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Murton Gap and Killingworth Moor Draft Utilities Assessment - Stage One

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Quality Management

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Contents

1. Introduction	4
Project Background.....	4
2. Planning Policy and Guidance Context	5
National.....	5
Local Planning Policy and Guidance.....	6
3. Assessment of existing utility provision	8
Introduction	8
Existing Assets	8
4. Consultation	10
5. Consultation Response	11
6. Conclusions	13

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1. Introduction

Project Background

- 1.1 Murton Gap and Killingworth Moor have been identified as strategic allocations in the emerging North Tyneside Local Plan. Both are key strategic sites to contribute towards the borough's objectively assessed needs for housing provision. Ensuring that development creates safe, sustainable and attractive places for existing and future residents it is therefore of crucial importance to the whole of North Tyneside.
- 1.2 Bringing these sites forward for sustainable development requires a thorough assessment of future infrastructure requirements. This Utilities Assessment is part of the overall evidence base being collated for both sites and takes a partnership approach by aiming to work in cooperation with those in the relevant industries and agencies.
- 1.3 As specified in the National Planning Policy Framework, the planning process requires that assessments should consider the capacity of utility providers within the Borough and their ability to meet future growth in demand. Both the Murton Gap and Killingworth Moor are predominantly agricultural fields and not connected to the urban area. It is therefore deemed necessary to undertake a utility assessment to determine existing provision, capacities levels and what future utility infrastructure would be required to assist in their delivery.
- 1.4 The purpose of this project would be to highlight a preferred scale and nature of utility infrastructure provision and where available obtain information on potential costs for such provision.
- 1.5 In ascertaining the utility infrastructure capacity and future demands for the sites, it is likely that further detailed investigations will need to continue beyond the completion of this study. As such this commission has been described as Stage 1. As further information is provided from the utility providers and developers a further Stage 2 commission will be considered jointly with the project manager and client team.

2. Planning Policy and Guidance Context

National Planning Policy and Guidance

- 2.1 This section will review the national and local planning policy context relevant to utility provision in relation to residential development. This would cover the National Planning Policy Framework (NPPF), National Planning Practice Guidance and the emerging Local Plan.
- 2.2 Central government published the NPPF in March 2012. At the heart of the NPPF is a presumption in favour of sustainable development, with the planning system performing an economic role, social role and environmental role simultaneously.
- 2.3 The NPPF, in paragraph 7, clearly places a requirement on each local authority to ensure that sufficient land of the right type and in the right places is available to support growth and by identifying and coordinating development requirements, including the provision of infrastructure.
- 2.4 In 2014, Central government released National Planning Practice Guidance. The guidance includes reference to the importance of paying careful attention to providing an adequate supply of land, identifying what infrastructure is required and how it can be funded and installed at the appropriate time. Ensuring the viability of development is critical to delivery and an overarching theme within guidance. Therefore infrastructure requirements play a crucial role in determining the overall delivery.
- 2.5 The guidance places an importance of early discussion with infrastructure and service providers to help understand their investment plans and capacity levels. It is for the Council to make clear over time frame of the Local Plan (recognising there will be a weakening position of certainty towards the end of the Local Plan) as to what infrastructure is required, who is going to fund and provide it, and how it relates to the anticipated rate and phasing of development.
- 2.6 Utility provision is rarely identified within national guidance but is often referred as infrastructure provision. The national guidance (both NPPF and NPPG) identifies the importance of infrastructure to the overall delivery of development sites and stresses the importance of working collaboratively with service providers in the preparation of development sites and the production of Local Plans. This is to ensure that the future costs and questions over the future viability of sites can be determined at the earliest possible stage and therefore reducing any potential constraints on delivering development sites.

“Local planning authorities should work with other authorities and providers to: assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications,

utilities, waste, health, social care, education, flood risk and coastal change management, and its ability to meet forecast demands; Paragraph 162, NPPF”

“Investment in business should not be over-burdened by the combined requirements of planning policy expectations. Planning policies should recognise and seek to address potential barriers to investment, including a poor environment or any lack of infrastructure, services or housing. Paragraph 21 NPPF”

- 2.7 Although national guidance does recognise utilities as being a significant factor for the delivery of new development it places great emphasis on telecommunications, which are seen as a strategic priority. High speed broadband provision is seen as essential for economic growth and plays a vital role in enhancing the provision of local community facilities and services.
- 2.8 This report assists the Council in its preparation of the Local Plan by according with national guidance. When examined by an inspector the Local Plan will be judged as to whether it has been ‘positively prepared’, providing evidence for how infrastructure requirements have been considered. This report therefore aims to assist in the delivery of the strategic sites at Killingworth Moor and Murton Gap and the future adoption of the Local Plan.

Local Planning Policy and Guidance

- 2.9 North Tyneside Council is currently preparing a Local Plan, which will replace the UDP¹. The Local Plan is proposed to be adopted in early 2017. The Local Plan will provide a planning policy framework to help achieve sustainable development: the core principle underlying planning, appropriate to the distinctive characteristics and needs of North Tyneside. It will set out the development needs of the borough and provide guidance on how they can be met. The priorities that the Local Plan will address include:
- The homes and jobs needed in the Borough.
 - Retail, leisure and other commercial development.
 - Infrastructure provision for transport, telecommunications, waste management, water, flood risk, coastal change, minerals and energy.
 - Provision of health facilities, community and cultural infrastructure and other local facilities.
 - Climate change mitigation and adaptation.
 - Conservation and enhancement of natural and built environment.

¹ North Tyneside Council Unitary Development Plan, 2002

- 2.10 The most recent consultation draft version of the Local Plan² was published in February 2015 and contained policy S10.1 General Infrastructure Funding and DM 10.14 Telecommunications – Broadband, mobile phone masts and equipment. These are not adopted policy but seek to ensure that appropriate infrastructure is delivered in the right place and at the right time and like the priority in national guidance for telecommunications the Council are proposing a policy to support the development and extension of telecommunications services. The current planning policy in North Tyneside is contained within the UDP. As this report will inform site allocations within the Local Plan, it is not considered appropriate to look to the current North Tyneside UDP that it will supersede.
- 2.11 North Tyneside Council also has an Infrastructure Delivery Plan (IDP), which informs appropriate policy in the Local Plan. The IDP sets out the main infrastructure required to support the development proposed with approximate costs and funding where identified.

² Local Plan Consultation Draft, North Tyneside Council, 2015

3. Assessment of existing utility provision

Introduction

- 3.1 Both Murton and Killingworth Moor have been identified as allocations within the North Tyneside Local Plan, as key strategic sites to contribute towards the boroughs objectively assessed needs for housing provision. Both sites represent a significant level of housing and other forms of development within a specific location. Consequently it is highly likely that the proposed growth will create a need for new and enhanced local infrastructure for their delivery.
- 3.2 North Tyneside's energy supply is very much dependant upon the supply of electricity and gas, but other forms of energy such as wood or coal are also used..

Existing Assets

- 3.3 Gas - Northern Gas Network Ltd owns and operates the local gas distribution network in the North of England. Modelling of the gas distribution networks is undertaken on a 3 year cycle to ensure that networks can support the anticipated general load growth.
- 3.4 Electricity - National Grid operates the national electricity transmission network across Great Britain and owns and maintains the network in England and Wales, providing electricity supplies from generating stations to local distribution companies. National Grid does not distribute electricity to individual premises, but their role in the wholesale market is key to ensuring a reliable and quality supply to all. Northern Power Grid owns and operates the electricity distribution network in North Tyneside.
- 3.5 National / Grid's high voltage electricity overhead transmission lines underground cables within North Tyneside Council's include the following:
- 275kV route from Blyth substation in Northumberland to South Shields substation in South Tyneside via Tynemouth substation in North Tyneside
 - Underground cables running from Tynemouth substation in North Tyneside to Silverlink substation in North Tyneside
- 3.6 The following substations are also located within the administrative area of North Tyneside Council:
- Tynemouth substation – 275kV, 132kV and 11kV
 - Silverlink substation – 11kV
- 3.7 Telecommunications - Standard landline and mobile telephone services as well as digital television reception are readily available across North Tyneside.

However high speed internet and fully interactive television services are to an extent dependent on better physical networks.

- 3.8 The borough suffers from varying degrees of digital exclusion which is defined as being prevented (by skills, equipment, motivation or some other factor) from going online and using new technologies.
- 3.9 Broadband- Internet access has boomed over the last 15 years with 68 per cent of premises across the whole of the UK having a fixed broadband connection. An effective broadband network supports economic growth, gives consumers greater choice and prices will be reduced. Broadband infrastructure in North Tyneside is provided by BT Openreach and Virgin Media, in many parts of the borough there is only a single provider.
- 3.10 In 2011 Central Government launched its Broadband delivery program, led by Broadband Delivery UK (BDUK), and a team within the Department for Culture, Media and Sport.
- 3.11 In 2013 Central Government launched Phase 2 of the Superfast Broadband Extension Program, lead by BDUK. The program is investing £250 million with the intention of extending high speed broad band coverage to 95% of the UK by 2017. Any funding allocated from this program will need to be matched by funds from the Local authority.
- 3.12 North Tyneside is currently investigating its options for joining this program. This is being considered as part of the budget setting process for 2015-16.
- 3.13 The program roll out phase would begin in 2016 ending 2017. Its purpose is to upgrade the infrastructure and potential availability of Superfast Broadband to both commercial and residential premises by enabling fibre to the BT street cabinet.

4. Consultation

- 4.1 The utility services that were to be considered within this assessment and contacted were:
- Water – Mains and Sewers. Northumbrian Water is the primary contact. Contact will also be made with the Environment Agency.
 - Electric – Northern Powergrid distribute electricity from the national grid to homes and businesses and will be contacted for their advice and anticipated requirements.
 - Gas – Northern Gas Networks distribute gas from the strategic network to local end users.
 - Telecoms – Direct engagement with terrestrial and mobile telecom service providers.
 - Terrestrial provision is dominated by BT in provision of standard telephone and broadband connections that provides the platform for most other telecom providers. BT also operate all local telephone exchanges. Virgin Media provide a standalone fibre optic network. It is anticipated that an extension of the Virgin Media network to the development sites would be in addition to BTs network
 - Mobile provision. Each of the primary network providers are part of the Mobile Operators Association (MOA). This assessment will engage with the MOA to establish the current annual roll-out programme for mobile phone masts and consider the scope for co-ordination of mobile phone network provision within the developments.
- 4.2 Prior to consultation, a review of previous consultation responses by each of the utility providers to the Council through the Local Plan meant that each of the letters was individually tailored (see Appendix B).
- 4.3 As part of the engagement an initial plan of the proposals and an indicative development profile was shared with the utility providers, seeking to:
- Obtain a view from relevant providers over the likely demand for their service arising from the development;
 - Confirm the current network capacity for each utility;
 - Establish the providers views over the scale and nature of new infrastructure apparatus to ensure adequate service provision to the Strategic Sites as development progresses; and,
 - Consider the scope for understanding the phasing for introduction of given infrastructure.
 - Invite further discussion with the providers to ensure full comprehension of the question being asked and the proposed nature and scale of development.

5. Consultation Response

- 5.1 Following the request for information from each of the utility providers there was a mixed response. Some provided limited information, whilst others providing an approximate costing of future infrastructure works. Further work with each utility provider could form part of the Stage 2 commission as the Masterplan is developed and the utility companies can provide further detailed information. A breakdown of the responses received from each utility company are below:
- 5.2 Northumbria Water - From the response to the Local Plan Northumbria Water position had not changed. The position statement they prepared in December 2014 highlights the pressures placed on the Howdon Sewage Treatment facility which treats wastewater and surface water from the surrounding Local Authority areas.
- 5.3 One of the problems for Howdon is the amount of surface water that feeds into it from combined sewers. There is approximately a further 7 - 8 years of capacity within Howdon (i.e. it could be nearing its volumetric compliance limits in around 2023 without surface water management intervention).
- 5.4 Removing or reducing the amount of surface water from the system is a key issue and Northumbria Water have already started working on the feasibility of several pilot projects which will look to remove significant volumes of surface water from the network discharging in to Howdon. They have also begun work on the Tyneside Interceptor Asset Management Plan. Both Killingworth Moor and Murton Gap are related to two of the pilot projects at Killingworth Lake and Marden Quarry but no information was provided through the consultation and further information is awaited.
- 5.5 In light of the above, the importance of surface water management must be considered within development proposals with strong policy directing sustainable surface water management in the new development.
- 5.6 If the surface water management schemes are successful then the cumulative impact should provide additional capacity for Howdon, but Northumbria Water can't quantify the increase at this stage so would still promote investigating a range of options to ensure that Howdon can accommodate the development sites.
- 5.7 Northern Power Grid – Northern Power Grid owns and operates the electricity distribution network in North Tyneside. Within their response they were able to consider an overall budget estimate for both the Killingworth Moor and Murton Gap.
- 5.8 Works would be required to extend the existing high voltage underground Distribution System to the site and install multiple ground mounted substations. From these substations Northern Power Grid would install

underground low voltage distribution cables throughout the site and lay underground service cables. When calculating the budget estimate, the assumptions have been made that North Power Grid will not need to reinforce the local electricity network or carry out associated works. Sufficient spare capacity exists within the local network. Based on the above and the assumptions made, it is estimated that the cost of providing a new/increased electrical connection to each site will be in the region of £5,250,000 Killingworth Moor and £7,300,000 Murton Gap.

- 5.9 Northern Gas Network – From the consultation response Northern Gas Networks confirms that there is sufficient capacity in the medium pressure infrastructure to support the additional loads anticipated. Northern Gas Networks have infrastructure on the site which may need diverting so further follow up work would be required to determine more specific details of future requirements and costs. Again, the information is based on assumptions and does not guarantee the availability of gas.
- 5.10 Telecommunications – Openreach/BT and Virgin Media are the two providers of broadband infrastructure in North Tyneside and the take up of the different broadband services will remain the responsibility of each resident or business through a commercial relationship with a supplier. The consultation response from Openreach/BT concluded that because the site was so early in the development process there are no firm outcomes on network infrastructure. Openreach/BT did explain that the physical works to install either copper or fibre cables can be generally added to the network more quickly compared to other utilities and have less impact on existing capacity. The scale of either development would not be expected to present challenges that couldn't be accommodated at the appropriate time. Openreach/BT wished to be kept informed with the developers on each site so cabling can occur early in the development process.
- 5.11 After follow up correspondence with Virgin Media they going to undertake an assessment of both sites and would be in contact when the initial assessment was complete but this has yet to be received.
- 5.12 Mobile Operators Association – On behalf of the Mobile Operators the Mobile Operators Association could not give a clear indication of what their likely infrastructure requirements will be. This is because the technology is continuously evolving and therefore they could not say what likely infrastructure would be required in ways to improve quality of coverage and/or network capacity into the future.

6. Conclusions

- 6.1 The response received from Northumbria Water highlighted the importance to avoid combined foul and surface water drainage at both Murton Gap and Killingworth Moor and sustainable surface water drainage should be encouraged on both sites.
- 6.2 Northumbria Water pilot projects at Marden Quarry and Killingworth Lake could have a bearing on the surface water drainage proposals for both sites and future assessments should consider the dynamics between them.
- 6.3 At this stage only Northern Power Grid was able to provide an estimate of costs for future infrastructure works. However, this was based on a series of assumptions, which must be treated with caution. Significantly, it was assumed that there is sufficient local capacity in the electricity network and development would not require local reinforcement of the network. Without further information, such as a defined site layout, Northern Power Grid is unable to provide a more detailed assessment.
- 6.4 Following the information received from the utility providers there are no reasons to suggest there would be any significant restrictions to the development proposed at Murton Gap and Killingworth Moor based on existing or future utility infrastructure. However, this may change as further detail of Masterplan are finalised.
- 6.5 Overall there is a lack of detail from the utility providers at this early stage in the development process and it would be anticipated that a Stage 2 commission would provide a more in depth analysis of future infrastructure requirements and budget estimates.