major supermarket groups in particular. Network Rail analysis suggests that freight carried by rail has increased by an average of 2.5% annually in the last 20 years, with 8-9% of all freight in the UK now being moved by rail. Network Rail predicts a continuation of this trend, with a doubling of current rail freight tonnage expected by the early 2040s.

1.2.4 This background trend of growth is most acutely seen on the West Coast Main Line (WCML), which is the busiest mixed-traffic rail corridor in Europe, carrying an intense mix of passenger and freight traffic for up to 20 hours per day. Over the past 20 years, significant work has been undertaken to maximise the use of the WCML; however, the number of WCML passenger rail trips increased by 36% between 2006 and 2009 alone. Today, the WCML tracks are the busiest 125 mph railway in Europe. This level of intensity on the WCML is now impacting on the performance of services along the corridor. In addition, the intensity of demand for long distance capacity on the WCML has stifled the scope to extend more local services and brought about timetable changes, requiring cuts to regional services in order to maintain capacity for growth in national services.

1.2.5 The capacity constraints faced by the strategic rail network, and WCML in particular, present a significant challenge to overcome, which, in the absence of a solution, will most likely result in longer term growth beyond the mid-2020s becoming seriously constrained. This constrained ability to accommodate growth in passenger and freight rail will also undermine

the ability of rail to mitigate the carbon implications of growth that can otherwise only continue through ever greater demands on the strategic road network.

1.2.6 The Government has rightly recognised that the status quo is not an option in the face of this looming threat to long-term growth and to the ability of the country to rebalance its economic geography. Domestic aviation does not offer a realistic option, as reflected in national policies against the development of internal flights, given the environmental externalities and constraint on airport capacity that they entail. There are also no feasible road options, given that two additional (west coast and east coast) three-lane motorways would be required as an alternative option, which would still not replicate the speed and ease of connectivity between cities offered by HS2, whilst also creating significant capacity constraints and congestion on the existing urban road networks.

1.2.7 Therefore, we fully support the Government's conclusion that rail network expansion is the only way to meet its strategic objectives to deliver long-term growth; and that HS2 is the only network expansion option that can secure uniquely high long-term benefits, whilst also safeguarding economic output in the years up to its operation.

1.2.8 As DfT analysis has clearly shown, the impact of lengthening all trains to their maximum length alongside a potential further route upgrade work on the WCML could increase capacity by up to 36% on current planned levels. On modest demand projections alone, this additional capacity could be expected to be exceeded in less than a decade; and, if demand were to increase at the levels seen prior to the recession, this capacity could be fully utilised within just three years. Clearly, this would not provide the long-term certainty over connectivity to markets that inward investors require of modern city region economies such as Greater Manchester and the West Midlands.

1.2.9 DfT analysis has also shown that the alternative full-scale upgrade of the WCML, East Coast Main Line, Midland Mainline and adjacent Cross Country infrastructure would cost in excess of £19 billion and would entail an estimated 14 years of weekend possessions. The resultant offer would provide neither the journey time improvements or service quality benefits that HS2 would secure for the remainder of the century. Moreover, the long-term loss of connectivity during the construction period would be catastrophic for national economic performance and would critically constrain the growth potential of the Manchester, Leeds and Birmingham city regions for over a decade.

1.2.10 Importantly, in addition to the quantum shift in capacity and journey time benefits provided by HS2 itself, no other alternative can provide the benefits of significant released capacity on the existing network. At present intercity trains occupy 11 of the 14 hourly train paths on the WCML fast lines, and these will become available for new services (commuter, regional and freight) under HS2 only. This capacity will provide the opportunity to further strengthen service patterns from Manchester beyond the improvements that will follow the introduction of Northern Hub enhancements later this decade. This released capacity benefit will be a spur to further economic growth; extending Manchester's labour market and improving access to markets and key employment centres.

1.3 The Economic Case for HS2

1.3.1 If the UK is to reach its full economic potential, we need all our cities and regions to perform at the highest level. This means first narrowing, then eliminating, the North-South divide in terms of productivity, especially productivity per worker. Given that a large proportion of the productivity divide reflects differences in connectivity, closing the productivity gap also

means closing the connectivity gap, and allowing the North to take advantage of its lower costs. Productivity per worker in London and the South may be higher than the North, but so are costs, and on a net cost per unit of output basis, the comparisons are much closer and not always in the favour of London and the South.

1.3.2 HS2 Ltd's analysis of the productivity benefits of HS2 suggest that with the right supporting investment and planning the direct productivity gains to the cities of the Midlands and the North will be larger than those for London and the South, which should mean a positive impact on cost per unit of output compared to London and the South. HS2, however, does more than simply improve productivity; it also lowers barriers to competition by bringing places closer together. It will therefore make it easier for local businesses to trade in London and the South, and also vice versa.

1.3.3 In this context, differences in net cost between the North and South will matter more with HS2 than without it. KPMG's September report for HS2 Ltd found that against the background of forecast trends in net costs, HS2 will result in a redistribution of employment and activity away from London and the South to the Midlands and the North. This was before allowing for the effects of a station at Manchester Airport and the use of freed-up capacity into Manchester, which would increase the productivity (and thereby lower net costs) in Manchester and wider the North.

1.3.4 In practice this means that in terms of the North South divide HS2 will act as a multiplier on investment or trends that have a greater impact on productivity or costs at one end of the country than the other. Therefore, once it is in place, investment in improving productivity or reducing costs in Manchester and the wider North will narrow the North South divide by more than it would have before; but the reverse will also be true,

productivity enhancing investment that only benefits London and the South will widen the divide by more than it would otherwise have done.

1.3.5 Even at more than £40bn, HS2 will account for only a minority of the Department of Transport's total investment programme over the next 20 years, and every pound of that programme will have implications for the balance of growth and opportunity across the country[1]. The gap between the levels of connectivity Manchester and other Northern Cities can expect under the status quo and what they need in order to match the productivity levels of London and the South is large, and the current pattern of investment means it is growing. HS2 is a very significant step in the right direction, and there is no alternative strategy which would fully address the North-South productivity gap and which will deliver the kind of sustainable rail-based connectivity improvements that HS2 will provide.

1.3.6 Delivering HS2 to Manchester and the wider area will mean building on success. Greater Manchester accounts for 7.5% of the economy outside London and the South East[2] but its GVA per head is higher than the rest of England and in absolute terms has grown over the last 13 years; GVA per head for Greater Manchester was £18,025 in 2010, compared to the national average (England excluding London and the South East) of £17,720[3]. Underlying job growth over the next 20 years is expected to be near 120,000 with almost half of these jobs expected in Manchester alone and a large proportion of them will be located in the Regional

[1] Government is committed to a spend of £73bn on transport between 2015/16 and 2020/21, with £16bn of this allowed for HS2.

[2] ONS Regional Accounts, GVA data, 2010

[3] ONS Regional Accounts, GVA data, 1997 to 2010

Centre. The growth pattern for Greater Manchester represents two-thirds of the growth across the North West as a whole to the early 2030's[4].

1.3.7 Nearly 70% of Greater Manchester's job growth is forecast to occur in the highly productive commercial and professional services sectors, for which connectivity is essential.

1.3.8 In addition to this background growth, the £2bn plus GM Transport fund is forecast to deliver a further 20,000 jobs across Greater Manchester. Added to this is a further 15,000 jobs expected as a result of the Northern Hub Rail investment.

1.3.9 Building upon the work undertaken by HS2 Ltd**,** more detailed work has been undertaken to evaluate the local economic impacts of HS2, which broadly show that planned and additional activity can deliver up to 180,000 new jobs in Greater Manchester by the early 2040's. Hence, HS2 will transform the competitive position of Greater Manchester - it will be fundamental in ensuring that currently planned growth plans are realised and in generating new activity that anticipated growth projections can be captured.

[4] Greater Manchester Forecasting Model, 2012

2 HS2 – An Engine for Growth

2.1 Introduction

2.1.1 HS2 by itself will not, of course, eliminate the North-South productivity gap, nor will it avoid the need for Governments to do more to ensure that growth and other transport investment programmes actively support regional growth. There is also a critical need for strategic decision-making and long term planning to facilitate the local growth potential and national benefits around Piccadilly and Manchester Airport.

2.1.2 The three key themes for the HS2 Growth Task Force provide a framework for understanding how the economic growth potential of HS2 can be harnessed as follows:

- Economic connectivity – HS2 will radically enhance connectivity between eight major cities that will increase labour market accessibility, open up new markets for trade and stimulate economic growth. The Taskforce is exploring how best to integrate local transport networks into HS2 and therefore spread the potential for jobs and growth over a wider area;
- Development and regeneration – HS2 station sites will create a focal point for urban development and regeneration. The Taskforce is exploring the conditions that best enable this potential to be realised alongside the HS2 stations and depots; and
- Employment, skills and business opportunities – the construction of HS2 will require a skilled workforce and effective local supply chains. The Taskforce is exploring what is required to ensure that British businesses and employees are ready to maximise the opportunities that HS2 will present can be secured through coordinated investment and activity.

2.1.3 Each of these growth themes is covered in the following sections, with particular reference to what HS2 can mean for the long-term growth potential of Greater Manchester, Collectively, this provides the backdrop to our response to the HS2 consultation questions, as set out elsewhere in this document.

2.2 HS2 and Connectivity

2.2.1 Effective and reliable transport networks are necessary if our businesses and communities are to thrive, we are to deliver balanced growth and the country as a whole is to reach its economic potential.

2.2.2 This is because of the role transport networks play in connecting businesses with their supply chains, their customers, and their labour markets. Connectivity is the lifeblood of market specialisation and innovation. It is also critical to controlling costs, promoting competition and spreading opportunity. Although connectivity can be measured in a variety of ways, it is difficult to explain differences in economic performance, employment and wage rates across the UK economy without reference to differences in connectivity.

2.2.3 HS2 will deliver these benefits in Greater Manchester by:

i) improving businesses' access to the valuable markets of London, the Midlands and the South East, with journey times from Manchester Piccadilly to London Euston reducing from 2 hours and 8 minutes to 1 hour and 8 minutes. These improvements are not simply about better connections to places served by HS2 but also about places served via HS2 or to places on existing conventional lines to which services can be improved as a result of additional capacity. All these improvements will allow businesses in Greater Manchester to access existing markets at a lower cost, and to extend their reach to new markets further afield. This will mean deeper and wider markets to sell to and

greater choice of suppliers to buy from. It is particularly important for the fast growing professional services sector which even in the absence of HS2 is forecast to account for 30% of total jobs in Greater Manchester, an increase of a third on today's jobs in the sector[5]. The recent KPMG report for HS2 Ltd[6] shows that HS2 increases business to business connectivity (the number of businesses that can be traded with and the ease of doing so) for Greater Manchester as a whole by almost 19%, even looking solely at the impact of HS2 services to and from Piccadilly;

ii) giving businesses access to a wider and deeper pool of labour through improved services on the classic rail network that is made possible by the capacity HS2 frees up. This will enable business in Greater Manchester to better source and access workers of the right skills at the right cost, whilst also providing Greater Manchester residents and wider commuters with the ability to access a wider range of employment opportunities. These effects further promote the kind of market specialisation that promotes productivity whilst at the same time increasing the total capacity of the Greater Manchester economy. HS2 Ltd has yet to publish analysis of the potential benefit of these improvements for Greater Manchester, but Greater Manchester's own work, for example that which underpins Greater Manchester's own Transport Fund Programme, suggests these impacts could potentially double the long term impact of business connectivity benefits alone;

iii) improving businesses' access to their customers, by expanding Manchester's footprint for example, in leisure, retail and conference

[5] Greater Manchester Forecasting Model

[6] HS2 Regional Economic Impacts, September 2013

travel, and enabling greater access by visitors, not just to the locations directly on the HS2 network but to places beyond and on the existing network benefiting from freed up capacity. This provides Manchester with more customers for a range of facilities including its existing cultural, sporting and retail facilities, and allows it to support a greater variety and specialisation in the development of these facilities and a range of sectors.

iv) providing a new interchange station at Manchester Airport, the country's largest airport outside of London and the only gateway airport with significant spare capacity. In addition to providing an additional boost to business connectivity and spreading these benefits more widely across Greater Manchester and the wider region, a station stop will significantly widen the airport's catchment, with a direct service journey time to London of 63 minutes and cutting the journey time to Birmingham to just over half an hour. This not only spreads the benefits of the airport's existing international connectivity further, it will also promote growth in that connectivity by allowing the airport to support a wider and denser international service network. There will also be particular benefits to communities in the south and western parts of the conurbation and the areas beyond (e.g. Cheshire) who will be able to connect to the HS2 service without having to travel into the city centre by other modes of transport (including the car) in order to continue their journey; and

v) providing additional rail freight paths. For an important and growing part of the freight market, rail offers a cheaper alternative to road. It also helps reduce congestion providing additional road based connectivity improvements. These savings are anticipated to be considerable for long distance container traffic from the large Southern container ports to destinations in the Midlands and the North and predicted to grow significantly over time so long as there is sufficient

capacity on the rail network to accommodate additional long distance rail freight. However, without the capacity freed up by HS2 it is difficult to see how this potential for rail freight to deliver additional cost savings to businesses across Greater Manchester and the North will be realised.

2.2.4 GMCA welcomes the fact that the Government's proposals also include provision for a link to the existing HS1 line north of St Pancras, largely utilising existing North London rail alignments, providing the scope for continental services from the North and Midlands, and greater access to Kent, Essex and Sussex which are expected to see greater patronage direct to the North West. Connectivity to the HS1 line, and through that to the European high speed networks, is essential if the full economic opportunity of HS2 is to be maximised for the city regions along the HS2 route and beyond. An appropriate link between HS2 and HS1 would spread the economic benefits of connectivity to Europe further; providing increased access to international markets and productivity gains for the national economy. These benefits have not been addressed to date, and further work is required for these to be understood against the costs of linking the HSR network. In addition, current services linking to St Pancras are relatively slow, and so would not provide adequate connections for a high speed international link. Therefore additional capacity needs to be provided to ensure that the future connection between HS1 and HS2 provides the sufficient speed and capacity for an international service from the North.

2.2.5 In practice, the benefits outlined in 2.2.3 and 2.2.4 above will spread well beyond Greater Manchester, with Piccadilly and Manchester airport at the heart of the wider North West's rail and wider transport network, both HS2 stations have a major role in contributing to the connectivity and productivity of the economies across the country, making Greater

Manchester a critical link in realising the economic growth potential from high speed rail in the UK.

2.3 The Development and Regeneration Potential of HS2

2.3.1 We recognise that the forecast economic potential of HS2 for Greater Manchester can only be turned into reality if the local conditions are right. As noted above, the wider investment environment and the approach to deploying freed up capacity are both important to this.

2.3.2 In addition, however, there is a critical need for strategic decision-making and long-term planning to facilitate the local growth potential around the proposed HS2 stations at Manchester Piccadilly and Manchester Airport and its Airport City Enterprise Zone. In each case this is about more than local growth; it is also about maximising the productivity gains from HS2 which means national as well as local benefits.

2.3.3 Recognising the one-off opportunity that HS2 offers, Greater Manchester plans to build on its track record of developing innovative approaches to delivering transformational infrastructure investment that work both nationally and locally.

The economic opportunity at Piccadilly station

2.3.4 Greater Manchester fully supports Government's plans to bring HS2 services to Piccadilly, the heart of the conurbation, which will provide the much needed additional capacity where it can have the greatest impact.

2.3.5 HS2 Ltd's outline plans involve the provision of four additional platforms in a new structure alongside the existing station, opening at the same time as the rest of Phase 2 in the early 2030s.

2.3.6 Greater Manchester does not believe this is the best way to maximise the benefits of HS2 nationally or locally, as it would ultimately mean

significant additional costs, as works that should be coordinated and properly planned are instead spread out over decades.

2.3.7 The budget identified by HS2 Ltd for a standalone facility alongside Piccadilly should instead be allocated to a single combined programme of works, including the forthcoming Northern Hub investment at the station, that delivers an integrated station fit for the long term and which is explicitly designed to enable and accelerate the local and national level development gains of the immediate Piccadilly area, and secure a significant amount of rail capacity benefits of HS2 alongside the opening of HS2 Phase 1.

2.3.8 The Manchester Piccadilly Strategic Regeneration Framework ("SRF") has been developed to address the need for a long-term coordinated view of the development potential of the immediate Piccadilly area, and to provide the capacity required to facilitate the significant growth anticipated in the City Region by the 2040s (expected to be almost 180,000 jobs as detailed in paragraph 1.3.9). The SRF area has the potential to host up to 45,000 jobs by the early 2040s, a net increase of more than 30,000 on today's figures.

2.3.9 Investment already in hand – including through Greater Manchester's own Transport Fund - means the SRF is already destined to be one of the best connected locations in Greater Manchester. With HS2, and a fit for purpose and fully integrated interchange station at Piccadilly, we believe it can become the best connected and thus most productive location for professional services sector businesses in the whole of the North.

2.3.10 This, along with wider investments in infrastructure and public realm in the development areas around the station, will create the right environment to support the scale of growth anticipated around Piccadilly

and across the wider regional centre, and secure the national productivity gains that growth in well-connected locations can provide.

2.3.11 The right kind of approach can bring forward these benefits by decades and save the taxpayer money at the same time.

2.3.12 Delivering the Piccadilly vision requires a coordinated and innovative approach to infrastructure design, planning, delivery and funding; it means the very opposite of business as usual.

2.3.13 In terms of infrastructure and planning this means:

- providing for an integrated multi-modal transport hub at Piccadilly station fit for the long term, given potential growth, and explicitly designed to maximise productivity and growth, which means recognising its role as the gateway to the immediate SRF area, the regional centre, and the wider city region; and
- co-ordinated and timely delivery of all investment works at the station by the time phase 1 opens in the mid-2020s. This saves money in the long term and avoids blight that would otherwise delay the point at which the potential of the SRF area can be realised. Without this coordinated approach, the separate introduction of the Northern Hub improvements later this decade, the HS2 Phase 2 station by 2033, the upgrades to both conventional rail and Metrolink capacity at the station, plus the works that will be required to manage increased flows through the station imply four or five phases of works, with Piccadilly remaining a construction site for 20 or more years. Delivering HS Phase 2 by the mid-2020s would also provide additional station capacity which can be used to mitigate the expected likelihood of service compromises between the opening of phases 1 and 2.

2.3.14 Although this approach will save money in the long term, it does mean bringing forward conventional rail and Metrolink investment that under business as usual would have been undertaken later.

2.3.15 The growth and productivity benefits of the strategy provide a potential source of revenue to address these short term costs and thereby avoid any impact on conventional rail budgets. Costs to the HS2 budget will be no different to those under the default assumption of a standalone station alongside Piccadilly. TfGM's analysis of the short term costs and productivity benefits of the strategy suggest that a share of the increased land values in the SRF area together with the net national tax gain from the additional productivity generated would be more than sufficient to cover its costs.

2.3.16 The combination of value capture, business rate retention zone, and IUK support being used to deliver the Northern Line Extension to Battersea/Nine Elms in London provides a blue-print of how this potential could be turned into reality. Greater Manchester intends to continue to work with the Growth Task Force, HS2 Ltd, DfT and Network Rail on refining the details of this approach to ensure that a funding and delivery model is brought forward for consideration.

The economic opportunity at Manchester Airport station

2.3.17 Greater Manchester and Manchester Airport Group (MAG) believe there is a strong case for an HS2 interchange station at Manchester Airport, which will not only improve the city region's rail connectivity further, but significantly extend the domestic footprint of what is already the UK's largest airport outside of London. This is made possible through the direct high speed connections to the centres of the Midlands, London and the South, as well as the improvements to local rail services made possible by the classic rail capacity freed up by HS2.

2.3.18 As the only airport other than Heathrow with two runways, Manchester Airport serves some 20 million passengers per annum, connecting them to over 200 international destinations. The airport also supports over 300 businesses on site that directly employ some 19,000 people. The Department for Transport's own forecasts (January 2013) suggest passenger volumes at the airport could rise to at least 35 million by 2030 outwith any investment in HS2, implying some 10 - 15,000 further employees on site. Adjacent to the airport is the globally-focused Airport City Enterprise Zone, with £800m of privately-led investment now secured, which is forecast to result in a further 15,000 employees in the area by the mid-2020s, again outwith the introduction of HS2.

2.3.19 Fundamental to Manchester Airport's size and success to date has been its existing high levels of public transport and highway connectivity. This is set to improve further through the committed investments in both conventional rail and light rail networks to the airport. The Metrolink works are part of the £1.5 billion of investment in Metrolink being provided through the Greater Manchester Transport Fund to enhance and expand the network. In addition, the £300m Airport to A6 (SEMMMS) road scheme is being part funded through the Greater Manchester Earnback deal agreed as part of Greater Manchester's City Deal. These investments will expand the airport's regional footprint and reinforce its role as the major UK gateway outside London. Improved international connectivity – which itself is a driver of national productivity – will provide the ideal platform on which HS2 can build.

2.3.20 In addition to the jobs and productivity growth estimated as a result of the improved connectivity delivered by HS2 (work to date points to an additional 9,000 jobs for Greater Manchester of the total 21,000 jobs noted previously, with work on-going to refine this analysis in order to reflect the connectivity provided through released capacity, and the

potential productivity gains of the combined connectivity improvements), there are additional gains to the economy from providing an HS2 station at Manchester airport which neither GM methodologies nor those of HS2 Ltd have yet captured. These include:

- through the additional airport passenger demand resulting from HS2, encouraging development of the airline route network into the airport – both in terms of destinations served and capacity – whilst at the same time making a contribution to addressing the South East aviation capacity constraints. Increased international connectivity in itself generates local and national productivity gains[7]. Greater Manchester and MAG believe these productivity gains could be maximised through a strategy that targets the expansion of the airport's domestic footprint, and through increased demand, its potential to support a wider and denser international service network. This strategy includes:
    - the delivery of high-quality surface transport that links the new airport station with the communities and economies across the city region, including investment in the local transport network, car parking provisions and people movers. A key component of this investment plan will be the proposed Metrolink Western Loop extension which would not only link the HS2 station directly with the Airport, (to provide a fast and efficient interchange option for rail/air passengers) but would also serve Airport City, West Wythenshawe and University Hospital and MediPark, as well as link to the wider Metrolink network that already serves the airport; and

[7] Work undertaken by IATA points to a 10% rise in international connectivity boosting labour productivity levels and hence GVA by some 0.07%

  - the effective use of the freed up capacity on the classic rail network.

- attracting investment to sites around the airport and in surrounding parts of Greater Manchester and Cheshire; a high proportion of which will come from FDI – a net benefit to the UK;
- the potential spread of transport and economic benefits beyond Greater Manchester to areas including Cheshire which are anticipated to be further complemented by the construction of the M56 – A6 link road; and
- improving aggregate skills levels and promoting a reduction in worklessness in the nearby, high-dependency areas of southern Manchester and more broadly within Greater Manchester. In doing so, HS2 would complement existing infrastructure and multi-agency approaches to worklessness, for example through development of partnerships with neighbouring academies, and through development of apprenticeship schemes. These dependency benefits are a multiplier on the top-line GVA benefits quoted above, increasing the total value of the investment nationally and locally.

2.3.21 The Greater Manchester Combined Authority (GMCA) and MAG have given an “in principle” commitment to make a local funding contribution towards the costs of the new station, in recognition of the long-term economic returns that investment would bring. Government and other stakeholders have been advised that there must be a level playing field with other similar HS2 investments and that the role of local funding contributions, justified on the basis of anticipated growth in the Enterprise Zone in the future, should be balanced alongside the funding of appropriate Airport infrastructure that would be avoided. Drawing on the precedent of the Battersea/Nine Elms deal, Greater Manchester and MAG see such a deal including:

- an agreed package of investment necessary to deliver a fit for purpose Airport Hub and to unlock the surrounding development which would deliver the contribution towards the station’s costs;
- an agreed timetable for this investment that helps to reduce costs and potentially advance revenues – e.g. through coordinated utilities works and/or early provision of car parking;
- an appropriate approach to land value capture that secures a meaningful contribution towards investment costs whilst avoiding a risk to the pace of development or a distortion of competition between airports, recognising that Manchester is not the only airport to benefit from access to HS2;
- a review of the existing Airport Enterprise Zone to cover the development and wider rateable value increases generated by the provision of an airport station and associated infrastructure, with these revenues being made available towards the costs of the agreed investment package; and
- an appropriate degree of risk sharing between the Local Authorities and central Government.

2.3.22 GMCA and MAG are confident that given the wider productivity gains to Greater Manchester and beyond of improving connectivity to Manchester airport, the incremental costs of providing an HS2 station at the airport will be more than covered by additional net national taxes; and that providing an HS2 station at Manchester Airport will not impose a long-term net cost to the UK taxpayer.

2.4 Securing the Skills and Supply Chain Benefits for Greater Manchester and the UK

2.4.1 The employment, skills and local business opportunities of HS2 could be very significant for Greater Manchester. As Government has acknowledged, whilst the UK benefits from a foundation of civil engineering skills as part of the Olympic and Crossrail legacy, HS2 presents a new level of demand for skills that we must be ready to respond to. In addition, the project is expected to generate supply chain contracts in the order of £20 billion across a wide range of engineering and support sectors.

2.4.2 HS2 offers the UK and Greater Manchester the opportunity to develop a 20-plus year strategy to maximise the benefits that the investment will bring, and embed expertise in the construction of high-speed rail that offers significant export potential for the UK. With major engineering aspects, including the single longest element of Phase 2 tunnelling, taking place in and around the city region, this presents a significant opportunity for the local business community and a major boost to local training initiatives. However, this goes beyond the tracks, tunnels, rolling stock and stations to encompass the wide range of regeneration and development; construction, project management and computer design skills; and jobs that HS2 will stimulate.

2.4.3 Through its business base and its strong governance, supported by reforms and programmes agreed with Government through the 2012 City Deal, Greater Manchester is well placed to contribute to, and benefit from, the catalytic effect on employment and skills that HS2 can make upon our economy. Compared to other parts of the UK, Greater Manchester has expertise in a number of sectors relevant to HS2's construction and operation, including:

- Construction: 6,500 firms employing 50,000 people;
- Architectural and engineering: 3,000 firms employing 17,000 people;
- Legal and accounting: 3,000 firms employing 32,000 people; and
- Management and consultancy: 3,500 firms employing 28,000 people.

2.4.4 Supply chain development activity – promoted by Government, supported by Greater Manchester and local business – needs to begin now. We welcome the Government's intention to develop a national procurement strategy for HS2, recognising the range of agencies that will need to be aligned in their delivery to secure best practice, integrated delivery and, critically, to enable the Nation to respond in a competitive way. A similar approach was developed for the Olympics with some success, but we will need to ensure that the HS2 project fully learns from that experience to ensure that the outcomes are maximised this time. In particular, the Olympics avoided some building cost inflation and skills shortages as a result of the parallel economic downturn, which cannot be assumed for HS2.

2.4.5 Experience from within the UK (such as around HS1, Crossrail, the 2012 Olympics, and other recent major infrastructure and energy investments) and from overseas suggests that the following conditions are required to enable the UK to maximise the supply chain and wider benefits of HS2:

- Policy certainty, enabling business to invest for the long term with confidence in anticipation of HS2's procurement and supply chain opportunities;
- A model of procurement that adds substantial weighting to prime contractors' ability to demonstrate strong supply chains and clear local benefit, achievable within EU procurement regulations (such as incorporating commitment to apprenticeships and local labour); and
- Active and visible political leadership in the task of building the UK's HS2 supply chain capacity, mirroring the support that has been crucial in rebuilding car production in the UK.

2.4.6 Greater Manchester, with the anticipated support of the Growth Taskforce, will work with DfT and HS2 Ltd to ensure that a clear plan is established within a coherent national framework to increase the capacity of the appropriate sectors to absorb increased demands, so as to reflect the lead time required to mobilise at this scale.

2.4.7 Led by its Business Growth Hub and building on the success of local firms in securing work in the run-up to the 2012 Olympics, Greater Manchester can help to identify the businesses best placed to benefit from HS2 sub-contracts, and to develop the technology, expertise and track record required to access a significant share of the investment in HS2.

2.4.8 A similar approach is required on skills and GMCA welcomes the recent statements from the Transport, Business and Skills Ministers that HS2 should include investment in the provision of skills and employment

opportunities for the next generation. GMCA firmly supports this initiative and believes that to be truly effective, this institutional focus must also include clear pathways linking a newly skilled generation to the direct employment opportunities HS2 affords. In Greater Manchester, we are ready to develop skills requirement forecasts with HS2 Ltd for the short/medium and long-term to underpin a long-term labour market programme between GMCA/GMLEP, further/higher education institutions and future employers, so as to develop a pipeline of talent to meet the demands of HS2. Acknowledging the requirements to develop the specialised skill sets to design, manage and deliver HS2, Greater Manchester partners believe this could include the specific development of talent in Greater Manchester drawing on our strong local academic base; we would welcome the opportunity to explore this further with HS2 Ltd.

2.4.9 Development of a long-term labour market programme can be done in Greater Manchester as well as in coordination with other LEP areas along the route. Resources now controlled by Greater Manchester – such as European Social Fund can also be deployed to address gaps in provision where the mainstream cannot respond.

3 Manchester Piccadilly Station

Consultation question:

(ii a) Do you agree or disagree with the Government's proposals for a Manchester station at Manchester Piccadilly as described in Chapter 7 (sections 7.8.1 – 7.8.7)?

3.1 GMCA Response

3.1.1 GMCA fully supports the Government's intention to terminate services into Manchester city centre at Piccadilly Station. In transport terms, Manchester Piccadilly offers the best location to integrate HS2, classic rail, Metrolink and other transport networks including coach and bus, so as to maximise the regional benefits of HS2. Moreover, in regeneration terms, the Strategic Regeneration Frameworks for the adjacent Piccadilly and Mayfield areas identify the potential for commercial development that could secure up to 30,000 additional jobs, alongside scope for greater housing opportunities and wider renewal across a key focus of regeneration for the city centre. HS2 has the potential to act as a catalyst to achieving this regeneration potential.

3.1.2 Reflecting the initial findings of the Growth Task Force, the achievement of potential regional connectivity and economic benefits on offer at Piccadilly will be determined by the final design, scope and timing of facilities that HS2 delivery will provide at the station and the broader connectivity improvements to the station. The regional status and impact of both Piccadilly and the city centre means that these benefits will radiate far beyond Manchester.

3.1.3 We recognise that the station design work set out in the consultation document is still in its relatively early stages. However, we would stress that it will be critical that the final station delivered is an international

quality, multi-modal facility that is fit for the long-term. To achieve this, we need to effectively integrate HS2, Network Rail and local transport investment over the development period to maximise their collective impact. We also need to challenge the potential for all partners to accelerate delivery through this coordinated approach to deliver the final enhanced facilities earlier than is currently programmed, so as to release the growth potential on offer; and to safeguard against protracted and multi-layered construction periods that can act as a real constraint on economic activity.

3.1.4 Therefore, in providing our full support for the delivery of HS2 to Piccadilly, GMCA considers that it is essential that joint working arrangements between TfGM, Manchester City Council, DfT, HS2 Ltd, Network Rail and other Government departments/agencies as required are strengthened and formalised to:

- Review the scope of the current design proposal, with the intention of providing for an integrated multi-modal transport hub at Piccadilly station fit for the long term, given potential growth, and explicitly designed to maximise productivity and growth;
- Review the scope for transformation of the station environment and surroundings in 2026 or earlier, the potential for maximum productivity and accelerated development in the adjacent area would be enhanced;
- Sequence investment more efficiently and cost effectively, by advancing the project sufficiently to combine works associated with the Northern Hub, Metrolink investments and HS2, all of which engender significant economic benefits, so that they are not stretched over a 20-year or more period – and thereby avoid duplicated costs;
- Enable early delivery of additional conventional rail capacity – by delivering the station early, additional platform capacity can be

provided at Manchester Piccadilly, which would facilitate additional classic compatible services alongside post Northern Hub classic service levels and thereby improved connectivity to the Masterplan area; and

- Enable early delivery of enhanced accessibility - the early delivery of the station would allow Greater Manchester to shape the investments in the Metrolink network to better align it with the station requirements. TfGM will work with HS2 Ltd to agree the most effective means of implementing or amending the existing Metrolink Transport and Works Act Order powers to ensure effective delivery of the integrated station.

3.1.5 As noted in Chapter 2 above, this approach will save money in the long term and costs to the HS2 budget will be no different to those under the default assumption of a standalone station alongside Piccadilly. Rather, what will be required will be to bring forward conventional rail and Metrolink investment that under business as usual would have been undertaken later. TfGM's analysis of the short term costs and productivity benefits of the proposed station development strategy suggest that a share of the increased land values in the SRF area together with the net national tax gain from the additional productivity generated, following the model established for the Northern Line Extension to Battersea/Nine Elms in London, would be more than sufficient to cover its costs.

3.1.6 Greater Manchester intends to continue to work with the Growth Task Force, HS2 Ltd, DfT and Network Rail on refining the details of this approach to ensure that a funding and delivery model is brought forward for consideration.

3.1.7 Further brief explanation of the Piccadilly Strategic Regeneration Framework is given in Appendix A. The key objectives upon which

Greater Manchester's proposals for an integrated transport hub at Piccadilly are founded are:

- **Accelerate –** The earliest delivery of a "high speed ready" station at Piccadilly (at least by 2026);
- **Enhance and Integrate –** Deliver a fit for purpose station and transport hub of world class architectural quality; and
- **Build Once –** Early delivery of enhanced accessibility, avoidance of duplicated costs and minimising disruption.

These objectives and potential solutions which we would seek to develop with HS2 Ltd, DfT and other stakeholders are further described in Appendix B.

4 Manchester Airport High Speed Station

Consultation question:

(ii b) Do you agree or disagree with the Government's proposals for an additional station near Manchester Airport as described in Chapter 7 (sections 7.6.1 – 7.6.6)?

4.1 GMCA Response

4.1.1 GMCA fully supports the proposals for an HS2 station near to Manchester Airport. As set out in our original submission to the former Secretary of State (in July 2012), analysis undertaken for the 2012 submission to DfT suggested that a two-thirds increase in the net GVA impact could be secured at the Greater Manchester level and across the immediate area (including Cheshire) from the inclusion of the Airport Station alongside the central Manchester station, equating to some £0.5 billion additional GVA a year (the equivalent of nearly 9,000 additional jobs). This will significantly enhance the economic potential of the Airport City Enterprise Zone, which has already attracted significant international interest and in 2013 secured a £800 million inward investment commitment from the Beijing Construction and Engineering Group.

4.1.2 In addition, the Airport Station will:

- connect the only airport other than Heathrow with two runways, to the high-speed network, thereby making a contribution to tackling the South East aviation capacity constraints;
- provide a wider catchment for what is already the country's third largest airport, not only spreading the benefits of the Airport's existing international connectivity further, but also promoting growth in that connectivity by allowing the Airport to support a wider and denser international service network;

- free up additional capacity at the Airport for new conventional rail services, thereby widening the footprint of the Airport and the high-speed station still further, accelerating the connectivity/real economic benefits cycle;
- provide a positive impact on the commercially sustainable public transport network that feeds the Airport and its surrounding developments;
- accelerate opportunities to extend the Metrolink network and TfGM will work with HS2 Ltd to agree the most effective means of implementing or amending the existing Metrolink Transport and Works Act Order powers to ensure effective delivery of the integrated station. Opportunities would include potential for tram-train connections across the southern part of the conurbation; and
- provide improved connectivity with a network of high capacity rail services linking key international gateways and onward through their connections to wider transport networks.

4.1.3 We recognise that the station design work set out in the consultation document is still in its relatively early stages. To fully capitalise on the transport and economic opportunities offered by an HS2 Airport Station, the outline proposals in the consultation document need to be fully and carefully integrated into the wider spatial, economic and transport plans. Therefore, in providing our full support for the delivery of HS2 to Manchester Airport, GMCA considers that it is essential that joint working arrangements are formed between TfGM, MAG, Manchester City Council, Trafford Borough Council, DfT, HS2 Ltd, Network Rail and other Government departments/agencies to refine the consultation scheme proposal, so as to:

- determine an agreed package of investment necessary to deliver a fit for purpose Airport Hub, including Highways Agency investment in adjacent motorway junction improvements, to unlock the surrounding development which would deliver the contribution towards the station's costs; and
- establish an agreed timetable for this investment that helps to reduce costs and potentially advance revenues – e.g. through coordinated utilities works and/or early provision of car parking.

4.1.4 In addition, GMCA and MAG retain our "in-principle" commitment to make a local funding contribution towards the costs of the new station, in recognition of the long-term economic returns that investment would bring. In doing so, we now require Government and other stakeholders to continue to work with us on the development of a funding strategy that draws on the precedent of the Battersea/Nine Elms deal to establish:

- an appropriate approach to land value capture that secures a meaningful contribution towards investment costs whilst avoiding a risk to the pace of development or a distortion of competition between airports, recognising that MAG is not the only airport to benefit from access to HS2;
- a review of the existing Airport Enterprise Zone to cover the development and wider rateable value increases generated by the provision of an airport station and associated infrastructure, with these revenues being made available towards the costs of the agreed investment package; and
- an appropriate degree of risk sharing between the Local Authorities and central Government.

4.1.5 An initial assessment of the preferred technical and operational proposal for the Airport Station is provided in Appendix C, together with the criteria

against which Greater Manchester partners assessed alternative proposals. Greater Manchester partners would welcome the opportunity to further assess the merits of the proposal and ensure that the preferred integrated station layout achieves the optimal solution technically, operationally and economically.

5 Line(s) of Route

Consultation question:

(i) Do you agree or disagree with the Government's proposed route between the West Midlands and Manchester as described in Chapter 7? This includes the proposed route alignment, the location of tunnels, ventilation shafts, cuttings, viaducts and depots as well as how the high speed line will connect to the West Coast Main Line.

5.1.1 GMCA has been a strong supporter of the proposed routing strategy since it was broadly adopted by the Government in 2010. The shape of the network will maximise the impact of both the capacity and journey times in Greater Manchester, South Yorkshire, the West Midlands and West Yorkshire, which collectively offer the greatest cluster of economic growth potential outside the South East. We welcome the fact that the proposals also include provision for a link to the existing HS1 line north of St Pancras, largely utilising existing North London rail alignments, providing the scope for continental services from the North and Midlands, and greater access to Kent, Essex and Sussex which are expected to see greater patronage direct to the North West. Connectivity to the HS1 line, and through that to the European HS networks, is essential if the full economic opportunity of HS2 is to be maximised for the city regions along the HS2 route and beyond. An appropriate link between HS2 and HS1 would spread the economic benefits of connectivity to Europe further; providing increased access to international markets and productivity gains for the national economy. These benefits have not been addressed to date, and further work is required for these to be understood against the costs of linking the HSR network. In addition, current services linking to St Pancras are relatively slow, and so would not provide adequate connections for a high speed international link. Therefore additional capacity needs to be provided to ensure that the future connection

between HS1 and HS2 provides the sufficient speed and capacity for an international service from the North.

5.1.2 We welcome the opportunities afforded by HS2 Ltd to date to discuss the detailed technical proposals for locations of tunnels, portals, vent shafts, cuttings, viaducts, depots and associated infrastructure. However, we recognise that design proposals are still at an early stage in much of this detail. Therefore, GMCA's support for the proposals is on the basis that HS2 Ltd and DfT will retain an on-going dialogue and establish a clear process with local planning authorities for the resolution of planning, highways and environment implications, so as to ensure that the long-term benefits of HS2 are secured in a manner that minimises any localised negative impact associated with the scheme. It is critical that further opportunities are retained throughout the future period of scheme development for the Greater Manchester planning authorities and TfGM, acting on behalf of GMCA as the local transport authority for Greater Manchester, to work with HS2 Ltd to ensure that the detailed construction methodologies, phasing and logistics plans are developed to ensure that the adverse implications of construction on the local communities, businesses, residents and development are assessed and mitigated where practicable.

5.1.3 Individual planning authorities in Greater Manchester have set out, in parallel with this strategic response to the consultation, any specific issues that they are keen to ensure are resolved through the on-going dialogue. The key elements of these submissions is summarised below. Note that this is not intended as an exhaustive representation of individual authorities' planning positions but rather a high-level summary of major issues identified by those authorities.

5.1.4 Manchester City Council has identified in particular the following key local planning issues to be resolved, for which it will continue to call on the support of GMCA and TfGM, including:

- The importance of ensuring that the tunnelling under densely populated parts of the City is undertaken and maintained in a manner that minimises the impact on adjacent communities;
- The importance of developing further shared understanding on the tunnelling methodology that is proposed for the alignment between the Manchester Airport and Piccadilly stations, recognising the scale of the work and movement of materials involved, so as to minimise impact on the functioning of the City and its neighbourhoods during the construction period;
- The opportunity to review with HS2 Ltd the specific locations and processes proposed for the tunnel ventilation shafts, so as to ensure that they do not undermine wider commercial opportunities in the City, and so as to minimise potential noise impacts and any other environmental impacts of the intervention points, particularly in residential areas; and
- The opportunity to review the proposals for the northern tunnel portal, with a view to relocating this closer to the city centre, so as to safeguard adjacent neighbourhoods, including a local school, and local regeneration initiatives.

5.1.5 Trafford Metropolitan Borough Council has identified in particular the following key local planning issues to be resolved, for which it will continue to call on the support of GMCA and TfGM, including:

- The need for HS2 Ltd to bring forward alternative engineering solutions, in close consultation with local planning and transport authorities, that mitigate the visual and heritage impact of the spur

(proposed to re-join the WCML at Golborne) on communities in Trafford;

- The importance of developing further shared understanding on the tunnelling methodology that is proposed from the Manchester Airport station northwards, recognising the scale of the work and movement of materials involved, so as to minimise impact on the functioning of the Borough and adjacent commercial development land;
- The need to review and revise with HS2 Ltd and local partners the final detailed location and design of the Airport station and car-park, as currently proposed in the consultation, with a view to the impact of Green Belt and adjacent commercial development land; and
- The need for the further development of the appraisal of sustainability to establish a more detailed understanding of the ecological, heritage and wider environmental impact of the scheme.

5.1.6 Wigan Council has identified in particular the following key issues to be resolved, for which it will continue to call on the support of GMCA and TfGM, including:

- The importance of resolving the environmental impact of the proposed Rolling Stock Depot when the detailed design work commences, especially relating to the impact on the green belt, ecological sites, listed buildings and access to the depot from the local road network. The Council expects HS2 Ltd and DfT to retain an on-going dialogue with the Council to ensure appropriate mitigation is in place.
- The need for on-going consideration of how the inclusion of HS2 facilities through the Golborne area of the borough may offer opportunities to maximise regeneration, development and housing potential in the wider Leigh area, reflecting work underway to fully

explore the potential on offer, including the potential for passenger facilities in this location.

- The importance of developing optimal options for the released capacity on the WCML for improved passenger connectivity and freight traffic through the corridor in support of further growth. The Council expects a commitment to retain comparable or to secure better service connections in a manner that best complements the HS2 services to enhance the connectivity of the borough for residents and businesses.
- The importance of further dialogue given the scale of the project for managing the noise/local externalities of the scheme, both during construction and operationally. The Council agrees that the approach proposed by HS2 Ltd and DfT is in accordance with that expected of schemes of this scale and nature, however further dialogue with HS2 Ltd and DfT is expected throughout the development of the project.

6 Additional Stations

Consultation question:

(iii) Do you think that there should be any additional stations on the western leg between the West Midlands and Manchester?

6.1 GMCA response

6.1.1 GMCA supports the proposals for High Speed stations on the western leg at Manchester Airport and Manchester Piccadilly and believe these present a balanced solution to service provision and connectivity for markets along the western route.

6.1.2 However, GMCA acknowledges that at this stage of project development, regional partners and other interested parties may wish to bring forward proposals for additional stations. As representative body for the ten Greater Manchester Local Authorities, GMCA would request that DfT and HS2 Ltd continue to work with those Authorities and TfGM to explore the feasibility of these proposals within the timescales available and to assess the operational and economic case for any such proposals.

6.1.3 GMCA acknowledges that Local Authorities and organisations along the proposed HS2 Phase 2 route may wish to propose alternative station, route or service options for HS2 Ltd to consider. GMCA would request that where such proposals affect the proposed scheme solutions for Greater Manchester, these are subject to the development of appropriate business cases to determine value for money and benefits and HS2 Ltd continue to engage with GMCA and TfGM.

6.1.4 The routing of the high speed rail alignment for Phase 2 (HS2) goes through Wigan to connect with the West Coast Main Line, south of Wigan town centre. This nationally significant infrastructure project will offer a range of opportunities to maximise economic growth, regeneration,

development and housing potential on the western boundaries of Greater Manchester.

6.1.5 Through the connection onto the West Coast Main Line, there is potential for Wigan North Western Station to cater for HS2 services, which would support one of the GMCA transport infrastructure priorities; the Wigan Transport Hub. There are significant regeneration and transportation benefits which would result from the identification of Wigan North Western as a HS2 station and these would lead to a major boost to the economy of the wider area.

6.1.6 Whilst the benefits to the borough are primarily seen to be at Wigan North Western Station, HS2 also presents an opportunity to create a new interchange station in the Leigh area of the borough.

7 Appraisal of Sustainability

Consultation question:

(vii) Please let us know your comments on the Appraisal of Sustainability (as reported in the Sustainability Statement) of the Government's proposed Phase Two route, including the alternatives to the proposed route as described in Chapter 9.

7.1 GMCA Response

7.1.1 Greater Manchester supports the work done to date on sustainability and in principle endorses the methodologies used in undertaking the Sustainable Assessment. It is anticipated that a detailed Environmental Impact Assessment (EIA) will be undertaken and Environmental Statement produced following agreement of the final route. It is expected that HS2 Ltd will work in collaboration with Local Authorities to identify appropriate measures to mitigate the impact of HS2 on local communities.

7.1.2 In particular, we are keen to review HS2 Ltd's proposals on issues such as:

- Proposed environmental mitigation measures, especially adjacent to sensitive locations such as Pennington Flash;
- The location and impact of tunnel shafts;
- Re-use and minimisation of construction materials, including in particular spoil / waste generated by the construction of the tunnel between Manchester Airport and West Gorton;
- Sustainable construction methodologies including transport of materials by river / canal / rail networks; and
- Carbon reduction initiatives.

7.1.3 We believe collaborative development of solutions to mitigate the negative impacts of these issues and others represents an opportunity to better present the sustainable positives of the scheme.

7.1.4 We note the potential for the scheme to have a positive impact on growth and development in Greater Manchester, particularly around Manchester Airport and Manchester city centre and we are keen to engage with you to develop and maximise these opportunities.

7.1.5 The scale of the project means that a wide range of specific arrangements will be required for managing the noise/local externalities of the scheme, both during construction and operationally. Greater Manchester partners acknowledge that the approach proposed by HS2 Ltd and DfT is in accordance with that expected of schemes of this scale and nature. However, we would expect that further dialogue with HS2 Ltd and DfT will continue throughout the development of the project and preparation of the EIA.

8 Released Capacity

Consultation question:

(viii) Please let us know your comments on how the capacity that would be freed up on the existing rail network by the introduction of the proposed Phase Two route could be used as described in Chapter 10.

8.1 GMCA Response

8.1.1 GMCA recognises that the released capacity on the current WCML corridor will provide significant further scope to secure the range of connectivity needed to maximise the wider impact of HS2. This is a critical factor in considering the unique scale of benefits that no alternative to HS2 Phase 2 can offer.

8.1.2 GMCA would identify two priorities on how the capacity which would be freed up by HS2 should be used - passenger services and freight services. Both are considered critical in ensuring that local and regional growth potential is realised.

8.2 Released Capacity – Passenger Services

8.2.1 Where passenger services are concerned, TfGM have identified important concerns on some aspects of HS2's currently proposed service patterns for classic trains, which GMCA endorses, including:

- The need to review the proposal to combine following implementation of HS2 two services (Piccadilly–Stoke-London and Manchester Airport–Piccadilly-Glasgow/Edinburgh), which in TfGM's view would create unreliability, remove direct trains from the Airport to Stations in North Cumbria and Scotland; provide a poor alternative to extending London-Preston classic compatible high speed trains to Lancaster and

Cumbria. TfGM have proposed instead that these services remain separated;

- The need to consider opportunities to connect HS2 and the Derby-Birmingham line to support service operations onto the existing rail network to Bristol and beyond, which would achieve a step change in the journey time for travel from Manchester to the South West of England; and
- The need to review current HS2 proposals for only two out three Manchester-London services to stop at Manchester Airport. TfGM believe that a much better option would be for all Manchester-London high speed services to stop at the Airport.

8.2.2 GMCA is also committed to ensure that those parts of Greater that currently benefit from WCML services are not materially affected by future changes. The policy position set out in the *Strategic Case for HS2* states that all places with a direct London service today retain a broadly comparable or better service after HS2 opens. GMCA therefore expects an on-going dialogue with HS2 Ltd on how that commitment will affect Stockport: new service patterns should not result in a loss of overall train services between Stockport and London; that trains that currently operate from the Airport to places such as Blackpool and Scotland are revised to start their journeys at Piccadilly; that consideration is given to operate trains from Manchester to North Wales via the Airport which would create a long-desired link between the Airport and Chester/North Wales. All of these service changes would be facilitated by the platform capacity released by HS2.

8.2.3 Appendix D sets out in greater detail Greater Manchester's initial views on how capacity released by HS2 could deliver better passenger services. TfGM has discussed many of them with Network Rail, which raised no fundamental objections to them. However, in those discussions,

both TfGM and Network Rail recognised the need to work with HS2 Ltd following the consultation to develop the best possible post-HS2 service pattern.

8.3 Released Capacity - Freight

8.3.1 GMCA believes that released capacity arising from HS2 is an essential part of the solution to developing a more efficient, sustainable and productive freight infrastructure network. Together with other complementary intervention measures, the economic benefits of HS2 can not only be multiplied but also spread to those areas that are not directly connected to the new high speed network.

8.3.2 More work is required to develop a National Freight Strategy and to identify the appropriate interventions to ensure HS2 maximises the potential for growing the freight industry and to encourage the maximum switch from road to rail. GMCA therefore welcomes the study which has been commissioned by HS2 Ltd to explore the cost differential and the wider benefits to the UK economy of freight carried by rail rather than on the roads.

8.3.3 Within the North West, rail freight is expected to have exceeded the capacity of WCML by 2030. Shifting freight from road to rail will be an essential part of being able to keep pace with the demands of the industry, as well as reducing congestion on the region's major Motorways, and reducing carbon emissions. The economic competitiveness of Greater Manchester demands that the fullest utilisation is made of Trafford Park and this will require addressing capacity pinch-points and developing an integrated approach to utilising the Ports at Liverpool and Hull.

8.3.4 TfGM has engaged with regional partner authorities on behalf of GMCA to ensure that a co-ordinated approach is taken to assessing the constraints and needs of freight infrastructure in the North of England and beyond. Furthermore, it firmly believes that this work can constructively inform the development of a national freight strategy ensuring that the appropriate complementary intervention measures are identified alongside HS2.

8.3.5 Appendix E:

- Highlights the importance of rail freight to the Greater Manchester economy, its predicted growth and the current network constraints;
- Summarises the measures Greater Manchester is undertaking to connect with DfT, HS2 Ltd and regional partners to develop a co-ordinated region wide response to the question of freight. For example through:
    - The “Future of Logistics” work being co-ordinated by New Economy and which looks at maximising the economic benefit to Greater Manchester from the sector; and
    - The development of a pteg freight manifesto.
- Economic Value of Rail Freight to the North.

9 Utilities along the Route

Consultation question:

(ix) Please let us know your comments on the introduction of other utilities along the proposed Phase Two line of route as described in Chapter 11.

9.1.1 Greater Manchester strongly supports the proposal to maximise the benefits of HS2 by developing and enhancing interdependencies between HS2 and other infrastructure projects.

9.1.2 We believe that it would be essential to allow provision for communication and other utilities to be installed along the route. Given that exact requirements are unknown at this stage, and the likely advancement in technologies by 2027, we consider the most sensible way to 'future proof' the network is to provide ample additional ducting along both sides of the alignment.

9.1.3 In addition to this, Greater Manchester are considering the proposals to utilise tram-train technology to allow services to use existing heavy rail lines before switching to the Metrolink system to run through the city centre. To create a link to the east of Manchester, we would be keen to work with HS2 Ltd to explore the options for running a Metrolink line adjacent to the HS2 route between Manchester Piccadilly and Ardwick junction. This would allow a connection between Metrolink and the heavy rail network between Ardwick junction and Ashburys.

Appendix A – Piccadilly Strategic Regeneration Framework

In order to respond to the opportunities presented by HS2 and the Northern Hub, a Strategic Regeneration Framework (SRF) has been developed for the area surrounding Piccadilly Station. This proposes changes in the vicinity of the station and also sets out our preferred options for the design and functionality of the station itself.

The SRF builds on work to update the regeneration framework for the Mayfield area. The HS2 Piccadilly SRF is also part of the overall strategy to regenerate the east of the city and has been developed in the context of the Greater Holt Town Regeneration Framework.

The Piccadilly Strategic Regeneration Framework was subject to public consultation which ended on the 8th November 2013. The proposals received strong support from the majority of landowners and stakeholders with many respondents recognising the positive impact that the regeneration proposals would bring. The City Council and Greater Manchester partners are now committed to continuing to work with landowners and stakeholders to refine and develop the proposals further.

The HS2 Piccadilly Strategic Regeneration Framework document can be found here: http://www.manchester.gov.uk/downloads/download/5613/hs2_piccadilly_regeneration_framework

HS2 Manchester Piccadilly Strategic Regeneration Framework – Masterplan Vision

The SRF builds on work to update the regeneration framework for the Mayfield area. The HS2 Piccadilly SRF is also part of the overall strategy to regenerate the east of the city and has been developed in the context of the Greater Holt Town Regeneration Framework.

The starting point for the SRF is the once-in-a-century opportunity provided by HS2 and the Northern Hub to create a world class transport hub and arrival point into the city, and to transform the eastern side of the city centre by defining a unique sense of place and new districts and providing key linkages between East Manchester and the city centre. The size and scale of the area - approximately 140 acres - also means it is one of the largest regeneration opportunities within the city centre.

SRF Themes

A number of key themes have informed the proposals within the SRF. These are:

- Maximising the opportunity – using the catalyst of HS2's arrival to create a new gateway and extend the boundaries of the city centre eastwards to the inner ring road and beyond.
- Place making – creating a new district focussed around the station and a new Boulevard with public spaces, streets and buildings that generate activity and promote city pride.
- Townscape integration – an area with its own character but also a seamless extension of the city centre which facilitates new routes and better connections.
- Neighbourhoods of choice – a diversity of neighbourhoods that attract people to live, work and socialise in.
- Transport connectivity - creating proposals that capture the potential for Piccadilly Station to be one of the world's great transport buildings which can capitalise on the area's unique location on the doorstep of one of Europe's largest multimodal transport interchanges.
- Market viability – defining proposals that offer a clear vision to investors and which are flexible and able to adapt to changes in demand.

SRF Proposals

The key proposals within the SRF are set out below.

- Neighbourhoods of Choice - A number of new neighbourhoods with strong individual identities are proposed. These are:
    - Piccadilly North – reinstating the historic street pattern.
    - East Village – mixed-used development with residential focus around canal basins.
    - Piccadilly Central – an area of large office developments around public squares and high-rise residential towers framing a new city park.
    - Mayfield – a new mixed-use city quarter on the banks of the remediated River Medlock (detail provided in the separate Mayfield report and SRF document)
    - Links to the North Campus (the old UMIST campus off Sackville Street) and The Corridor area.
- Connectivity - Consideration is given to animated and legible pedestrian connections through the area and with neighbouring areas, particularly to East Manchester, and appropriate road layouts. The station proposals take into account the expansion and connectivity of the public transport infrastructure around Piccadilly.
- Uses - A mix of uses is proposed to ensure viability and sustainability, with each neighbourhood given the potential to adapt before and after their redevelopment. Active street frontages should be provided to animate the area, with the opportunity to incorporate a major retail destination into the proposals. The overall scale of the development is of a size commensurate with the city's vision for Manchester and the context of an international transport hub. The potential for over 1.3m square metres (14.4m square feet) of new floor space has been identified, including 625k

square metres of commercial floor space, 400k square metres of residential and 100k square metres of retail and leisure facilities.

- Public Spaces - A crucial part of the SRF is the provision of a network of public spaces to provide a sense of place and foster sustainable growth. Provision is made for a series of public spaces with different scales and characters, including:
    - A new boulevard that provides a high quality connection between Piccadilly and the communities of East Manchester, including Holt Town. This is seen as a crucial catalyst for further development.
    - A highly visible, redesigned and reinvigorated arrival space at the front of Piccadilly Station.
    - A new civic space to the north of the HS2 station concourse.
    - A new public park connecting Mayfield Park and the Medlock Valley.
- Station Proposals - Integration of the HS2 and existing Piccadilly Stations should create a world class intermodal transport facility and architectural statement befitting of Manchester. The SRF includes a Station brief which would provide such a facility, drawing on best practice from other international transport facilities. The essential features of the new station are considered to be:
    - High architectural quality;
    - A mix of uses; and
    - Intermodal connections for all forms of transport.

  As part of this, we have evaluated options for the Metrolink facilities at the Station, including better integration with the railway station, better interchange facilities, and improved access. Options for a new coach station and optimal bus and taxi movements are also being considered.

Appendix B – Integrated Piccadilly Station Proposals

The approach to developing the Strategic Regeneration Framework and integrated station design has been founded on the following objectives:

1. **Accelerate** – The earliest delivery of a "high speed ready" station at Piccadilly (at least by 2026);
2. **Enhance and Integrate** – Deliver a "fit-for-purpose" station and transport hub of world class architectural quality; and
3. **Build once** - Early delivery of enhanced accessibility, avoidance of duplicated costs, and minimizing disruption.

1 - Accelerate

HS2 investment has the potential to be a real catalyst to attract new activities and add considerable value to unlock and facilitate regeneration in the area surrounding Piccadilly. A significant proportion of these can be delivered in advance of the full arrival of HS2 Phase 2 in 2033 through the accelerated investment in HS2 at the station such that Piccadilly is "high speed ready" by 2026 (coinciding with the opening of phase 1). Furthermore bringing forward and co-ordinating the station development to the accelerated timetable will allow Greater Manchester to exploit a number of benefits that would otherwise not be deliverable without such acceleration.

Accelerating the delivery of a high speed ready station and the provision of four additional functional platforms (with the necessary realignment to the existing lines) would free up capacity thereby facilitating enhancement of the classic services, by means of additional services or train lengthening, and improved connectivity to the area from 2026 rather than 2033.

Maximising this opportunity involves specifying what service enhancements early delivery of 400 metre platforms could unlock both before and after the opening of Phase 1. Appendix D gives further consideration to the service enhancements that could be delivered as a result of released platform capacity.

Early delivery – Avoiding the capacity crisis and accommodating HS2 Phase 1 services

Accelerating the delivery of an HS2-ready Piccadilly station, with a minimum of four additional functional platforms will facilitate superior rail connectivity for Manchester City Centre, resulting from services running more directly, more reliably, and with more capacity. This will enhance the kind of connectivity (and thus GVA) benefits anticipated from the Northern Hub and accelerating them by a decade or more.

The improvements to rail services facilitated by early opening of Piccadilly HS2 platforms will achieve both:

(i) relief of capacity constraints that would arise by the mid-2020s, even if HS2 were not built;

(ii) avoiding the potential worsening of some rail services that would otherwise be a consequence of implementation of HS2 Phase 1 only.

Each of the above is discussed below.

(i) Relief of capacity constraints that would arise anyway by the mid-2020s

Development work for the West Coast RUS (Network Rail, July 2011) and Northern RUS (Network Rail, May 2011) looked at infrastructure capability, service patterns, train capacities and station-area constraints. With respect to Manchester Piccadilly Station, the conclusion was that platform availability, especially as trains become longer in response to increasing passenger demand, will become critical to the successful operation of the railway network.

As train-lengths are increased to accommodate demand growth, two capacity constraints become critical:

- fewer trains will be able to be stacked at the longer bay-platforms (1 to 8)
- fewer trains will be sufficiently short to be accommodated at the shorter bay- platforms (9 to 12)

Lengthening platforms would be very expensive because it would require major alterations to the point-work at the entrance to the station, and possibly widening of the viaduct.

Two particular services have been identified as requiring lengthening from the mid-2020s:

- Manchester – Birmingham/Bristol (2tph)
- Manchester – Crewe – Cardiff (1tph).

By the mid-2020s, there is expected to be no platform capacity at Piccadilly to accommodate train-lengthening for these services. Without additional platform capacity, longer trains could only be accommodated by reducing turnaround times of services in general (adversely affecting punctuality/reliability) or by withdrawing other rail services.

HS2, by providing four additional platforms, provides a long-term solution to platform capacity at Piccadilly. Early opening of the HS2 Piccadilly platforms would enable that capacity to be released in a timely manner, when it is expected to be needed by forecast growth in demand.

(ii) Avoiding the worsening of rail services that would otherwise result from implementation of HS2 Phase 1 only

HS2 involves increasing Manchester – London trains from three per hour to four per hour: the existing three-trains-per-hour service would be replicated by HS2 services, and there would be an additional one train per hour serving stations on the “classic” line.

TfGM’s assessment of the position, which has included detailed discussions with Network Rail, is that an additional hourly London-bound service can be accommodated by either:

- the approach assumed in the work underlying the October 2013 HS2 Business Case, in which the additional hourly "classic" Manchester – London service starts from Glasgow or Edinburgh, enabling it to use the through-platforms at Piccadilly, rather than the more capacity-constrained bay-platforms;
- withdrawal of local or regional services that use the Piccadilly bay-platforms, enabling the hourly "classic" Manchester – London service to terminate in Manchester.

TfGM's view is that the first approach - starting the hourly "classic" Manchester – London service from Scotland - would:

- create unreliability from operating an unnecessarily long service, passing through the heavily utilised network in Manchester City Centre (and at other locations), which will also worsen the reliability of other services with which it will interact;
- remove direct trains from Manchester Airport to stations in north Cumbria and Scotland; and
- provide a poor alternative to extending London – Preston classic-compatible high-speed trains to Lancaster and stations in Cumbria (we understand from discussions with the rail industry that this would be done if the separation of Manchester – London and Manchester Airport – Scotland "classic" services were retained).

Under the alternative approach - withdrawal of local or regional services that use the Piccadilly bay-platforms - TfGM has estimated that the following services would need to be withdrawn:

- 1 train per hour Manchester Airport - Manchester Piccadilly - Sheffield, reducing the Manchester – Sheffield express-service frequency from three trains per hour to two trains per hour, and removing the direct

service from Manchester Airport to Sheffield, which is regarded as a key link supporting the North of England economy.

- 1 train per hour Manchester Piccadilly – Stockport - Crewe stopping service, reducing the frequency of that service from two trains per hour to one train per hour. Frequency is assumed to be retained at stations south of Wilmslow by extension of a Piccadilly – Airport stopping service, resulting in longer journey times and significant crowding on the remaining hourly Crewe – Stockport – Manchester service, since it is not expected to be possible to lengthen that train due to the platform length constraints referred to above.

Early transformation of the station

HS2 should become the catalyst for turning Piccadilly into the kind of iconic gateway that HS1 has made at St Pancras. This would mean GVA benefits to Greater Manchester beyond the impact of HS2 (and the capacity it frees up) on business to business and labour market connectivity. A significant proportion of these additional place shaping, gateway and broader branding benefits can be accelerated by bringing forward the station enhancements. Critical will be the agreement of a specification for a suitably iconic and future proofed Piccadilly station, including improved interchange with other transport modes, as will co-ordinating investment to minimise disruption in the area.

Providing investor confidence

Early delivery of the station and surrounding infrastructure also provides an opportunity for investors to anticipate some of the full benefits of HS2 itself, and would provide a visual demonstration of the potential of the area. This means the project is about making the surrounding area HS2-ready as well as the station itself. This would be a key regeneration benefit, helping to stimulate some early investment in the area which could act as a catalyst to the longer term development.

2 - Enhance and Integrate

Analysis undertaken and evidence from elsewhere demonstrates the positive impact that a well-designed station and surroundings has on rateable values of existing properties and new developments in the area (in the absence of any improved connectivity). This would mean GVA benefits to Greater Manchester beyond the impact of HS2 (and the capacity it frees up) on business to business and labour market connectivity.

Fundamental to the enhancements is the need for a fit for purpose specification of a suitably iconic and future proofed Piccadilly station. The station design will be a critical factor in enabling the regeneration of the surrounding area to support the commercial impact that high speed rail will ultimately bring. This includes providing connectivity between the elements of the station as well as the station and the wider city. Evidence suggests that well designed and strategically focused transport infrastructure, such as an HS2 station, provides a real opportunity for cities. The HS2 station at Manchester Piccadilly will be a major gateway to the city and in turn act as a magnet for major new development attracting key business sectors, commercial activities and new inward investment.

World Class Integrated Piccadilly Station

Piccadilly HS2 Station should be designed as one station, incorporating the Classic Railway station, the Northern Hub and Metrolink elements, and integrated with the proposed adjacent developments, with the station's location moved slightly closer to the city centre.

This Vision is supported by:

- Master planning of the area surrounding the station
- Funding plan for the Piccadilly Strategic Regeneration Framework (SRF)
- Estimate of regeneration benefits of SRF
- Estimate of transport benefits of SRF

- Cost estimate of SRF.
- Benchmark / comparison to other city stations.

HS2 Manchester Piccadilly Strategic Regeneration Framework Draft, August 2013, p38.

Station Location

The SRF proposes that the position of the HS2 station building should be moved slightly closer to the city centre.

While still generally along the route alignment proposed by HS2 the station should also be moved slightly laterally away from the existing Listed Classic railway station to allow for a shared concourse to link the HS2 concourse at a low level to the existing station main concourse. This alternative location would keep the HS2 elements of the station within the "station operation boundary" proposed by HS2 Ltd except for the movement towards the city centre. TfGM will work with HS2 Ltd to agree the most effective means of implementing or amending the existing Metrolink Transport and Works Act Order powers to ensure effective delivery of the integrated station.

Station Transport Integration

It is seen as crucial that the station is a single, integrated facility, with a new shared main concourse, legible circulation to all areas, clear definition of spaces, and full integration of all transport connections, including Metrolink, bus, taxi, parking, coach and cycle provision. This includes the following considerations.

a) **Classic Station and Northern Hub new platforms:** The majority of the existing station is unaffected with only small areas of demolition required. Northern Hub platforms, 15 and 16, will come online in 2018. GMCA and its partners will continue actively working with Network Rail to ensure the complementary requirements of the SRF and North Hub works maximise the regeneration benefits to the area around the station.

Network Rail has also indicated its supports in principle for the overall vision for a world-class transport hub and the associated regeneration benefits to

the City and wider region and has set out the areas requiring further consideration as the scheme proposals are developed.

HS2 Ltd have acknowledged through its response to the SRF proposals that with regard to the - "*HS2 Concourse Arrangement –The shared street level concourse arrangement could offer some benefits in spatial and passenger experience terms but would need to be assessed carefully in terms of station operation."*

b) **Metrolink:** As acknowledged by HS2 Ltd, *"Realignment of the Metrolink offers potentially significant opportunities for improvement to the HS2 concourse location and passenger flows across the undercroft".*

In addition to realignment of Metrolink, HS2 is expected to create additional demand for Metrolink services and the existing service provision will be overwhelmed.

To accommodate the expansion of Piccadilly, HS2, tram train and the proposed developments in the area, new Metrolink platforms are required at Piccadilly to allow more passengers to use the station. The works will improve the passenger experience when using this Metrolink stop and allow better integration with the proposed station expansion. A number of options have been considered and two options are currently being taken forward. The options can be seen in the diagrams on the following pages and are described below.

Option one:

This option retains Metrolink in the same area of the station as the existing stop. The existing platforms will be removed and replaced with two larger island platforms, which will double the Metrolink capacity, compared to the existing stop. There will be four tracks through the station. The area around

the platforms will be opened up, with new mezzanine walkways installed to connect Metrolink to the main station and surrounding areas.

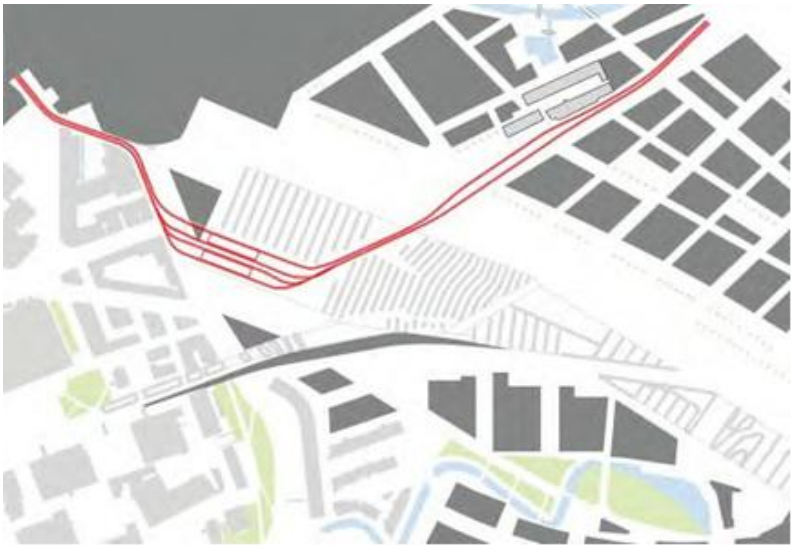
Advantages:

- Improved access to Metrolink platforms;
- Increased capacity; and
- Metrolink stop in close proximity to the Mayfield site.

Disadvantages:

- Closure of London Road, adjacent to the Metrolink stop;
- Removal of Grade 2 listed station façade adjacent to London Road;
- Significant long term disruption during construction to Metrolink users;
- Existing drop-off and taxi waiting area to be removed;
- Flow through station impeded, as the Metrolink platform and tracks would act as a barrier to movement between Mayfield and the station / City Centre; and
- Potentially significant structural alterations / removal and replacement required to the Network Rail station supporting columns.

Metrolink Option 1: Redevelops the existing Metrolink stop below the existing rail platforms[8]



Lower Level - Metrolink Option 1

[8] HS2 Manchester Piccadilly Strategic Regeneration Framework Draft, August 2013, p44

Option two:

This option would involve constructing a new Metrolink stop beneath the proposed HS2 platforms. The existing Metrolink stop would then be removed. Two large island platforms and four tracks would be installed, doubling the current Metrolink capacity. Access to the Metrolink stop would be gained from the HS2 station mezzanine, which also serves HS2 and the mainline station. The scheme takes advantage of the removal of Gateway House.

Advantages:

- Increased capacity;
- Improved access to Metrolink platforms, particularly for users of HS2;
- The Metrolink stop is in close proximity to the Regional Centre and the Strategic Regeneration Framework development zone;
- This option can be constructed at the same time as the HS2 platforms and minimises the construction impact on the station and Metrolink users;
- The impact on London Road is similar to the existing condition; and
- The area of the present Metrolink stop can be brought into beneficial use.

Disadvantages:

- Wider area of disruption during construction, although the majority of this disruption will be required for HS2 regardless of the inclusion of Metrolink; and
- Tunnelling works would be required below the new plaza."[9]

[9] HS2 Manchester Piccadilly Strategic Regeneration Framework Draft, August 2013, p41

Metrolink Option 2: Develops a new Metrolink stop north of the existing station and below the new HS2 platforms.[10]

Lower Level - Metrolink Option 2

Integration of the various transport modes and the HS2 Station within the Piccadilly SRF would require careful consideration and the following non-exhaustive list describes the areas which Manchester City Council and TfGM would seek to work closely with HS2 Ltd to develop the designs:

a) **Bus Access:** As acknowledged by HS2 Ltd, *"Further studies [are] required to examine multimodal interaction including …. Buses….."*

[10] HS2 Manchester Piccadilly Strategic Regeneration Framework Draft, August 2013, p45

Local bus access via London road will need to be reviewed dependent on which Metrolink option is taken forward and whether this road can remain open in front of the station.

b) **Coach Station:** We have reviewed our approach to city centre coach station provision and regard Piccadilly (HS2) Station as a suitable location for a relocated coach station. Routing and management of coaches via or across the new Boulevard will require further study.

c) **Taxi Access**: *"Further studies required to examine multimodal interaction including….. taxis…"*

A taxi rank will be required on the new Boulevard and some provision may need to be retained on the Mayfield side of the station as well.

d) **Cycle Access:** *"Further studies required to examine multimodal interaction including ….. cycling strategies".*

e) **Car Access:** *"Further studies required to examine multimodal interaction including traffic circulation…."*

While the new Boulevard is not proposed to be open to traffic other issues are yet to be resolved including closure or not of London Road, access to station undercroft parking for Network Rail staff and train drivers etc.

f) **Car parking:** HS2 Ltd's proposals for car parking at Piccadilly Station are considered to be too concentrated at a single location. Agreement on the size of car park required has yet to be reached with HS2 Ltd but the principle in the SRF is to distribute parking more widely as illustrated below.

Connection to existing rail network for accelerated delivery

There are two scenarios for delivery of the station:

- HS2 Piccadilly operational before 2026; and
- HS2 Piccadilly operational in 2026.

Scenario 1: HS2 Piccadilly operational before 2026

While the HS2 platforms and part of the approach viaduct would be complete in this Scenario 1, the tunnel into Manchester will not be complete. Therefore only Classic rolling stock ("British" trains) would be operating to Manchester and no HS2 trains at all. These Classic trains would probably be a maximum length of 260 m as currently and so could be accommodated on the HS2 platforms in terms of length. However temporary platform "build outs" would be required to accommodate them.

A crossover and bridge structure would be required to bring trains from the existing network across the gap between the existing viaduct and the new part of the HS2 viaduct built.

Network Rail signalling and power systems will need to be integrated with the HS2 infrastructure at Piccadilly station so that the system operates as an extension to the existing (Classic) system.

Scenario 2: HS2 Piccadilly operational in 2026

HS2 (Phase 1) would be operational from London to Birmingham with some HS2 trains continuing to Manchester on the Classic rail network

While the HS2 platforms and part of the new HS2 approach viaduct would be complete in this Scenario 2, the tunnel into Manchester will still not be complete. Temporary platform "build outs" would be required to accommodate:

- The HS2 Classic Compatible trains, and
- Any normal "British" trains needing to use the HS2 platforms.

(NB. It is acknowledged that HS2's Piccadilly Station, and the rest of the HS2 network, would be built to what is known as "GC" gauge, which is both wider and higher than that for normal British trains but these larger HS2 GC trains would not be in Manchester before 2033).

It is understood that HS2 Phase 1 2026 (Classic compatible) trains from London to Manchester would currently be only 200m long due to the platform limitations at the existing Piccadilly Station for 400 m long trains.

Another option may be for extra HS2 coaches to be added to extend the HS2 200 m train to be a similar length to the 260 m existing Pendolino trains.

It is assumed that 400m trains could be scheduled by HS2 Ltd to run directly from London to Manchester if some platforms at Piccadilly Station were longer (i.e. 400 m).

These 400m HS2 trains would however be non-stopping from London as the intermediate station platforms (i.e. at Stockport) would be too short. In practice HS2 Ltd might consider running a mixture of 200 m and 400 m trains from London or HS2 would run 400m trains while an existing Classic service might run 260m long trains.

A crossover and bridge structure would be required to bring trains from the existing network across the gap between the existing viaduct and the new part of the HS2 viaduct built.

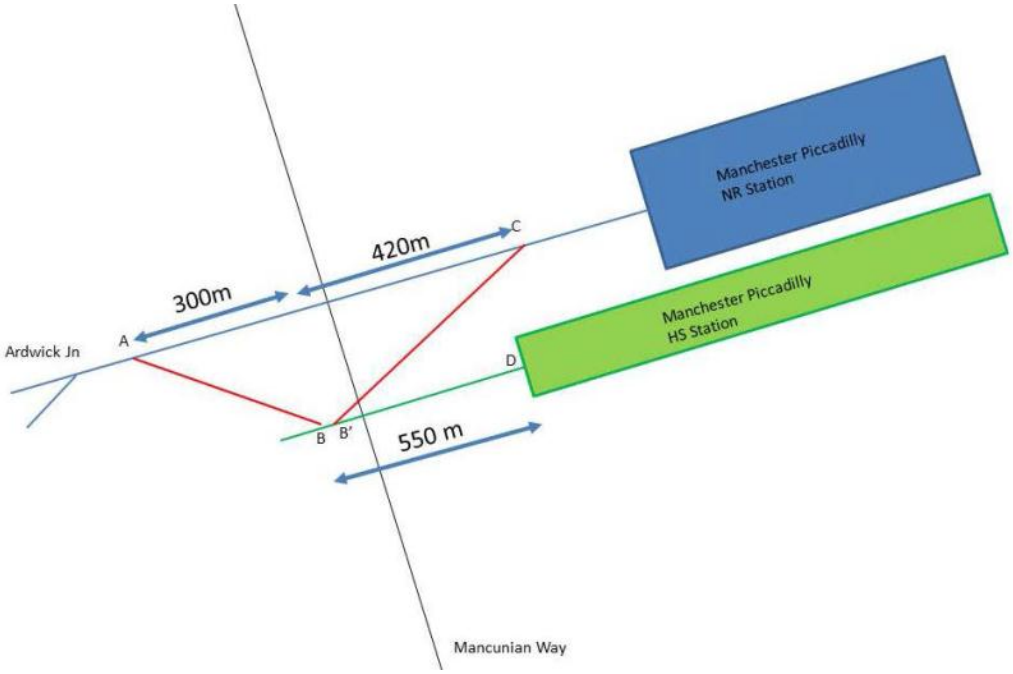
Network Rail signalling and power systems will need to be integrated with the HS2 infrastructure at Piccadilly station so that the system operates as an extension to the existing (Classic) system.

When HS2 is fully operational a cross over and another bridge structure would also be required to route any Classic compatible trains running through the HS2 tunnel into the existing Piccadilly Platforms. This has been confirmed by HS2 Ltd in their

"Technical note: Connection from HS2 to existing network at Manchester Piccadilly, 3 October 2013".

This high level assessment note discusses the scope of assessment and HS2 Ltd's initial findings in relation to a railway connection from HS2 into the existing network and vice versa, in close proximity to Manchester Piccadilly HS2 Station.

The Layout below details the initial findings of the HS2 Ltd assessment. The red lines are the interconnecting bridge structures and the green that part of the HS2 route which would need to be constructed an accelerated delivery of the HS2 Station. For accelerated delivery of HS2 at Piccadilly Station section A, B, B', D would be required.



3 - Build Once

Delivery of a Piccadilly HS2 Station should become the catalyst for turning Piccadilly into the kind of iconic gateway that HS1 has made at St Pancras.

Delivery of the HS2, Northern Hub and other infrastructure work will result in significant disruption in the area around Piccadilly Station. The current timescale for HS2 will mean that this disruption will be extended, impacting on business performance and investment, as well as holding back the realisation of a significant proportion of the benefits of the Northern Hub for an extended period. Maximising the benefits from the development therefore also means a need to minimise the impact of works at the station on the redevelopment of the immediate area. At the same time, combining the works necessary to deliver the HS2, Northern Hub and possible Metrolink works could reduce the net costs of advancing the wider station project.

The early delivery of the HS2 station would enable Greater Manchester to shape the investments in Metrolink to better align it with the station requirements that the anticipated investments in Northern Hub and HS2 will bring.

However, these investments cannot wait until the full arrival of HS2 in 2033 and as such there will likely need to be works which are duplicated between now and 2033 that could be avoided through the accelerated investment.

Appendix C - Airport Station: Technical and Operational Proposals

Background to proposals

Manchester Airport is the largest in the UK outside London, and the third largest overall. It is the major aviation gateway outside the southeast: drawing passengers from across Northern Britain, who are able to access more destinations than on offer at Heathrow. It is comparable in size to Barcelona, Copenhagen, Munich, Stockholm & Dusseldorf, and is larger than many European capital city airports. Manchester Airport is also home to Airport City, Greater Manchester's Enterprise Zone. This is a unique development led by Manchester Airports Group (MAG), who are the principal landowner and lead development partner. The development targets globally mobile businesses that rely on first-rate international and domestic connectivity. Airport City's direct competitors are Frankfurt, Amsterdam, Madrid and Dusseldorf.

The location of Greater Manchester's Enterprise Zone was chosen unanimously by the leaders of the ten Greater Manchester districts because of the unique (and thus complementary) nature of its offering. This means a high proportion of the growth delivered on the site is genuinely additional for the Greater Manchester City Region.

There is a wealth of policy at national, regional and local level which supports and encourages the growth of Manchester Airport and the economic activity it generates. It is a major growth opportunity for Greater Manchester – driven by its excellent levels of connectivity – from international to local.

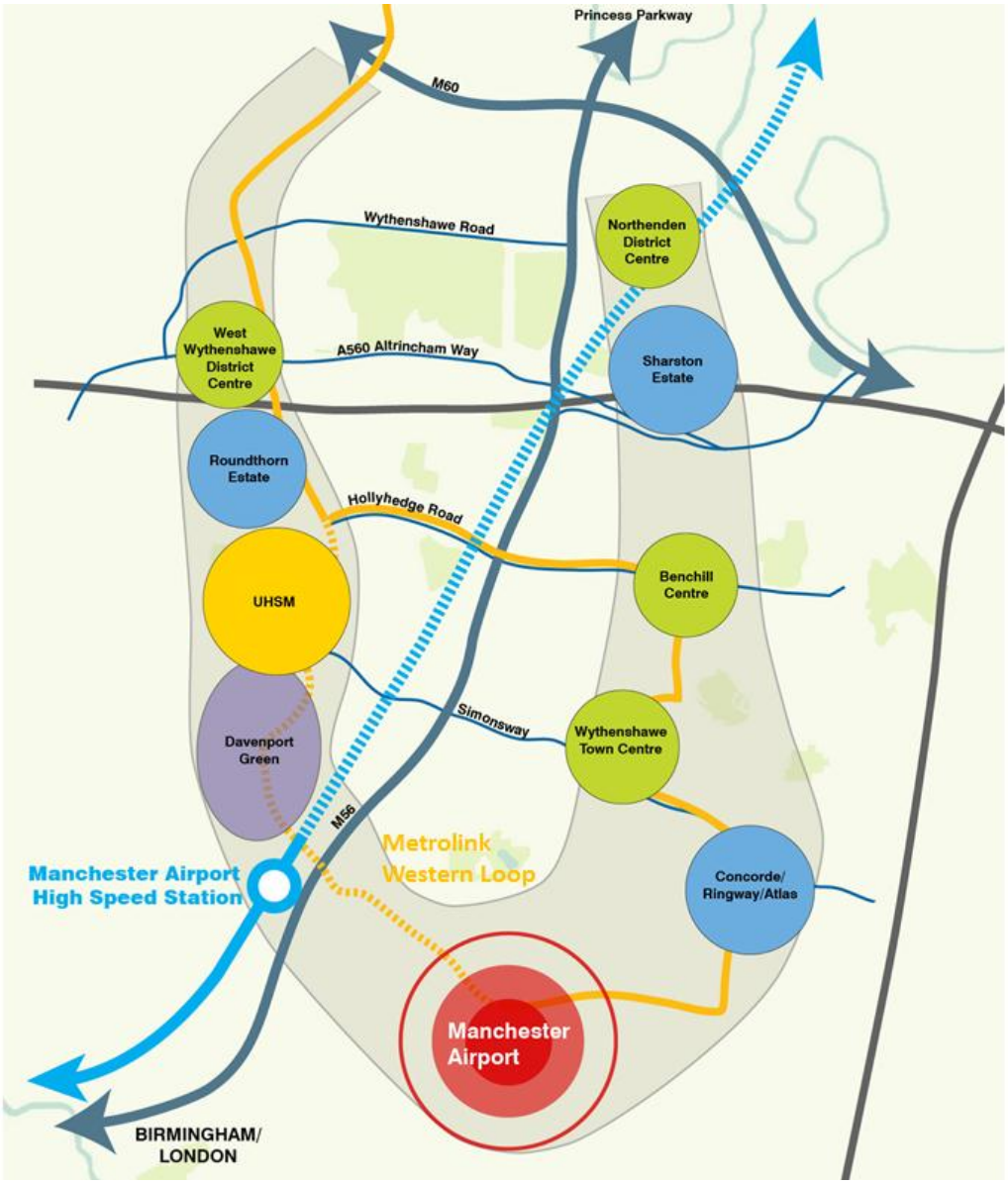
With some adaptation, the HS2 station is well placed to serve, and benefit from, the emerging strategy for the Airport area. The key changes over the next 25 years include:

- The growth of the Airport to c 40mppa, and the expansion onto land allocated in the adopted Manchester Core Strategy;

- The development of Airport City, the Greater Manchester Enterprise Zone. This will provide a new economic zone in Wythenshawe and comprises a network of sites including Airport City North, MediPark and University hospital. Over 15,000 jobs are to be created over the next 10 - 15 years on 116ha of land; and

We are developing a strategic Masterplan for the wider area which will set out locations for new economic activity, the type and scale of development and, critically, the likely phasing and programme to realise these opportunities. This is likely to be an extension and / or intensification of the development framework that is already being pursued as part of the Enterprise Zone. However, a major influence (and uncertainty) is the timing, location and scale of HS2 related construction activity. In particular, whether the tunnel to Manchester is built from the north or south. This will determine which areas of land may be sterilised and over what period. Greater Manchester partners would therefore welcome the opportunity to assess and agree the optimum solutions for co-ordinating construction and development activity with HS2 Ltd.

The following Figure shows the above elements of the strategy in their wider context.



Airport Masterplan

The Airport already has a long term Masterplan to 2030. This is currently under review in the light of Government's work to develop a new aviation policy; informed by the work of the Airports (Davies) Commission which will report in 2015. HS2 Ltd has used the existing Masterplan to inform its route design. We confirm that the current proposals for line of route are compatible with that Masterplan. The layout and location of the HS2 station is also generally acceptable; subject to the suggested changes discussed in this response.

Access and connectivity

Manchester Airport's success is attributable to its extensive transport links and connectivity. Airport City is founded on its connectivity; making it attractive for occupiers, investors and employees. HS2 will add to that connectivity bringing both transport and economic benefits. Integrating HS2 with the wider transport networks is a 'win-win'. It helps HS2 to be successful in attracting the maximum demand. It also improves and broadens the area's connectivity – thus supporting Airport growth, and economic activity in the EZ and the wider South Manchester / North Cheshire sub region. Our work has focused on refining the initial HS2 proposal to achieve these aims.

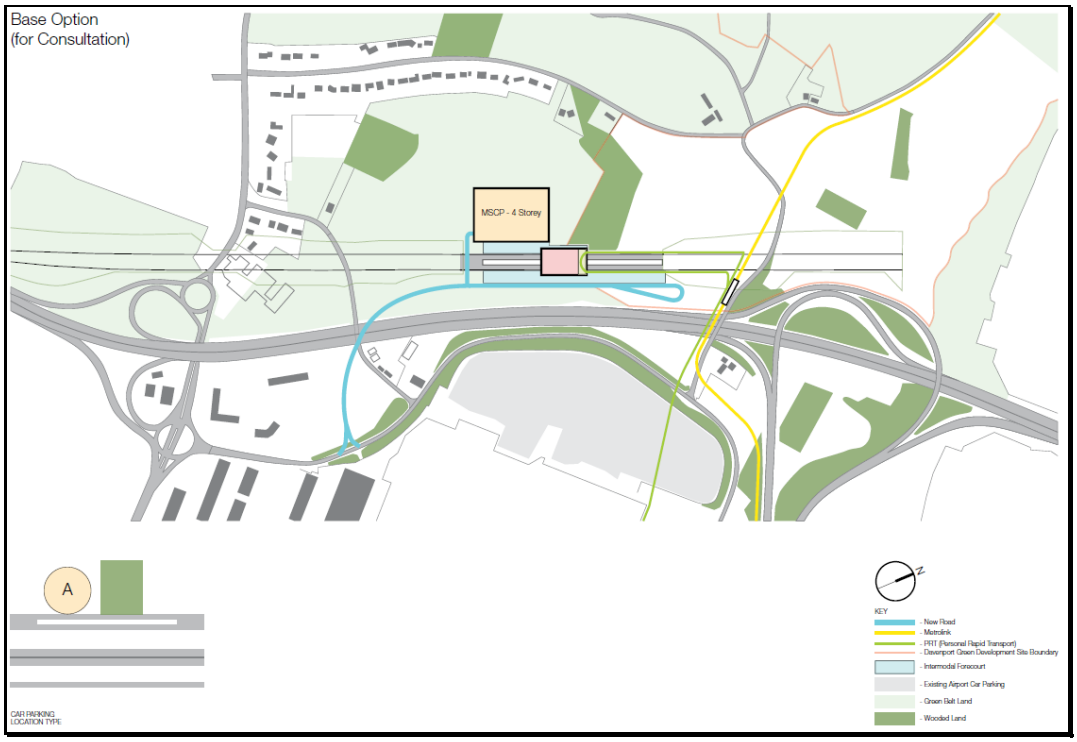
The existing transport system is to be enhanced in coming years:

- Extension of Metrolink to a Manchester Airport terminus (Underway; Completion 2016)
- Metrolink Western extension Airport – Wythenshawe Hospital (uncommitted)
- New M56(J5) - A6 link road (estimate 2017)
- J5 – J6 and Airport access improvements (2017 on)
- 4th rail platform at Manchester Airport (Underway; completion 2015)
- M56 J7 – J5 managed motorway (initial concept)

The Greater Manchester partners, working with HS2 Ltd and the Highways Agency, have looked at road and public transport connections to HS2 in the light of these proposals.

Highways

HS2 Ltd's consultation proposals show only a local road connection to the highway network (as shown conceptually on the following "Base Option (for Consultation)").



Highways options were therefore analysed and reviewed for how best to connect HS2 to the strategic road network, and to understand better the traffic impacts of HS2. This included:

- Possible changes to Junctions 5 & 6; while maintaining flows
- Impact on M56 traffic flows in 2032;
- Impact on airport access;
- Convenient passenger access to HS2

- Effect of the M56-A6 link road, and
- Opportunities presented by the committed airport improvement schemes (the “Rainbow” works).

Extensive remodelling of Junction 5 (M56) has been considered. This tackles the wider issue of increasing congestion on M56 but was seen as going beyond that required purely to serve HS2. However, we have sought to avoid prejudicing such a solution in future.

The highway layout in all of the alternative station options considered were broadly the same; with only slight variations due to the position of the station drop off and multi-storey car park location.

Compared to HS2 Ltd’s Consultation proposals, the highway layout now put forward (Preferred Airport Station Option below) would meet HS2 Ltd’s needs; avoid the adverse effects of the consultation scheme and maintain or improve connectivity to:

- The Airport
- Airport City / EZ
- Davenport Green
- M56
- M56-A6 link

The key elements of the new scheme are Local distributor roads (single carriageway) either side of M56; linked by a relocated Thorley Lane bridge. This will improve access to HS2 from all directions; introduce greater capacity and resilience; separate road traffic from Metrolink; allow access to the Davenport Green development area.

Thorley Lane Bridge:

The Highways Agency (HA) has confirmed that it is going ahead with the replacement of this existing bridge on its current alignment. This does not appear to be the best long term solution for HS2. The HA should design a structure capable of

relocation or re-use to meet the needs of HS2 (including the capability to also accommodate Metrolink trams).

Further Highways Layout refinement:

Further refinement to the common highways layout is being considered as part of the Master planning work. This involves Runger Lane and Thorley Lane (on the east side of M56) being rerouted across the land at Junction 5 and linking to the new Airport city road scheme. This will open up access to more development land, free up space for aircraft apron at Terminal 2 and better separate Metrolink from the highway.

Station layout assessment

HS2 Ltd's consultation proposals show only one Station option (as shown conceptually in the "Base Option (for Consultation)" – refer to the Highways section above).

The Greater Manchester partners have reviewed this proposal against the following criteria:

- Interchange (Does the proposed configuration deliver seamless interchange from the HS2 concourse; Highways, people mover, bus, cycling and pedestrian issues);
- Connectivity (Does the proposed configuration deliver efficient connectivity?);
- Operational performance;
- Generic design performance;
- Construction and scope for phased implementation;
- Impact on Environmental Features (including Green Belt);
- Strategic Fit; and
- Cost and benefits.

As a result; seven alternative layouts have been developed. These, in turn, were appraised against the same criteria. Options with poor assessment against either/or connectivity, operational performance and impact on environmental features were not selected.

Integration & Connectivity

All parties agree that the greatest benefits from HS2 will only be realised if it is fully integrated with the pattern of wider development, and effectively linked to the Airport terminals and transport interchange.

Three methods for linking HS2 to the Airport station and terminals have been reviewed initially:

- Metrolink (Western extension to Metrolink);
- Dedicated bus shuttle; and
- Bespoke people mover / transit system.

Metrolink

TfGM holds some powers to extend the line to the Airport currently under construction in a westerly direction to serve west Wythenshawe and University Hospital. It would then re-join the Airport line at Roundthorn, creating a 'western loop'. This western extension would serve Enterprise Zone development sites at the Hospital, MediPark and Davenport Green. A small re-routeing of the planned line would mean it could pass close to the HS2 platforms, at a higher level. Moving the HS2 station concourse north would then provide a convenient interchange between HS2 and Metrolink. This option is attractive, because it not only links HS2 to the Airport, but it also gives wider connectivity.

MAG and TfGM have also identified and evaluated a number of Station layouts. By moving the HS2 station concourse north, a convenient interchange between HS2 and an extended Metrolink, to serve West Wythenshawe and the Hospital, becomes possible. TfGM already have some statutory powers to build this Western Loop which

will improve local connectivity and also opens up the possibility of wider connections to an even larger part of South Manchester. The recent TfGM Capital Projects Paper proposes that the Altrincham-Stockport railway line is considered as part of a possible future study of transport to the Manchester Airport area to take into account the Manchester Airport HS2 station. Consideration would include a potential interchange at Baguley in addition to the Western Loop. The City Council supports these proposals, including the Western Loop extension of Metrolink and the TfGM approach to tram-train development.

A preferred route has been identified which provides a convenient interchange between HS2 and Metrolink. This is common to all the Airport Station layout Options described below. It is compatible with both the suggested highways scheme and the emerging Masterplan for the Airport.

Dedicated bus shuttle:

The existing public transport interchange at the Airport includes a modern bus and coach station as well as the rail station and Metrolink platforms. There is an extensive network of local bus services linking the Airport with south Manchester and north east Cheshire.

The local partners see potential to develop a network of express bus services linking Cheshire and north Staffordshire to the Airport, using the motorway network. The added attraction of an HS2 station would make it more likely that these services would prove attractive to commercial operators.

The Options developed for the station all include provision for bus access, including a an Airport shuttle service, which could be integrated with the existing on site shuttle services that link car parks, hotels and employment areas to the Airport interchange. Bespoke people mover / transit system:

HS2 Ltd's consultation proposals indicate the option for a people mover transit system ("PRT"). This would not provide the wider connectivity that results from the

Metrolink connection. Nevertheless, it is an option to be kept under review as it could form part of an Airport / Airport city wide bespoke transit system. Flexibility and space for such a future system should be allowed for as the station design is developed.

Parking provision

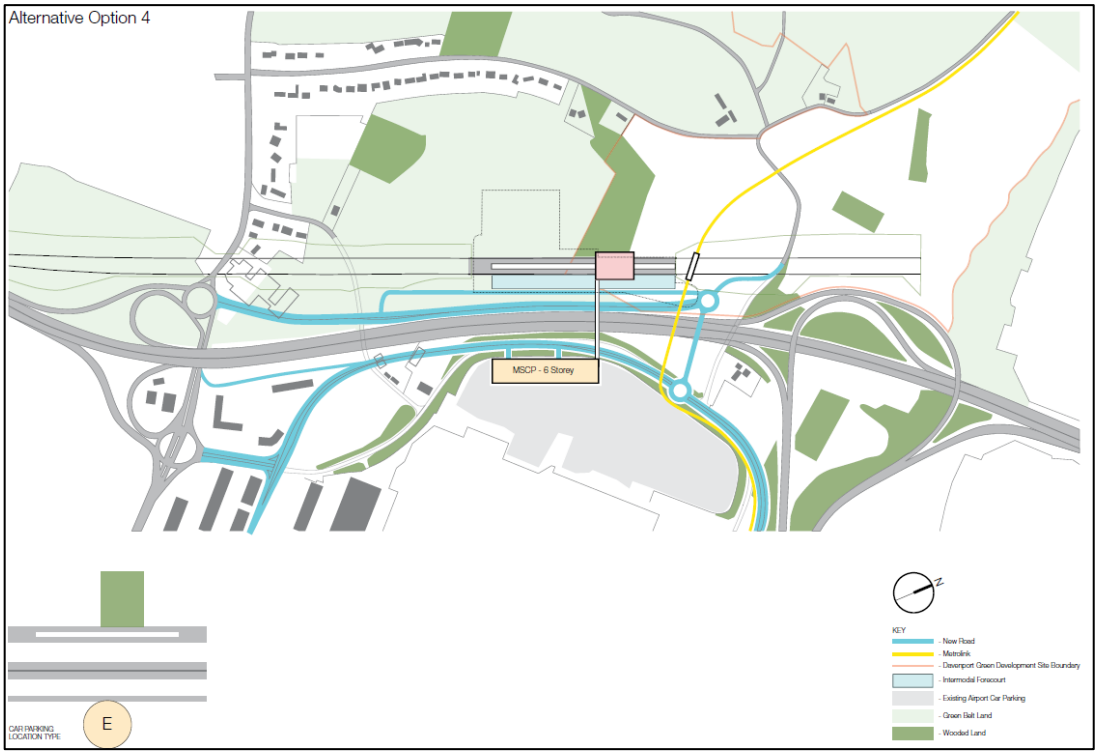
HS2 Ltd's consultation option includes a 3500 space multi storey car park for HS2 passengers.

The location of this car park is one of the main differentiators in the alternative Station layouts that have been assessed. The car park has been located further from adjacent houses on the Airport side of the M56 corridor.

The Greater Manchester partners believe there is potential to incorporate this car park into the extensive airport car parking provision, thus providing a single integrated supply and allowing dual use by rail and air passengers. This may lead to a larger car park being provided in this location. There is also the prospect of early or phased provision of car parking; an option to be further evaluated as part of the business case (see below).

Preferred Airport Station Option

The preliminary conclusion of the Greater Manchester partners is that this option offers significant advantages over the HS2 Ltd consultation scheme. It is recommended that Government commission HS2 Ltd to take forward this option for further review in its next phase of detailed work. Greater Manchester partners would welcome the opportunity to further assess the merits of the proposal and ensure that the preferred integrated station layout achieves the optimal solution technically, operationally and economically.



Appendix D – Released Capacity (Passenger Services)

Introduction to Appendix

This appendix sets out how capacity released by HS2 could deliver better passenger services, including:

- the benefits of releasing platform capacity at Manchester Piccadilly Station;
- our initial view on how the "classic" rail service patterns within the HS2 business case can make best use of that capacity through opportunities for services utilising the Manchester arm of HS2 and onward onto the classic network and also opportunities for classic services that would operate solely on the classic network utilising capacity released by HS2; and
- our initial view on the proposed pattern of HS2 services and opportunities for revision to maximise the benefits offered by the project.

The suggestions set out here represent Greater Manchester's initial view and reflect work carried out by TfGM. A number of which have been discussed with Network Rail, who have raised no fundamental objections to them. In those discussions, both TfGM and Network Rail recognised the need to work with HS2 Ltd following the consultation to develop the best possible post-HS2 service pattern.

Releasing platform capacity at Manchester Piccadilly Station

A critical constraint on the rail network in the years following the implementation of the Northern Hub capacity enhancements will be the platform capacity of Piccadilly Station. As train-lengths are increased to accommodate demand growth, two platform capacity constraints become critical:

- fewer trains will be able to be stacked at the longer bay platforms (1 to 8); and
- fewer trains will be sufficiently short to be accommodated at the shorter bay platforms (9 to 12).

Lengthening existing platforms would be very expensive because it would require major alterations to the point-work at the entrance to the station, and possibly widening of the viaduct.

HS2 provides a solution to the platform capacity of Piccadilly Station by moving at least two London-bound trains per hour onto new platforms located immediately to the north of the present station. Release of the platform capacity occupied by these long trains (with their long turn-round time) will enable Piccadilly Station to accommodate many more years of demand growth. This represents a substantial source of benefit from HS2 that is omitted from HS2 Ltd's appraisal.

Two particular services have been identified as requiring lengthening beyond the capability of the existing platforms from the mid-2020s:

- Manchester – Birmingham/Bristol (2tph); and
- Manchester – Crewe – Cardiff (1tph).

HS2 will abstract some demand from Manchester – Birmingham trains from 2032 through operation of a Manchester – Birmingham high-speed service. However, the diversion of Manchester – London trains onto the high-speed line will also increase demand for Manchester – Birmingham "classic" services for movements such as Manchester – Macclesfield, and Manchester – Stoke-on-Trent. Therefore train-lengthening is still expected to be needed to meet these demands (plus possibly some additional local trains) which can be accommodated within the released platform capacity at Piccadilly.

It is expected that Network Rail will be seeking to improve the operational efficiency of the railway line between Manchester and Stockport / Cheadle Hulme over the coming years: in addition, HS2 Phase 2 will release additional train-paths on this section of route. If HS2 releases sufficient platform capacity at Manchester Piccadilly, rail services on this corridor could be improved: for example, service-

frequencies could be increased on the Manchester – Stockport – Buxton line, providing a better service for commuters on that congested corridor.

The Greater Manchester Local Authorities consider the question of platform capacity at Manchester Piccadilly to be sufficiently critical that it provides an important part of the justification of early opening of the HS2 platforms at that station, before delivery of the HS2 Phase 2 route from Birmingham to Manchester.

Indeed, in the long term, a combination of continued growth in rail demand, plus more effective use of released capacity, as outlined in this appendix, could fully use-up the capacity released by HS2 at Piccadilly Station and this could constrain achievement of national and local growth agendas.

Some further platform capacity could be released by operating tram-trains on the lines from Manchester to Marple, Glossop, or Hazel Grove by extending the existing Metrolink network.

It should be noted that further increases in Piccadilly Station platform capacity (beyond that provided by current plans for HS2 which could well be needed if rail demand continues to grow) have not been considered here. This should be factored into the proposed wider review of the future station that forms a core element of GMCA's response to this consultation, so as to ensure that platform capacity does not have the unintended effect of placing a long-term constraint on the growth of rail in the north-west of England.

Do the "classic" rail service patterns in the HS2 business case make best use of the released capacity?

Greater Manchester believes that some aspects of HS2 Ltd's currently-proposed service-pattern for "classic" trains do not make the best use of the available (and newly-released) capacity on the existing rail network. A particular concern is the proposed combining of two existing "classic" services following implementation of HS2:

- Manchester Piccadilly – Stoke-on-Trent – London
- Manchester Airport – Manchester Piccadilly – Glasgow/Edinburgh

These services are proposed (in the documentation that underlies the October 2013 HS2 business case) to be combined to form an hourly London – Stoke-on-Trent - Manchester Piccadilly – Glasgow/Edinburgh service.

Greater Manchester's view is that this proposed change would:

- Create unreliability from operating an unnecessarily long service, passing through the heavily-utilised rail network in central Manchester (and at other locations), which will also worsen the reliability of other services with which it will interact;
- Remove direct trains from Manchester Airport to stations in north Cumbria and Scotland; and
- Provide a poor alternative to extending London – Preston classic-compatible high-speed trains to Lancaster and stations in Cumbria (we understand from discussions with the rail industry that this would be done if the separation of Manchester – London and Manchester Airport – Scotland "classic" trains services were retained).

Greater Manchester therefore proposes that the Manchester Piccadilly – Stoke-on-Trent - London services and Manchester Airport – Manchester Piccadilly – Glasgow/Edinburgh services remain separated. Discussion with the rail industry has indicated that the capacity released at Piccadilly Station by the HS2 additional platforms will provide the necessary capacity to continue terminating Manchester – Stoke – London services at Piccadilly, together with facilitating the train lengthening described earlier in this response. To retain the present service pattern during the period 2026 – 32 (when HS2 Phase 1 only is open) is expected to require early opening of the Piccadilly HS2 platforms, the case for which is made elsewhere in this response to the consultation, so as to ensure that local and regional train services do

not need to be cut back in order to provide the capacity – a position that Greater Manchester would oppose.

We would also propose that opportunities should then be explored to secure a path on the HS2 Phase 1 line to enable the London – Stoke – Manchester service to be operated as an hourly classic-compatible high-speed train service. This would deliver substantial benefits to all three towns and their surrounding areas, and TfGM would be keen to further review the scope for this provision as the HS2 programme develops.

Whilst operation of a fourth Manchester – London train in each hour is a necessary consequence of HS2, Greater Manchester is nonetheless concerned about the effect – at least in the period between opening of Phase 1 and Phase 2 of HS2 - on the capacity-constrained section of track between Manchester, Stockport, and Cheadle Hulme. Bringing forward the re-signalling of that section of route would prevent the additional trains creating reduced punctuality and reliability. The case for bringing forward the re-signalling should therefore be assessed in the light of the additional pressure on capacity that HS2 Phase 1 will create. It will also be important that the delayed improvements to facilities at Stockport Station are in place before HS2 Phase 1 services start serving the station. Stockport station was identified in the 2009 DfT Better Stations Report as one of the 10 worst stations requiring improvement.

To ensure that Stockport and its surrounding area gains the full benefit from Phase 1 of HS2, Greater Manchester expects that all HS2 Phase 1 classic-compatible high-speed trains to/from Manchester will stop at Stockport Station and that all other trains operating via Stockport will also continue to stop there.

While the above proposed modifications to the proposed “classic” service-pattern will improve the position, Greater Manchester is nonetheless aware that Stockport’s service to London would be reduced from 3tph to 1tph following introduction of HS2 Phase 2, and that the October 2013 report, “The Strategic Case for HS2” set out an aim that all places with a direct London service today retain a broadly comparable or

better service after HS2 opens. Greater Manchester therefore expects an on-going dialogue with HS2 Ltd on how that commitment will affect Stockport.

Any impact on Stockport would be substantially mitigated by construction of a Metrolink line between Stockport Town Centre and Manchester Airport, serving both Stockport Station and Manchester Airport HS2 Station as intermediate stops. Outline feasibility work has been carried out for a route, which would utilise the existing Stockport – Altrincham railway line (operating as a tram-train). It is proposed to undertake a study of transport requirements around the airport. TfGM anticipates working with HS2 Ltd to develop these plans in order to provide appropriate public transport access for Manchester Airport HS2 station.

Greater Manchester welcomes the inclusion of the proposed hourly Manchester – Milton Keynes – Bournemouth service within the train service-pattern that underlies the October 2013 HS2 Business Case. This service will provide a fast and direct link from Manchester to Oxford, Reading, and the south coast, plus two trains per hour between Manchester and Milton Keynes. However, we question whether there would be sufficient capacity to accommodate the service, especially after opening of HS2 Phase 1. Our concerns include platform capacity at Manchester Piccadilly (which TfGM believes would be solved by early opening of the HS2 platforms there) together with line capacity in the Trent Valley and at Colwich Junction. It would be particularly important to retain an hourly Manchester – Milton Keynes – Southampton service if the London – Stoke – Manchester service were operated via the HS2 line south of Lichfield (see above). Under that scenario, the hourly Manchester – Southampton service would provide the only direct link between Manchester and Milton Keynes.

The busiest rail corridor into Manchester is that from Preston via Wigan or Bolton. The Northern Hub and electrification proposals enable the growing demand to be accommodated by operating longer trains, but infrastructure constraints within the central areas of Salford and Manchester constrain the scope for doing so. Trains on this corridor originate from locations as diverse as Edinburgh, Glasgow, Cumbria,

Blackpool, Southport, and Clitheroe and operate across the city centre to the southern suburbs and Manchester Airport.

To create space on the classic infrastructure for additional trains from places such as Leyland, Blackburn and Bolton (and thus avoid overcrowding) Greater Manchester believes it would be beneficial if trains that currently operate from Manchester Airport to locations such as Cumbria and Scotland could be revised to start their journeys at Piccadilly Station. They could operate via the HS2 Airport station and the east /north curve at the proposed delta junction near Golborne with the 'main' line to Wigan, Preston and beyond. These services would need to be operated by electric trains with performance (acceleration and top speed) compatible with the HS2 trains in the same way that domestic services are operated on HS1.

Journey times between Manchester and Preston on those trains may be similar to those achieved on the classic network (which would help ensure an even spread of passengers between all services, and minimise the risk of overcrowding particular trains), but would be much quicker between the Airport and Preston. Benefits would therefore arise from reduced crowding and improved access to the main international airport for northern England – the latter being particularly important for economic development.

It would also be possible to operate trains from Manchester to North Wales via Manchester Airport if there were the capability in the Golborne Depot area for trains to move between HS2 and the West Coast Main Line south. This would create the long-desired (but impractical to deliver with the current classic infrastructure) link between the Airport and Chester / North Wales, helping with the economic development of these areas. This service could replace the proposed hourly Manchester Victoria – North Wales service, again relieving capacity on the network in the central areas of Salford and Manchester. Another option that should be considered for providing a fast Manchester – Airport – Chester – North Wales service is a connection from HS2 onto the Mid-Cheshire line south of Altrincham.

The above services – utilising the Manchester arm of HS2 and then onto the classic network - would be facilitated by the platform capacity released at Manchester Piccadilly by HS2. Also required would be a connector between the HS2 track and the existing platforms at Manchester Piccadilly.

Finally, we would also highlight the potential to further extend the potential benefits offered by the HS2 Manchester – Birmingham route by considering options to connect HS2 and the Derby - Birmingham line. This would present opportunities for trains to operate onto the existing rail network to Bristol and beyond, enabling a step-change in journey-time for travel from Manchester to South-West England, which is a movement for which the distances favour rail, but where rail's mode share is presently low.

How could the proposed pattern of HS2 services be improved?

The HS2 service-pattern that underlies the October 2013 business case anticipates two out of three Manchester – London services stopping at Manchester Airport, with one out of three omitting that stop. Greater Manchester's view is that a much better option would be for all Manchester – London high-speed services to stop at Manchester Airport (which TfGM expects to account for approximately one-third of the demand from the two Manchester HS2 stations) for the following reasons:

- It would provide a twenty minute headway from Manchester Airport Station to London, compared with an irregular 20-minute and 40-minute headway under the service-pattern anticipated by HS2 Ltd;
- It would improve service legibility, with all services achieving a similar journey-time, encouraging a turn-up-and-go approach to rail travel between London and Manchester Airport Station; and
- Providing the same service-headway at Manchester Airport HS2 Station as at Manchester Piccadilly will encourage HS2 users accessing by car to use Manchester Airport Station instead of driving into Manchester City Centre to use Piccadilly Station.

As noted above, Greater Manchester has also identified an opportunity to operate an hourly classic-compatible high-speed London – Manchester service via the HS2 line between London and Lichfield and then via classic lines, calling at Stoke-on-Trent, Macclesfield, and Stockport.

Besides the proposed changes specified above, Greater Manchester looks forward to discussing with HS2 Ltd other opportunities for increasing the benefits of HS2 by adjusting services and stopping-patterns.

Appendix E – Released Capacity (Freight)

Released capacity arising from HS2 is an essential part of the solution to developing a more efficient, sustainable and productive freight infrastructure network.

Work undertaken by HS2 Ltd, Network Rail and DfT to assess the implications of released capacity on the national rail freight network is at an early stage

GMCA has engaged with partner authorities to ensure that a co-ordinated approach is taken to assessing the constraints and needs of freight infrastructure in the North of England and beyond.

This appendix:

- Highlights the importance of rail freight to the Greater Manchester economy, its predicted growth and the current network constraints;
- Summarises the measures Greater Manchester is undertaking to connect with DfT, HS2 Ltd and regional partners to develop a co-ordinated region wide response to the question of freight. For example through:
    - The “Future of Logistics” work being co-ordinated by New Economy and which looks at maximising the economic benefit to Greater Manchester from the sector; and
    - The development of a pteg freight manifesto.
- Economic Value of Rail Freight to the North.

There are a number of studies, both recently concluded and in progression, which demonstrate the economic benefit of rail freight and therefore the potential in freight using released rail capacity. There is a priority requirement for all parties to work together to identify the economic benefits of allocating released capacity to freight, and then identifying the infrastructure required for this to occur.

In the North of England, the current value of the rail freight industry is £209m per year, approximately 0.03% of the North's economy. The industry supports economic output of £862m through indirect links and £1,567m through induced links, which represents around 0.15% of the North's economy. This means that rail freight is supporting industries in the north of England in generating economic outputs some four to five times greater than the direct economic value it delivers itself.

KPMG are currently undertaking work which explores the cost differential and the wider benefits to the UK economy of rail freight compared to road freight. This project will report early in 2014 and we will work closely with KPMG to disaggregate down to a Greater Manchester level.

In addition to these capacity benefits, a recent study by the Consultancy WSP has estimated that HS2 could take 500,000 HGV lorry journeys off the M1, M40 and M6 motorways each year leading to environmental benefits worth over £45 million per annum (using factors including congestion, pollution and noise) and saving over 65,000 tonnes of carbon dioxide emissions per annum. HS2 could effectively release up to two train paths per hour of freight train capacity in each direction. WSP forecast that 40 trains per day would use this additional capacity, which would allow rail freight growth to continue.

The Growth of Rail Freight

Around 6.6 million tonnes of cargo per annum are currently collected in the North West region by rail freight. The main commodities include maritime containers (for delivery to deep-sea container ports in the south and east of England). 9.4 million tonnes are delivered to the North West by rail freight. Again, the main commodities include maritime containers (from the deep-sea container ports in the south and east of England).

Network Rail's Freight Market Study estimates that by 2033, intermodal rail freight will be between 10.1% and 12.8% of the total rail market share by tonne km. The forecast freight train growth to 2043 is 2.9% annual growth by tonne km (the increasing cost of diesel fuel used by road hauliers has been making rail freight more

competitive). In Greater Manchester, where Trafford Park and, in the future, Port Salford are located this is likely to be significantly higher.

The West Coast Main Line (WCML) acts as the spine route for intermodal rail freight services between London and the South East (including the major deep sea container ports between Southampton and Felixstowe, inclusive) and the West Midlands, the North West and Glasgow. It carries one quarter of UK rail freight. With the development of port facilities in the Mersey estuary it is possible that in the future there will also be containers landed in the North West and then transported by rail to the South East.

Capacity Constraints

The 'Rail North' Study demonstrates that the current rail network's capacity is likely to restrict rail's capability to accommodate the growth. By 2030, rail freight is expected to have exceeded the capacity of WCML. Insufficient capacity and network capability for growth in the freight market will limit the competitiveness of the economy and so there are clear economic benefits for freight to use this released capacity. Shifting freight from road to rail is likely to form an essential part of decarbonising the UK economy, and so releasing capacity for rail freight will be necessary to achieve that long-term objective.

For example, releasing capacity for freight on the West Coast Main Line is going to be vital to Liverpool 2 and the Atlantic Gateway. Northern Hub interventions will make rail coming out of Seaforth suitable for the wider containers and high speed rail will enable freight to travel more freely up and down the country on the West Coast Main Line. We would welcome involvement in working with Network Rail and the Merseyside authorities in analysing how potential infrastructure could aid the whole region.

Freight trains to/from Trafford Park are currently pathed alongside passenger trains through Manchester Deansgate, Oxford Road and Piccadilly (via Platforms 13 and 14) stations, a known capacity pinch point. The planned Northern Hub scheme will provide additional capacity for both freight and passenger trains through this corridor,

enabling the number of freight trains operated to more than double and make use of the infrastructure capacity released by HS2. Northern Hub infrastructure enhancements will also make it easier to operate freight trains between Port Salford and the West Coast Main Line, and between Liverpool/West Coast Main Line and Midland Main Line.

There is a need, however, to ensure freight trains can operate on the northern section of the WCML (north of Preston) when there are more passenger trains as a consequence of HS2.

Rail freight services tend to be competitive on routes where there are large and regular flows of traffic, such as between container ports and inland intermodal terminals. These economics highlight the importance of the development of a network of rail-connected distribution parks in Great Britain to secure greater modal shift by locating the origins and destinations of most freight flows (distribution centres) on the same site as an intermodal rail freight terminal.

There is currently no definitive conclusion on how much capacity HS2 will release for freight. "Future Priorities for the West Coast Main Line- Released Capacity from a High Speed Line' proposed accommodating 80 to 85 trains per day on sections of the WCML including Rugby to Stafford. It is worth noting that North of Golborne station there are no infrastructure improvements currently identified and there may be a requirement in future for this to maximise the economic and environmental benefits.

In order to maximise the opportunities for freight created by HS2, additional supporting rail infrastructure is likely to be needed. It is suggested that a national-level study be carried out with the objective of identifying complementary rail infrastructure to maximise the opportunities for rail freight offered by HS2.

The Future of Logistics in Greater Manchester

Transport for Greater Manchester has recently concluded a project which looked at increasing the organisation's evidence base for logistics. This work is being developed further with our partners at New Economy and at MIDAS. We are beginning to identify the logistics opportunities that arise from forecast trends in the

logistics market, in particular identifying the spatial distribution of those opportunities, the essential locational factors dictating choices for different opportunities, and the potential for regions/cities to compete. This includes highlighting rail infrastructure required by Greater Manchester to reach its optimum potential in relation to logistics opportunities (particularly through Atlantic Gateway to Liverpool City Region, but also via Yorkshire to the Humber ports). This study will report in Spring 2014 and will include scenario testing on the impact of HS2 on freight movements and subsequently the wider economy.

As we look forward, it is likely that the issue of the movements of logistics and rail will increase in the public consciousness as we become more aware of the carbon impact in the movement of goods. The movement of goods by road is less likely to be able to be facilitated by low carbon means than on the rail network. There is likely to be a willingness of logistics operators to share train capacity making rail freight logistics more competitive.

A report for pteg and the Metropolitan authorities recently concluded that rail can provide economic and flexible transport chains for higher value goods when transported in containers within intermodal transport chains. There is also the potential for High Speed freight traffic for high value, lightweight goods. For example, complex automotive parts produced in the North West could be moved by rail into continental Europe (assuming a smooth transition between HS1 and HS2).

Pteg is currently developing a freight manifesto which is envisaged to include strong support for HS2. The manifesto is planned for release in Spring 2014.

We anticipate passenger and freight service options for released capacity will be developed with TfGM. There are significant opportunities to enhance the wider service and to provide strong economic and environmental benefits.