

North Tyneside Council Report to Cabinet 9 June 2014

ITEM 7(i)
Metro Strategy 2030
Consultation

Portfolio(s): Economic Development

Cabinet Member(s): Cllr F Lott

Report from Service Area: Environment and Leisure

Responsible Officer: Phil Scott, Head of Environment and Leisure (Tel: 643 7295)

Wards affected: All

PART 1

1.1 Purpose:

Cabinet is invited to approve the submission of a response from the Authority to the consultation 'Metro Strategy 2030', which is being undertaken by Nexus.

1.2 Recommendation(s):

It is recommended that Cabinet:

- (1) notes the contents of the report;
- (2) agrees that the Authority should submit a response to the consultation; and
- (3) approves, in principle, the draft response attached as Appendix 1 and authorises the Head of Environment and Leisure, in consultation with the Cabinet Member for Economic Development, to make any final amendments to the draft response and submit the final response to the consultation.

1.3 Forward plan:

28 days notice of the report has been given and it first appeared on the Forward Plan that was published on 12 May 2014.

1.4 Council plan and Policy Framework

The proposals are relevant to the following objective in the Council Plan 2014 to 2018:

1 C We will improve accessibility in the borough and support accessibility by walking and cycling

1.5 Information

1.5.1 Details of the consultation

Nexus, which owns and manages the Tyne and Wear Metro system, is conducting a consultation on a draft strategy for the future development of the Metro system to the year 2030.

Nexus' work is overseen by the newly formed Combined Authority, which has assumed the functions of the former Tyne and Wear Integrated Transport Authority (ITA). At its last meeting of 27 March 2014 the ITA endorsed Nexus' intention to carry out public consultation on the draft Metro Strategy 2030.

Any person may respond to the Nexus consultation, which closes on 30 June 2014.

1.5.2 Background

The Tyne and Wear Metro system is used by 38 million passengers a year and includes 60 stations, of which 17 are in North Tyneside. Nexus continues to deliver the £389m 'all change' programme to renew and modernise the infrastructure of the system.

Metro services are run using the existing fleet of 90 Metrocars which entered service in 1980. As part of the 'all change' programme these are undergoing a programme of 'three-quarter life refurbishment', to be completed in December 2015, which is expected to extend their life to around 2025.

Most of the Metro system runs on dedicated track, although between Pelaw and Sunderland Metro trains run on Network Rail infrastructure shared with other trains. Maintenance of Metro track and stations is undertaken in house by Nexus, while the operation of Metro services is carried out by DB Regio Tyne and Wear under an operating concession for a period of between seven and nine years from April 2010.

1.5.3 Scope of the draft strategy

Two consultation documents make up the draft strategy: a summary document and a detailed background document.

A demand study undertaken for Nexus, based on low, core and high demand scenarios, predicts that passenger numbers on the existing Metro system, excluding any potential network extensions, will increase by between 28% and 74% by 2030, to between 49 million and 66 million passenger journeys per year. The draft strategy recognises that passenger growth will be partly dependent on economic development and land use planning in areas served by Metro.

The draft strategy sets out how the Metro fleet can continue to meet current and future passenger demand, including a recommendation that Nexus assess the implications of a 'final life' refurbishment of the current Metrocars in 2025, compared with the option of procuring a new fleet. It then considers some of the technical aspects of Metro operation, including depot facilities, signalling and control, and energy supply, including the scope to make Metro operations more energy efficient. Further topics considered are how Metro can best meet customer requirements in the future; potential arrangements for Metro operation after the end of the current concession; potential network extensions,

described in more detail in section 1.5.4 of this report; and possible options for financing of Metro operations in the future.

The nine key recommendations of the draft strategy, which Nexus state will guide further work towards the development of full business cases and the identification of appropriate future funding sources, are as follows:

1. Customer requirements will dictate how Metro evolves in the future. These range from future demand levels, to what passengers want to see at stations and on trains. All areas where there is a meaningful business case for network extensions and new stations will be considered.
2. Integration with land-use patterns and other transport modes is critical. Metro must be at the heart of a planning and transport programme that maximises the strengths of light rail in moving large numbers of people quickly, safely and reliably.
3. Metro must continue to demonstrate good value for money and a commitment to deliver sustainable transport in a way that meets stakeholders' needs across the region.
4. Further investment in Metro is vital to ensure that the network can maintain and expand its role.
5. The next generation of trains will meet customer requirements and demonstrate best practice in terms of facilities, flexibility, economy and energy efficiency.
6. The future Metro network as a whole will become an exemplar in terms of energy efficiency and environmental awareness across all aspects of its operations, as a central element of the region's low-carbon future.
7. Future operational frameworks for Metro will offer the best combination of customer service, innovation and value for money for passengers and taxpayers.
8. Technology offers further potential to improve the offer to customers. Metro will embrace innovation across all areas of the business where it improves accessibility, increases choice and information and reduces costs.
9. Replacement of the existing train fleet is essential to ensure the delivery of many of the above recommendations.

The aims and objectives of Nexus' draft strategy, and the full list of its recommendations, are reproduced in Appendix 2.

1.5.4 Potential network extensions

The draft strategy does not commit to promoting any extensions to the Metro network, as the continued delivery of service on the existing lines is considered to be paramount. It does however detail seven potential network extensions which Nexus regards as having the greatest outline potential based on predicted demand and technical feasibility. The costs of any such scheme would be substantial and its future progress would be dependent on a robust business case being developed and a funding package assembled.

One of the seven potential extensions is in North Tyneside: the Northumberland Park to Howdon route would leave the northern loop of the Metro line east of Northumberland Park and run along an existing north-south corridor to join the southern loop of the Metro east of Howdon station, with level crossings at Middle Engine Lane, Silver Fox Way and Earsdon Road. This would pass close to Cobalt Business Park, Silverlink, Tyne Tunnel Trading Estate and West Chirton Industrial Estate, significant employment destinations with prospects for future growth and increased travel demand.

The draft strategy suggests that this potential extension would be built as a segregated off-street alignment similar to the existing Metro network (rather than using street-running trams, as for some other potential extensions) and hence could be served by the same Metro trains used on the existing network. As services could extend onto the existing Metro network, it could also lead to higher service frequencies between Howdon and Newcastle via Wallsend.

The draft strategy lists other potential network extensions which were examined at a baseline technical level by Nexus but not included among the seven routes selected: these include Four Lane Ends to Killingworth in North Tyneside. Reference is also made to the Ashington, Blyth and Tyne line, which passes through Northumberland Park, and is the subject of separate proposals being promoted by Northumberland County Council for the possible re-introduction of passenger services.

The draft strategy also states that there is 'some potential' for new stations on the existing Metro network, and refers briefly to three sites identified in South Tyneside and Sunderland's development plans as longer-term possibilities, while recognising that other sites may be considered in the future. It states that new stations are most often desirable if linked to new housing or retail development adjacent to the Metro, as was the case, for example, with Northumberland Park in North Tyneside, opened in 2005.

1.6 Decision options

The following options are available for consideration by Cabinet:

Option 1

Agree that a formal response to the supplemental consultation be submitted and approve the proposed course of action set out at 1.2 to allow the response to be submitted.

Option 2

Decide not to submit a formal response to the supplemental consultation.

1.7 Reasons for recommended option

Option 1 is recommended as this will allow the Authority's views on the future development of the Metro system to be taken into account.

1.8 Appendices

Appendix 1 Proposed North Tyneside Council response to the consultation
Appendix 2 Aims, objectives and recommendations of Nexus' draft Metro Strategy 2030

1.9 Contact officers

Colin MacDonald, Senior Manager, Technical & Regulatory Services, 0191 643 6620
Andrew Flynn, Integrated Transport Manager, 0191 643 6083
John Cram, Integrated Transport Officer, 0191 643 6122
Alison Campbell, Financial Business Manager, 0191 643 7038

1.10 Background information

The following background papers/information have been used in the compilation of this report and are available at the office of the author:

- 1) The consultation documents – a summary document and a detailed background document – are available on the Nexus website at:
www.nexus.org.uk/consultation/item/metro-strategy-2030
- 2) Tyne and Wear third Local Transport Plan (LTP3) documents (the LTP Strategy 2011-21 and the LTP Delivery Plan 2011-14) – are available online at:
www.tyneandwearltp.gov.uk/documents/ltp3/

PART 2 – COMPLIANCE WITH PRINCIPLES OF DECISION MAKING

2.1 Finance and other resources

Should Cabinet decide that a response should be submitted, the response would be prepared using existing officer resource and submitted to Nexus by email.

2.2 Legal

At its meeting of 27 March 2014 the former Tyne and Wear Integrated Transport Authority (ITA) endorsed Nexus' intention to carry out the 'Metro Strategy 2030' consultation. With effect from 15 April 2014 the ITA was dissolved and its responsibilities as local transport authority passed to the newly created Combined Authority. Nexus by virtue of the Order creating the Combined Authority became the Passenger Transport Executive for the Combined Authority for the purposes of Part 5 of the Local Transport Act 2008 and Part 6 of the Local Democracy, Economic Development and Construction Act 2009.

2.3 Consultation/community engagement

Any person may respond to the Nexus consultation. The consultation documents are published on the Nexus website.

2.4 Human rights

There are no human rights implications directly arising from this report.

2.5 Equalities and diversity

There are no equalities and diversity implications directly arising from this report.

2.6 Risk management

There are no risk management implications directly arising from this report.

2.7 Crime and disorder

There are no crime and disorder implications directly arising from this report.

2.8 Environment and sustainability

There are no environment and sustainability implications directly arising from this report.

PART 3 - SIGN OFF

- Deputy Chief Executive
- Head of Service
- Mayor/Cabinet Member(s)
- Chief Finance Officer
- Monitoring Officer
- Strategic Manager – Strategic Services

Appendix 1 North Tyneside Council draft response to the consultation

This is the response of North Tyneside Council (“the Authority”) to the consultation ‘Metro Strategy 2030’, which is being carried out by Nexus.

- **What is your future vision for Metro?**
- **What do you see as the role of Metro within the area covering Tyne and Wear, County Durham and Northumberland?**

Metro plays a vital role in the economy of North Tyneside and throughout the area it serves. It provides an efficient and sustainable means of transporting large numbers of people swiftly and efficiently, helping to minimise congestion and overcrowding on the transport network as a whole and providing excellent accessibility which supports the local economy.

Within the area covering Tyne and Wear, County Durham and Northumberland, Metro’s role is to act efficiently as part of an integrated transport system to facilitate end-to-end journeys, including many which involve more than one mode of transport. Its role therefore includes supporting sustainable accessibility and economic growth in the region.

In the future we would see Metro continuing to provide an efficient, cost-effective public transport service, supporting the growth of the region’s economy and potentially serving a wider range of destinations directly. We would see it acting as part of an integrated, user-friendly transport system which provides excellent accessibility and promotes modal shift from the private car to public transport.

- **Do you believe that it covers all of the required topics and themes to be successful?**

The topics and themes covered by the draft strategy are highly relevant to the future development of Metro, including the Metro fleet, customer experience and potential structures for operating and financing the Metro system in the future. It is appropriate that the Metro operator should seek to minimise its carbon footprint as far as possible, e.g. through measures such as incorporating energy-efficient design features into new or refurbished vehicles and using renewable sources of energy where practicable.

It is highly appropriate that the draft strategy highlights the importance of links between the future development of the Metro system and land use planning (e.g. on pp29-32). Light rail systems such as Metro are particularly suited to routes with substantial flows and hence the greatest opportunities for future development of the system are likely to be those which can link to substantial employment or residential developments.

A draft version of the North Tyneside Local Plan was published for public consultation in November 2013 and the Plan is currently being prepared for a further stage of consultation later in the year. The Local Plan will establish a framework for sustainable growth and development over the next 15 years and will identify the preferred development sites for new homes, employment and retail and the agreed level of overall growth in the borough for the next 15 years. We would expect there to be close integration between future development of the Metro system and the North Tyneside Local Plan to assist in enabling the Local Plan to deliver improved accessibility and support regeneration and economic development as well as minimising carbon emissions.

As a partner in the Tyne and Wear Local Transport Plan (LTP3) we recognise the desirability of evaluating potential additions to the Metro network, alongside complementary non-Metro

measures, as a means of extending the reach of Metro across a wider area of Tyne and Wear (as stated in section 14.81 of the LTP3 strategy) and linking in with new development to secure wider economic benefits. There is also considerable potential for additional Metro stations to serve areas of growth outlined in authorities' Local Plans. We would urge Nexus, working in partnership with local authorities, to carefully consider these options alongside strengthening the integration of other transport links with the Metro system to help improve accessibility and deliver sustainable communities.

As stated above, Metro forms one part of the region's wider transport network: the potential to improve the integration of Metro with other modes of transport – including bus, heavy rail, cycling, taxi and private car – could be covered more systematically in the draft strategy.

▪ **Do you have any views on the specific proposals?**

Potential new stations

We welcome the assurance (on p39) that Nexus will continue to work with local authorities in developing plans to add stations to the existing network. As sites are identified for development through the Local Plan process we anticipate that there will be substantial scope for a new station or stations in North Tyneside which could facilitate new development and have broader benefits for both the local economy and the public transport network as a whole. We note the previous example of Northumberland Park in North Tyneside, opened in 2005, which serves as a Metro, bus and park and ride interchange and supports wider accessibility to employment and other destinations.

Potential network extensions – Howdon to Northumberland Park

We consider that the potential Metro extension from Howdon to Northumberland Park, in the A19 corridor within North Tyneside, presents a substantial opportunity in terms of supporting economic development in the corridor and more widely, and we welcome the fact that it has been identified by Nexus as a potentially suitable network extension for which it would be appropriate to work towards developing a business case. The draft strategy correctly identifies that the route would serve major employment sites which also have further potential for substantial jobs growth, including Cobalt, Silverlink, Tyne Tunnel Trading Estate and West Chirton Industrial Estate. There is also committed new residential development in the Northumberland Park area and the potential that substantial further residential development may be brought forward in the corridor as sites for new development are identified through the Local Plan process.

We note also the following attributes of this potential network extension:

- i. it could be served using the existing Metro fleet, hence its progress would not be dependent on the acquisition of new vehicles;
- ii. it would increase the flexibility of the Metro network as a whole by providing an inner circle within the Coast loop;
- iii. it could run within an existing alignment for most of its length;
- iv. it has lower indicative costs than all but one of the other potential extensions;
- v. it is predicted to generate a robust level of demand, from new stations and the existing network, relative to the indicative cost;
- vi. the corridor offers good prospects for interchange with other modes of transport, and includes an existing park and ride site and bus interchange at Northumberland Park;
- vii. it offers the potential to support public transport journeys in the wider region, e.g. by linking at Northumberland Park with the Route 19 bus service to South-East Northumberland and potentially in the future with the separate scheme promoted by Northumberland County Council to reinstate passenger services on the Ashington, Blyth and Tyne line.

It would also fit well with the typical attributes of successful light rail schemes as set out in the Department for Transport publication 'Green Light for Light Rail' (shown on p8 of the strategy: serving a major conurbation, having major traffic attractors along the route, serving corridors with significant traffic volumes, providing competitive journey times, delivering regular and reliable journey times using a high degree of segregation from traffic, being perceived as safe, offering good interchange with other modes and being well related to existing and future land-use developments).

This potential network extension would therefore offer the prospect of being deliverable within a relatively short period and achieving substantial economic benefits by linking an existing and growing area of major employment directly into the existing Metro network and, via interchange facilities, to a wide catchment area across the North East.

Potential network extensions – Four Lane Ends to Killingworth

We note that Nexus examined at a preliminary level a potential network extension from Four Lane Ends to Killingworth, but that the draft strategy recommends that the process of developing a business case for this should not be progressed. It seems surprising that the draft strategy suggests that travel demand in this corridor "appears weak" (p105), given that the corridor includes both an area of employment developments (including Gosforth Business Park, Balliol and Quorum) which already provides jobs for over 9,000 people with further growth expected as Quorum Business Park is built out, and the town of Killingworth from which there are substantial commuter flows. We would therefore invite Nexus to revisit this position and to carry out further work to assess the route's potential for inclusion as a possible further network extension.

Comments on other specific proposals – fares, ticketing and information

With respect to fares and ticketing, the draft strategy proposes (p62) a simplified product range based on single tickets, day tickets, monthly and annual tickets. While we concur that passengers should be able to choose from a clearly understandable range of tickets without unnecessary complication, we would encourage Nexus to explore the options for introducing a limited number of additional ticket types which could stimulate travel demand at times when the system is less well used, which could potentially include e.g. cheaper evening return tickets similar to those available on some Northern Rail services.

The draft strategy suggests that tickets are offered with Metro-only or multi-modal options. Many public transport journeys can be made most efficiently if the ticket allows the use of more than one operator, e.g. travel on Metro followed by bus, and we would encourage the promotion of multi-modal tickets to passengers and making it as clear as possible to the passenger at the point of sale which tickets are multi-modal and which valid on Metro only. We note also that there is currently no multi-modal season ticket valid outside the Tyne and Wear boundary, as was cited in the North East Independent Economic Review led by Lord Adonis in 2013: given the substantial levels of daily travel between Tyne and Wear and adjoining areas of Northumberland and County Durham, we would encourage Nexus to explore the possibilities for the introduction of multi-modal tickets valid in the wider region.

Passenger information should be relevant to passengers' needs and accessible in a range of forms suitable to the preferences of customers. Given the high and increasing use of smartphones and similar portable devices it is right that Nexus continue, as proposed (p65-66), to develop applications which provide travel information in a form convenient for their users; this may improve passenger satisfaction where it provides increased quality of information, such as details in real time in the case of disruptions to service. Establishing a programme of monitoring satisfaction with information during disruptions, as proposed, will assist with this. However, not all passengers will carry smartphones or equivalent and it is appropriate that Nexus provide information in a range of forms accessible to all users.

Comments on other specific proposals – Metro fleet and passenger experience

Securing a new or refurbished Metro fleet is a central theme of the strategy and it is important as part of this that consideration be given to improving the full range of aspects of the passenger experience. It is recognised that the internal layout of carriages (p41) may in future provide increased flexible space for e.g. luggage, prams and cycles, and for use as standing room by passengers at the busiest times and sections of route. However, many Metro journeys in North Tyneside cover a substantially greater distance than urban ‘short hop’ journeys and the availability of a seat can make a considerable difference to passenger comfort: the draft strategy recognises (p60) that passengers on longer Metro journeys, e.g. between North Tyneside’s coast and central Newcastle and Gateshead, also pay higher than average fares for their journey and have a reasonable expectation to be able to be seated in most cases. While we recognise the desirability of providing additional flexible space, it is important to maintain the provision of a reasonable level of seating suitable for passengers making longer journeys by Metro.

The accessibility of vehicles for people with differing levels of mobility is important in terms of providing a Metro system which everyone can use. The draft strategy refers (p42) to the requirement to comply with the Rail Vehicle Accessibility Regulations (RVAR) by 2020. We would encourage Nexus to be proactive in improving levels of accessibility of Metro vehicles, stations and interchange to meet or exceed modern standards wherever possible, in terms of both physical accessibility and other factors such as on-board information. This would enhance the opportunities for people with differing levels of mobility to be able to travel independently on the Metro.

Personal security, and perceptions of personal security, are important factors for public transport users and while they may not appear high on the list of ‘top ten’ factors as ranked by passengers (p57) they may often be a factor in people’s decision as to whether to use public transport for a particular journey. It is appropriate that Nexus seek continually to improve stations to ensure that passengers perceive them as safe, as proposed (p68), and that the design of any new or refurbished Metros takes full account of any opportunities to address personal security concerns.

Integration with other modes of transport includes integration with cycling and we welcome the opportunity to progress work with Nexus to improve cycling access to Metro stations (p69). Nexus should also engage with passengers and user groups to seek to accommodate the substantial local demand to carry non-folding cycles on board the existing Metro fleet: this would assist in improving accessibility to employment as well as to popular destinations such as North Tyneside’s coast. Any future new fleet, whether running on the existing Metro lines or network extensions, should be designed to be capable of carrying several non-folding cycles on board each unit to cater for likely levels of demand. It seems inappropriate at this stage for the draft strategy to suggest (p41) that carriage of bicycles might be prohibited at certain times even once a new fleet was introduced.

Further comments on points of detail in the draft strategy documents

The definition of what the draft strategy seeks to achieve is spread over several different lists in the background document including a vision; aims; objectives; guiding principles; and the full list of recommendations. The summary document includes a further list of nine key recommendations, not all of which appear to link directly to the full list of recommendations. If it is possible for the final version of the strategy to take a more streamlined approach, reducing

the number of separate lists, this would help give a clearer message as to the desired outcomes of the strategy.

In 'policy and strategy links' (p7), the section 'International policy' might be better headed 'International organisations'; the section 'EU policy' might read more clearly if the first sentence was omitted.

It is suggested (p11) that the 60 existing stations can be divided into four types, of which Howdon is given as an example of an "out-of-town" halt: it would be helpful to clarify whether this is an official form of classification used by Nexus and whether there are any other station types beyond the four listed.

At Quorum Business Park, future developments include full occupation of the employment units, as well as "build-out to completion of the retail area" (p30).

Appendix 2 Aims, objectives and recommendations of Nexus' draft Metro Strategy 2030

Aims of the draft Metro Strategy 2030:

- (i) Infrastructure resilience – to capitalise on investment in engineering and a new train fleet, alongside the application of best practice in network maintenance, to deliver a robust and reliable Metro network.
- (ii) Increase the proportion of trips made by Metro relative to those undertaken by car along transport corridors where mode choice exists.
- (iii) Develop the network to accommodate forecast base-case increases in the level of demand as follows:
 - 2020: 49 million trips per year
 - 2025: 53 million trips per year
 - 2030: 60 million trips per year
- (iv) Continue to reduce energy consumption and improve environmental performance as far as practicable, consistent with legislation, technology and operating protocols, progressively maximising the benefits brought about through the use of new equipment.
- (v) An annual average increase in operating efficiency resulting in a reduced requirement for operating subsidy over time.
- (vi) Ongoing reductions in the level of fraudulent travel through the use of network gating, smart technology and effective evidence-based enforcement.
- (vii) Punctuality and reliability – ensure that network performance meets users' expectations and is in line with comparable networks elsewhere.
- (viii) Customer satisfaction –to aim for long-term improvements in recorded customer satisfaction across a range of metrics.
- (ix) Increase the proportion of Tyne and Wear households within easy access of a Metro station through a targeted programme of network extensions where funding permits, and where they can be clearly justified by forecast levels of demand. Also, to investigate the construction of additional stations on the existing network, subject to the same criteria.
- (x) Increase the volume of interchange between Metro and other travel modes by means of additional stations, network extensions and further Park and Ride sites as required by levels of customer demand.
- (xi) Maximise the potential of commercial and development opportunities, particularly in terms of securing maximum planning gain from new developments that can be re-invested in network improvements.

Objectives that will help to achieve these aims are:

1. Position Metro at the heart of the region's integrated transport network with the ability to influence and respond to future economic, environmental and social trends.
2. Produce robust forecasts of future demand on the existing network and potential network extensions.
3. Develop a high-level specification for a new fleet that will meet customer needs into the future.
4. Appraise future options for Metro operations, including rolling stock, electrical, mechanical, environmental, and safety elements.
5. Ensure that the requirements of future Metro customers are anticipated and provided-for across all aspects of the Strategy.
6. Identify the optimum future operational framework for Metro, taking account of customer, financial, fleet replacement and network considerations.
7. Provide recommendations for future consideration regarding potential on-street and off-street network extension corridors
8. Identify potential funding, investment, development and asset opportunities that will facilitate successful delivery of the strategy.

9. Enabling many of the above and at the heart of this strategy is the essential replacement of the current fleet of trains.

Recommendations in the draft Metro Strategy 2030:

(for definitions of technical terms please see the detailed document, available online at www.nexus.org.uk/consultation/item/metro-strategy-2030)

Existing Network Demand

- Monitor existing and predicted future demand for Metro closely.
- Monitor regional and national economic and planning trends.
- Maximise demand through the delivery of reliable services that meet customer requirements.
- Liaise closely with the Local Economic Partnership to ensure the optimum locations of development proposed within the Strategic Economic Plan.
- Liaise with district planning authorities to ensure that the principles and detailed design of developments are planned so as to maximise accessibility by Metro.
- Work with local authorities on the introduction of new stations on the existing network where these are justified by demand, sought by local communities and are operationally feasible.

Fleet Renewal

- Commission as a priority, a study to establish the maximum train throughput using Nexus' existing signalling system
- Assess the financial and practical implications of a further, final 'Life Extension' refurbishment of the existing Nexus vehicles in 2025, compared to procurement of a new fleet
- Undertake consideration and economic assessment of options for the design of a new Nexus Metro vehicle type or types

Power Supplies

- Retain 1500V DC operation for Nexus' own on-track network, and investigate the implications of either extending this to on-street operation or using 750V DC in a separate on-street fleet.
- Consider a dual-voltage 1500V DC / 25kV AC facility as a key specification for a new fleet.
- Consider the energy-efficiency benefits of regenerative braking in detail in the design of both new vehicles and renewed substations.
- Monitor and feed into Network Rail's plans for future regional roll-out of electrification.
- Depot Facilities
- Establishment of options and outline costings to refurbish the existing Gosforth Depot to provide long-term sustainability of operations.
- Estimate the costs of a brand new main depot.
- Identify and come to an initial view about alternative sites for a new main depot, or smaller outstabling depots.
- Identify the likely disposal proceeds of Gosforth Depot, were it to be sold.
- Come to a conclusion about the preferred options on the site of a main depot and stabling facilities.

Signalling and Control

- Undertake more detailed research into the rationale(s) and potential benefits and disadvantages of a fundamental change to the Metro signalling and control system, compared to the retention of a broadly like-for-like system.

- Continue engagement with the COMET/NOVA working group of worldwide Metro networks which is currently examining CBTC and increased automation.

Energy Supply, Efficiency and Renewables

- Continue on an ongoing basis to identify and implement cost-effective energy-saving opportunities on Metro
- More work be carried out on the opportunities for renewable energy generation or contracting
- Given its long-term criticality to Metro operation, establish a formal Energy Strategy

Customer Requirements

- Develop and maintain close contact with Metro users and non-users to establish a deep understanding of customer preferences.
- Incorporate customer requirements into the design of new rolling stock as far as practicable.
- Ensure that Metro fares and ticketing products are simple to understand and relate to users' needs.
- Continue to provide accurate and timely proactive and reactive service information in formats that customers want, taking account of wider accessibility needs.
- Design new and refurbished stations that are modern, safe and welcoming.
- Promote Park and Ride facilities where feasible and justified by demand.

Concession

- The key recommendation is to remain open-minded as to the exact definition of a future concession framework, as it is likely to be shaped by several key factors including:
 - Customer requirements.
 - Availability of finance and loan guarantees.
 - Progress towards the identification of viable network extensions.
 - Design, Build, Operate and Maintain options.
 - Assessment of strengths and weaknesses of the existing concession arrangements.
 - Opportunities to achieve economies of scale.
 - The concession renewal process should, if possible, be based around a three-package approach with the option retained to combine or separate as governed by financial and market factors and constraints.

Network Extension Corridors

- Undertake further technical feasibility work with key stakeholders in respect of those corridors that appear to have the best prospects in terms of demand, deliverability and financing.
- Ensure that these corridors are incorporated as appropriate into long-term transport plans and economic plans.
- Monitor these corridors for forthcoming developments that could be a catalyst for implementation

Finance

- Actively investigate all options for the future financing of Metro that offer the best combination of security, flexibility and value for public money.