

INTERNAL MEMORANDUM
TECHNICAL SERVICES

From: Head of Technical Services
To: Head of Planning
FAO: Simon Grundy
CC: Planning Administration

| | | | | |
|--|-------|-------------|-----|---|
| Proposal: Outline application for proposed development of approximately 350 residential dwellings and associated access. | Date: | 12/06/14 | | |
| Location: Summerville Farm, Durham Road, Stockton-on-Tees | Ref: | 13/2387/OUT | Rev | 1 |

| BANE Consultation | | Consultation Other | |
|-----------------------------|--|---------------------------|--|
| Network Safety | | Countryside & Green Space | |
| Highways Network Management | | Consultancy Practice | |
| Environmental Policy | | | |
| Flood Risk Management | | | |
| Community Transport | | | |
| Connect Tees Valley | | | |

Executive Summary

This memorandum provides a summary report following discussions between the applicant and Technical Services during the planning consultation period.

In the initial report provided by Technical Services in December 2013 it was noted that the impact of the development traffic on the Horse and Jockey roundabout (A177 Durham Road / Harrowgate Lane) would be severe and mitigation would be required to provide the necessary highway capacity to accommodate any traffic generated by this development.

A junction improvement scheme to mitigate development traffic at the Horse and Jockey roundabout has been developed by Stockton Borough Council (SBC) and tested in an AIMSUN transport model. The scheme adds signal operations at the junction and is shown to provide sufficient capacity for this development. An initial estimated cost of the junction improvement works is £900,000.

Subject to the impact at the Horse and Jockey roundabout being mitigated, the Head of Technical Services would have no objection to the development. The mitigation should be secured via Section 106 contributions, Section 278 Agreements and planning conditions. The transport requirements are summarised as follows:

- Section 278 works to provide a fourth arm onto the signalised junction of Harrowgate Lane and Einstein Way to provide the access into the site. The design must incorporate a right-turn lane on the westbound Harrowgate Lane arm of the junction to prevent right-turning vehicles blocking the straight-ahead movement. Development should not commence prior to the applicant entering into a Highways Agreement with the Council for the provision of the site access works;

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- A contribution (£875,000) towards the highway improvements at the Horse and Jockey roundabout;
- A contribution (£60,000) to maintain the operation of an hourly daytime bus service for a period of three years;
- £25,000 for off-site cycleway infrastructure; and
- £100 per dwelling (total of £35,000) for Travel Plan incentives.

Highways Comments

Overview

The proposed development is for approximately 350 residential dwellings on land accessed off Harrowgate Lane. A Transport Assessment (TA) has been submitted in support of the application, the scope of which was agreed with the applicant prior to submitting the application.

As part of the wider masterplanning approach for the West Stockton area, Stockton Borough Council (SBC) has developed an AIMSUN transport model which has been used, in addition to the TA, to review the impacts of this development on the local highway network.

Development Layout

The application is in outline only with all matters except access reserved. The main access into the site would be provided by adding a fourth arm onto the signalised junction of Harrowgate Lane and Einstein Way. This proposed arrangement is appropriate for this element of the site. However, the transport modelling undertaken by SBC indicates that a right-turn lane would be required on the westbound Harrowgate Lane arm of the junction to prevent right-turning vehicles blocking the straight-ahead movement. Footways (2m) would be provided on both sides of the access road and the applicant would need to enter into a Section 278 Agreement for the proposed access works onto the adopted highway.

A minor access, to be used as a pedestrian / cycle route but also providing emergency access onto Harrowgate Lane is proposed as well as additional pedestrian only links onto Harrowgate Lane and A177 Durham Road.

The internal layout is subject to a Reserved Matters application but should be designed in accordance with *Manual for Streets* (Department for Transport, 2007) guidance. The route through the site should be a minimum of 4.8m wide and a 2m wide footway should be provided on both sides of the carriageway.

Car and cycle parking must be provided for each dwelling in accordance with *Supplementary Planning Document 3: Parking Provision for New Developments, 2011*. Each incurtilage parking space should be 6 metres in length to ensure that parked cars do not overhang the footway. In accordance with the parking standards, a garage can only be counted as a parking space if it meets the minimum internal dimensions of 6m x 3m.

Any Reserved Matters application for the detailed elements of the site would also need to be supported by information on refuse collection and storage along with autotracking of large vehicles around the site. A Construction Management Plan would be required in order to ensure that no construction works would have a detrimental impact on the highway.

The applicant would need to enter into a Section 38 Agreement for the highway and footpaths which would become highway maintainable at the public expense.

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Trip Generation

Vehicle trip rates used in the TA have been derived from comparable sites in TRICS. The trip rates and subsequent forecasts are shown in Table 1.

Table 1: Vehicular Trip Rates and Trip Forecasts

| | AM Peak | | | PM Peak | | |
|-------|----------|------------|-------|----------|------------|-------|
| | Arrivals | Departures | Total | Arrivals | Departures | Total |
| Rate | 0.155 | 0.413 | 0.568 | 0.388 | 0.237 | 0.625 |
| Trips | 54 | 145 | 199 | 136 | 83 | 219 |

It was noted during scoping discussions that the trip rates are lower than those applied at other local sites (including Peacocks Yard, Allens West and Urlay Nook). However, having reviewed the sites in TRICS, and noting that the site has more established sustainable links when compared with Allens West and Urlay Nook, there is no reasonable evidence to object to the trip rates applied in the assessment.

Highway Impact

The TA reviews the development at a number of local junctions, the results of which are detailed below:

Horse and Jockey roundabout (A177 Durham Road / Harrowgate Lane junction)

This junction has been modelled using ARCADY 7 with development traffic distributed based on the Highways Agency PENELOPE distributions. ARCADY results refer to Ratio of Flow to Capacity (RFC) and predicted queue lengths in Passenger Car units (PCUs). A RFC value of 1 indicates that the arm of the junction is operating at its theoretical capacity.

The results at the Horse and Jockey roundabout presented in the TA show no highway capacity issues in both the base and future scenarios. During the 2023 AM peak (with development) scenario, the results are:

- Durham Road (north) – 0.72 RFC / 3 PCUs
- Junction Road – 0.66 RFC / 2 PCUs
- Durham Road (south) – 0.25 RFC / 0 PCUs
- Harrowgate Lane – 0.65 RFC / 2 PCUs

A sensitivity test has also been undertaken using Census trip distributions (rather than the Highways Agency PENELOPE distributions) and the results for the 2023 AM peak (with development) scenario are:

- Durham Road (north) – 0.74 RFC / 3 PCUs
- Junction Road – 0.68 RFC / 2 PCUs
- Durham Road (south) – 0.26 RFC / 0 PCUs
- Harrowgate Lane – 0.71 RFC / 2 PCUs

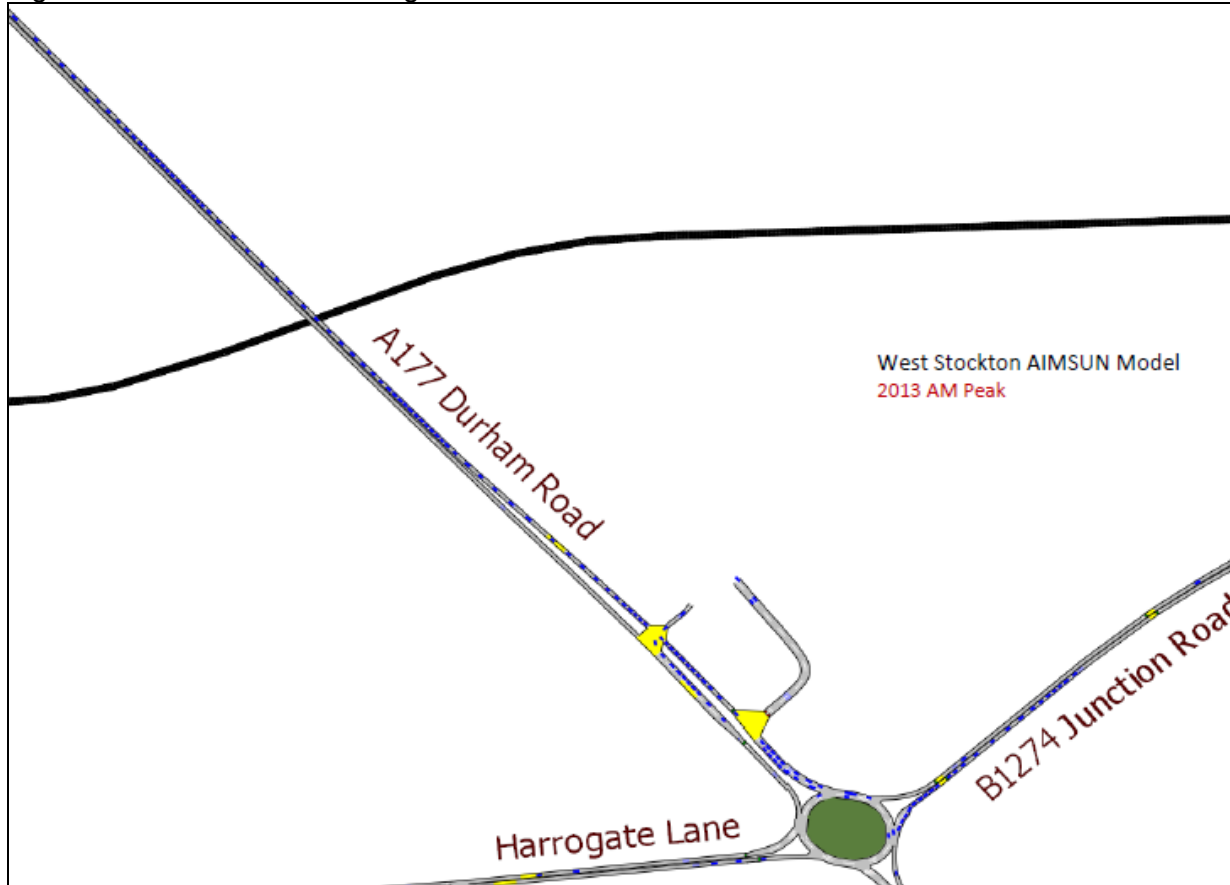
The results using ARCADY indicate no existing or forecast capacity issues at the junction. However no data has been provided to validate the results of the model and ascertain whether the base model is accurately representing base conditions prior to development traffic being added. The junction is known to have existing capacity issues, with congestion experienced during peak hours and long queues recorded. Technical Services has previously tried to undertake local modelling of the junction but have found it difficult to replicate base conditions in an ARCADY model.

As a result, Technical Services commissioned the development of an AIMSUN micro-simulation model to assess the traffic impacts of potential residential development in the local area. A micro-simulation model of the area was considered to be the appropriate tool to assess the highway impacts on this part of the network.

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Figure 1 is a screenshot taken from the model showing baseline conditions on the A177 Durham Road. This arm of the junction is particularly busy during peak hours from a combination of the roundabout entry capacity but also the signal timings at the upstream junction into Tesco. It is therefore crucial that the operations of the roundabout and the signalised junction are assessed together, rather than just the roundabout on its own.

Figure 1: AM Peak Queue Length on A177 Durham Road from AIMSUN Model



The base conditions in the AIMSUN model have been validated against queue length surveys undertaken in March 2013. In addition to the long queues recorded on the A177 Durham Road southbound approach, a queue length of 18 vehicles approaching the roundabout from Junction Road was recorded during the morning peak. The queue lengths on the A177 Durham Road southbound are less during the evening peak but on the A177 northbound approach a queue length of 18 vehicles was recorded at 16:50, with an average queue of 12 vehicles across the evening peak hour.

The outputs from the AIMSUN model suggest the Horse and Jockey roundabout is experiencing congested traffic conditions and any additional traffic travelling through the junction would need to be mitigated. The development forecasts that 69 vehicles would exit the site and turn left towards the Horse and Jockey roundabout during the morning peak hour.

Based on the results in the TA the application is not proposing any highway mitigation as the capacity assessments in the TA indicate that the surrounding highway network can accommodate the proposed development traffic. However, the results from the Council's validated transport model confirm that some parts of the network within the scope of the TA are already operating with capacity issues and any development traffic would have a material adverse impact that would need to be mitigated. The greatest impact of this development would

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be at the Horse and Jockey roundabout which is already experiencing congestion in the base year and any additional traffic would need to be mitigated. A junction improvement scheme has been developed by SBC and tested in the AIMSUN model. The scheme adds signal operations at the junction and is shown to provide sufficient capacity for this development. The scheme retains the 'U Turn' movements associated with traffic heading west from Tesco's. The estimated cost of the improvement works are approximately £900,000, excluding any costs of land acquisition or service diversions. As the junction already shows congested traffic conditions during the peak periods, the SBC modelling work has demonstrated that any additional traffic would require mitigation.

If this development is granted approval, the development must contribute towards the junction improvements. Without mitigation at the Horse and Jockey roundabout there would be a highway objection to the application as there is insufficient capacity on this part of the local highway network to accommodate the development traffic. A contribution of £875,000 towards the highway works has been agreed with the applicant and this should be secured through a Section 106 Agreement.

Site access

The proposed site access has been modelled using LinSig 3.2 and the results show that the proposed signalised access would operate within capacity in future years. The package used by the applicant to assess the junction operation, LINSIG, uses cyclic flow profiles for traffic demand, and for every cycle the program assumes an identical pattern of traffic (*Source: LINSIG3 User Guide, Section 3.1.1.2*). Therefore, although the forecast 2 PCU (passenger car units) right-turn storage in front of the stop line on Harrowgate Lane westbound is considered adequate in the TA to avoid blocking the straight-ahead movement, this is with respect to a flat arrival demand on the right-turn movement. SBC also note that an all-red pedestrian stage has been included at the junction that is called every other cycle. With a 90 second cycle time, this assumes the pedestrian phase is called every three minutes. If the pedestrian phase was called every cycle, then it could have a large effect on operation. The randomness of daily traffic also has the potential to form a right-turn queue greater than 2 PCU any time during the modelled peak hours. Additionally, it is considered that the right turn storage in front of the stop-line for the side roads 'Einstein Way' and 'Site Access' has been over-estimated in the LINSIG model.

Having reviewed the junction operation it is considered that a right-turn lane, similar to the one on the Harrowgate Lane eastbound approach at this junction, would be required if this development was permitted to prevent right turning vehicles blocking the ahead movement.

Harrowgate Lane / Darlington Bank Lane roundabout

This junction has been modelled in the TA using ARCADY 7 and the results during the 2023 AM peak (with development) scenario are as follows:

- Harrowgate Lane – 0.64 RFC / 2 PCUs
- Darlington Back Lane (east) – 0.56 RFC / 1 PCUs
- Darlington Back Lane (west) – 0.70 RFC / 2 PCUs

The results suggest that this junction would operate within capacity with the addition of development traffic. The West Stockton transport model does however indicate that additional traffic in this area would require highway improvements to this junction, Yarm Back Lane junction and the Elton Interchange.

The transport modelling is being undertaken as there are anticipated to be other development sites, in addition to this application, coming forward in the West Stockton area. The Council are therefore developing a masterplan for the West Stockton area and assessing what infrastructure would be required to support the masterplan. Given the number of stakeholders involved ATLAS (Advisory Team for Large Applications - Homes and Communities Agency) has been assisting in

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the preparation of the masterplan. ATLAS encourage cooperation between the Local Authority, the applicant and adjacent land owners to create a sustainable community with good design and a sense of place.

As this application has come forward before the masterplan work is complete, an assessment needs to be made regarding whether this development would be acceptable before the proposed highway improvements identified as part of the masterplan work at Yarm Back Lane and the Elton Interchange have committed funding. The traffic forecasts show that this development would create an additional 37 trips travelling through the Darlington Back Lane roundabout and the Yarm Back Lane junction in the morning peak. Given the relatively low number of trips it is considered that the impact of this development on the Yarm Back Lane and Elton Interchange junctions, without mitigation, would not be severe and would not be sufficient to warrant a highway objection.

Highway Safety

The TA considers highway safety and concludes that there are no inherent highway safety concerns. This is acceptable.

Sustainable Transport

The proposed layout incorporates pedestrian / cyclist connections to the surrounding footway and the site is sustainably located, being within walking distance of a number of facilities.

The masterplan drawing P-01-002 indicates a cycleway connection onto Durham Road at the northeast corner of the development providing a connection to the Public Right of Way (footpath no.47) to the north. This connection is not advised as there would be insufficient width on the highway to provide a footway/cycleway along Durham Road at this location. An access/egress point to the development at this location would also encourage residents to cross Durham Road at an unmarked location to access Tesco. A more suitable access/egress point on the eastern boundary of the site would be in the southeast corner to connect to the controlled crossing point across Durham Road. As part of the junction improvement works at the Horse and Jockey roundabout a cycleway connection would be provided to connect with the existing cycleway network at Renvyle Avenue and provide a link from the development to routes that provided connections to Norton and Billingham to the east.

A connection to the west of the site to connect to the PRow and National Cycleway Network (Route 1) is required. The initial Technical Services response suggests a link to the north of the development should be provided by working with adjacent landowners as required to provide the link. It has however been agreed that an alternative connection can be achieved by widening the existing footway to 3m wide on Harrowgate Lane between the site access and Letch Lane. A contribution towards this footway widening (£25,000) should be secured as part of the Section 106 Agreement.

To the south, the Section 278 works to alter the existing junction of Harrowgate Lane and Einstein Way to incorporate a fourth arm into the site should accommodate a toucan crossing of Harrowgate Lane so cyclists can cross and access existing routes to the south. Within the interim Travel Plan it highlights that a pedestrian/cycle connection is to be provided at the south western corner of the site onto Harrowgate Lane. This would need to continue along Harrowgate Lane to link with the National Cycle Network 1 using the footway which is to be widened to provide a footway / cycleway.

It is essential that this site and others put forward for the West Stockton area are connected via a viable public transport route and all developments are encouraged to work with the Council in bringing forward a wider strategy for public transport.

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There are bus services that pass the site on both Harrowgate Lane and the A177 Durham Road and the use of the local bus services should be promoted as part of the Travel Plan. The existing bus service operating on Harrowgate Lane (Leven Valley 84 service) is a subsidised bus service. As a public transport strategy has not been developed, as a minimum this site should contribute to maintaining local bus services from the outset of the development. At an estimated cost of £20,000 per year, the development should therefore provide a £60,000 to sustain an hourly daytime bus service for a period of three years or until a wider public transport strategy has been agreed with the Local Highway Authority.

An Interim Travel Plan has been provided and the production of a full Travel Plan, to the satisfaction of the Highway Authority, should be secured by condition and agreed prior to commencement of the development.

A Travel Plan Coordinator should be appointed and the full Travel Plan should include details of the Travel Plan Coordinators roles and responsibilities and timescales. An important action for the coordinator would be to establish an exit strategy for the Travel Plan by enabling the residents to take the Travel Plan forward. The full Travel Plan must include:

- Contact details for the Travel Plan Coordinator (TPC);
- Timescales for the TPC to be in place (minimum of 5 years). For a residential development this post should be in place as part of the marketing stage of the development to promote the aims and objectives of the Travel Plan to prospective new occupants;
- Modal split targets and measures to achieve these targets, which must be SMART: Specific, Measurable, Achievable, Realistic and Timebound;
- Details of when the Travel Plan is to be monitored and reviewed including timescales for when travel surveys are to be carried out. The site survey should be carried out after an appropriate number of properties have been occupied to ensure an adequate sample size. The suggested trigger in the interim Travel Plan of after the occupation of the 40% of the site is considered too late – a more appropriate trigger point would be following the occupation of the 80th dwelling; and
- Details of an exit strategy of how the Travel Plan will be continued once the TPC has left the site (e.g. a community travel plan forum/group established).

The production of a welcome pack for new occupants is a positive measure to provide information about sustainable modes of travel. This should include incentives and the Heads of Terms of the Section 106 Agreement should request £100 per dwelling be made available as a Travel Plan incentive payment. This should include the provision of discounted bus passes to encourage residents to use the subsidised bus service and cycle vouchers for inclusion in the welcome packs. The Travel Plan Coordinator should also devise a list of priorities for the remaining funding should all dwellings not take up this incentive.

It is also recommended that the developer explore the opportunity to work with a car club company to establish the provision of a car club at the development. The presence of a car club at a residential development is something that the Local Highway Authority is encouraging as it could reduce the reliance on car ownership, particularly second car ownership. The developer should explore the opportunity to subsidise the membership of the car club as part of the Travel Plan incentives in the Travel Plan welcome packs.

Summary

In summary, the site is sustainably located but there are known capacity issues on the local highway network in the vicinity of the site, particularly at the Horse and Jockey roundabout. Consequently, Technical Services have developed a transport model of the area to support the

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wider West Stockton masterplan. The transport model demonstrates that with mitigation at the Horse and Jockey roundabout this site could be accommodated on the highway network.

Contributions are also required from this development to ensure the site is linked into the wider cycleway network and to retain, as a minimum, the existing level of public transport provision until a wider public transport strategy is in place.

Subject to an agreed package of mitigation, there would be no highway objection to the development. This mitigation should be secured via Section 106 contributions, Section 278 Agreements and a Travel Plan. These requirements are summarised as follows:

Section 278 works

- The addition of a fourth arm onto the junction at Harrowgate Lane / Einstein Way to create the access into the site. The junction must provide a right-turn lane on the Harrowgate Lane westbound approach and incorporate a toucan crossing to improve facilities for cyclists crossing Harrowgate Lane.

Section 106 Contributions

- A contribution (£875,000) towards the highway improvements at the Horse and Jockey roundabout. It is suggested that this should be paid in four instalments; on occupation of the 50th dwelling (£175,000), 150th dwelling (£250,000), 250th dwelling (£325,000) and 300th dwelling (£125,000);
- £60,000 to maintain the operation of an hourly daytime bus service using the bus stops on Harrowgate Lane for a period of three years from occupation of the first dwelling;
- £25,000 for off-site cycleway infrastructure (to provide a link between a cycleway within the site and Letch Lane via the provision of a cycleway on the north side of Harrowgate Lane). Payment required on occupation of the first dwelling; and
- £100 per dwelling (total of £35,000) for Travel Plan incentives. This funding could be used towards the provision of bus travel discounts, cycle vouchers or membership of a local car club (if a car club operates locally when development commences). Funding to be allocated on occupation of each dwelling.

Landscape & Visual Comments

Landscape Character

A general landscape appraisal of the site has been carried out, but the concept and principles of the development are outlined within the Design and Access Statement discussed in the Landscape Strategy section below.

The topography of the site currently comprises an undulating landform that rises gradually towards the western site boundary from the east. The northern and western parts of the site are gently rolling.

The area is classified as urban fringe agricultural land in the Stockton Borough Council Landscape Character Assessment as part of landscape unit SLCA0106. This Assessment classes this site as having a medium capacity for development, highlighting redevelopment of the derelict Summerville Farm that lies on the eastern edge of the site next to the A177, as a potential suitable use for the area. The site is located just outside the limits to development and forms part of the strategic gap separating the northern expansion of Stockton from the villages to the north, part of Core Strategy Policy CS10. The Secondary Wildlife corridor B West Stockton, as highlighted in the Stockton Council Green Infrastructure, runs through the site from the north east to the south west.

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The site consists of a large arable field crossed by an overhead power line with a pylon tower located in the western section of the site. There are additional power lines and several pylons just to the north of the application site boundary, associated with the large Norton substation, that extend out of the immediate area to the north and the south and these visually dominate views of the site. The north eastern edges of the site are defined by a broken hedgerow boundary, but the mid northern site boundary falls away to the south and has no definable edge appearing to cut through the arable field. Much of the southern site boundary is defined by a continuous hawthorn hedge that follows Harrogate Lane with the south east and south west corners framed by buildings, The Horse and Jockey Public House and two residential houses respectively. The eastern site boundary is enclosed by a hawthorn hedge that follows Durham Road although many gaps are present at the southern end near the Horse and Jockey Public House and the derelict Summerville Farm (which is to be demolished) is located on this boundary. The western edges of the site are framed by the residential properties on Letch Lane and the eastern edge of the Norton substation.

Public footpath ref. Stockton FP47 runs through the area just north of the application site following the railway and links Durham Road with the Castle Eden walkway to the west.

Current views of the site

Views of the site from the north are gained from the public footpath just the north of the site. The existing hedgerow, that defines the north eastern site boundary, only partly screens views of the site from this location with wide but filtered views are afforded. Longer distance views across the site to the existing trees and residential properties can be gained from the footpath. Views of the site from the south along Harrogate Lane are largely screened by the existing thick hedgerow, although glimpsed views of the site are afforded through the occasional small limited gaps in the hedge. There will however be clear views of the site from second storey windows from the properties on the Hardwick Estate that face the site. On the eastern site boundary views from Durham Lane are only partly screened by the fragmented hedge boundary that follows the road, notably at the south eastern edge, so that some larger open views of the site are provided. The hedge is notably smaller than the one on Harrogate lane allowing clearer views of the site. Views of the far south east and south west corners of the site are blocked by existing properties. Similarly existing residential properties block the views of the site from the west along Letch Lane.

Longer distance views from the west, such as from the villages of Carlton and Redmarshall, are restricted by rising landform and existing field hedges and trees and the existing properties on Letch Lane, the Hardwick Estate and the substation also restrict any views of the site from the south and the west. Longer distance views from the north are blocked by landform and existing trees and the Tesco store blocks the views from the east.

Landscape Strategy

The general aims of the landscape for the site are laid out in principle in the landscape strategy section of the Design and Access Statement and shown on the Framework Masterplan.

The development aims to retain the existing boundary hedges around the edges of the site which will help to soften views of the proposed residential development. The landscape strategy plan shows new buffer tree and shrub planting on all the site boundaries to filter views into the site, both of the new development and of the existing pylons and electricity substation. The northern buffer would screen views of the lower parts of the substation complex and railway line in time and would help to act as a defined edge to the development. However views of the pylon towers will be only filtered by the planting as it matures and it is envisaged that the planting would take 5 years before any screening or filtering benefits would be achieved. A width of 15-20 metres is proposed for this northern buffer planting and this is considered an acceptable width that in time would screen and filter views of the substation.

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A basic shadow analysis study has been carried out for the site showing the effects of the buffer planting on the site and adjacent areas. This study does not appear to show the shadows cast by the trees planted as part of the southern buffer zone where shadowing is likely to be an issue. The buffers must be carefully designed at the detailed stage to minimise shadowing. This requirement would need to be conditioned.

Pedestrian links to the wider area should be provided linking up to the existing public footpath to the north of the site (and then on to the Castle Eden Walkway) and connecting the site to Harrowgate Lane and Durham Road. Pathways across the site should interface with the open spaces wherever possible.

The establishment of a green infrastructure network within the site will create an attractive setting for the estate. The two main green linkages running through the site are the linear park that follows the Pylon Route across the centre of the site and the 'edge corridor' that consists of a wider woodland buffer planting on the northern edges of the site that acts as a buffer to the railway and substation and continues down the other site boundaries to a lesser extent. It is understood that the design of the landscaping of the linear park will be in accordance with the latest National Grids Document a Sense of Place see link below: <http://www.nationalgrid.com/uk/senseofplace/Documents/documents.html>

The potential of using Sustainable Drainage Systems (SUDs) within the open linear park is indicated on the Framework masterplan and landscape strategy plan. This is supported in principle subject to the detail design stage allowing for the function of the SUDs, their integration into the linear park as part of the aesthetic landscape setting and health and safety concerns relating to their usage within the park. It is also recommended that the proposed main green infrastructure corridor and associated SUD's is appropriately introduced or filtered into the wider network of streets and public spaces to create green fingers or linkages in accordance with comments set out in the Built Environment section of this memo.

Four site sections have been produced to illustrate some of the different landscape character areas within the proposed development. Section 1 shows the view of a typical SUD within the proposed linear park. This is considered an acceptable section in principle subject to detail. Section 2 shows a typical landscape buffer to a main road but it is unclear which road as the plan shows Durham Road and the section Harrowgate Lane. This needs to be confirmed and it is the existing hedgerows on either road should form part of the 4 metre landscape buffer which should fall within the public realm and not in private garden ownership. A typical streetscape with highway tree planting and a swale is shown on section 3. Provided the trees are adopted by either the highway authority or a land management company then this section would be acceptable in principle. Section 4 shows a typical corridor buffer presumed to the northern buffer. The detailed planting must conform to Secure by Design standards for the section to be acceptable in principle.

Details of hard landscaping, including Street Furniture, Lighting and Enclosure details and any public art details would be required to be conditioned.

Soft landscaping and maintenance would need to be conditioned.

Details of existing and proposed levels would need to be demonstrated, such as relating to creating any mounds around the site to enhance the screening capacity of the proposed woodland planting and level areas for recreational areas and SUDs. This requirement would need to be conditioned.

The open space allocation utilising Stockton Borough Councils open space SPD calculator stipulates that 1.65 hectares of amenity space and 0.95 hectares of allotments are required on

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this site. It is envisaged that this can be achieved on the site in the area just south of the large SUDs pond shown at the western end of the site, although this must be demonstrated at the detailed stage to ensure the open space is useable and a good buffer is provided to separate the space from the SUDs scheme. The development also aims to provide for a play area within this area.

Notwithstanding the illustrative masterplan a condition should be added to any recommendation for approval that requires the reserved matters application to be laid out in accordance with the Open Space, Sport and Recreation Supplementary Planning Document (SPD), <http://www.stockton.gov.uk/documents/ert/planning/spatialplanning/openspacespd/OpenSpaceSPD.pdf>

This SPD provides the applicant with the methodology of how to allocate the space for open space provision. In addition further details are contained in the Stockton Borough Council's own 'Design Guidance Notes for the Installation of New Play Areas' – available on request. For example, it is noted that the equipped play area shall be in addition to the 0.6 hectares of open space for kick about. Buffer zones of 30m minimum depth would be required between the play area activity zones and the boundary of the nearest residential property. The play area should remain broadly square in shape with good access and the potential for good natural surveillance. The kick about area would be roughly square, flat and well drained.

Play areas of this type usually consist of an equipped play provision that caters for a wide age range (4 – 8, 9 -13 & 13+) and safer surfacing together with associated infrastructure such as: fencing, drainage and CCTV. Further details of play equipment are to be found in the Informative Section of this Memorandum. ROSPA would also be able to offer detailed advice.

Existing trees

There are very few existing trees on the site which appear to be found around the existing properties on Harrowgate lane and Letch Lane to the south and west (likely to be garden trees) and around the derelict Summerfield Farm. A tree survey shall be carried out in accordance with British Standard BS 5837 (2012):Trees in relation to Design, Demolition and Construction to identify all the trees worthy of retention within the scheme and those likely to be affected by the scheme (falling within 10m of the site).

All proposed works to trees that can be retained on the site including retention/ removal, and/or pruning work should be shown on a 'Tree Protection Plan' that details all tree protection measures –including a scale drawing to show protective fencing layouts and highlighting where modified design and construction methods may be required, e.g. no dig path construction and ground protection. An Arboricultural Method Statement should also be submitted detailing works to be carried out as part of the development within a trees root protection area or any works that could potentially damage a tree. The tree survey needs to be conditioned.

Built Environment

Site Layout

This development is one of a number of development sites that is anticipated to come forward in the West Stockton area. Subsequently, ATLAS (Advisory Team for Large Applications - Homes and Communities Agency) has been assisting in the preparation of the Masterplan for west Stockton. ATLAS encourages cooperation between the Local Authority, the applicant and the adjacent land owner's to create a sustainable community with good design and a sense of place.

The development pattern indicated on the Framework Masterplan (dwg P-01-002) responds well to the existing urban grain to the south of Harrowgate Lane. The site is proposing to provide good linkages to the surrounding community and local amenities with strong tree lined delineation of the primary routes though the site. It is essential that this principle is carried

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through to the site design stage to ensure that the scheme provides a sense of place as residents enter and progress through the development.

It is recommended that proposed main green infrastructure corridor and associated SUD's is appropriately introduced or filtered into the wider network of streets and public spaces to create green fingers or linkages. This will not only tackle the sites surface water run-off as close to the source as possible, it will also provide the opportunity to integrate both the green infrastructure and SUD's elements into the streetscape treatment to define main streets and local character areas. A precedent exemplar scheme in Upton, Northampton demonstrates that by integrating SUD's into the streetscape design, you can define main streets and create a distinctive townscape character which ultimately contributes to creating a sense of place.

It is noted that the red line boundary on the Framework Masterplan dwg P-01-002 doesn't correspond with the site plan dwg P-01-001 or any of the other plans that have been submitted. The Design and Access statement describes the evolution of the framework masterplan in accordance with the boundary shown in the site plan; however the final Framework Masterplan doesn't cover the small triangle of farm land that will be left over at the North-west of the site adjacent to the existing substation. Clarification is required in relation to the site boundary and the Framework plan indicating the future use of this site and its associated means of access should this area of land remain in separate ownership.

Scale and Massing

In reference to drawing P-02-101 'Scale Plan', the proposals indicate an appropriate range and level of scale across the site with the majority of the core development site being 2 to 2.5 Stories. It is noted that it is proposed to provide 2 to 3 stories along the frontage of Harrowgate Lane and it is recommended that the 3 storey element of the this frontage is concentrated to the end of any terraced properties and/or at the corners or entrance points to highlight these entrances and create a sense of arrival. This will also create a varied roofscape to the frontage, visual interest to the street, and break up the potential repetition of a continuous built form streetscape.

It is essential that a high quality treatment is provided to the streetscene along the Harrowgate frontage including, appropriate building form, fenestration and public realm. Corner and end plots should seek to have active frontages where possible to ensure that built form turns the corner reducing the need for blank elevations or gable ends.

Design Quality

It is intended to produce a design guide/code to support the proposed framework masterplan for the West Stockton Core Strategy site which is being prepared in conjunction with ATLAS (Advisory Team for Large Applications - Homes and Communities Agency). This design guide will set out the design quality standards required for the treatment of any proposed townscape including built form, streetscape, palette of materials and green infrastructure. Manual for Streets will be one of the core documents that will under pin the design guide and all street typologies proposed should be in accordance with the principles set out in Manual for Streets with regards to design quality and layout. Each street typology should have a distinctive palette of materials to ensure that site is legible, providing delineation as to which streets and spaces are primary, which are secondary and which are semi-private/private.

Proposals should be in accordance with SPD 1: Sustainable Design Guide, in particular section 4 'Design Principles'.

Proposals should be in accordance with guidance and the principles set out in Building for Life 12, which is the governments updated required standards on homes and communities

<http://www.designcouncil.org.uk/Documents/Documents/OurWork/CABE/Building%20for%20Life/Building%20for%20Life%2012.pdf>

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Environmental Policy

Environmental Policy supports the application in principle subject to details being provided of the final design make up of renewable energy supply and how this meets the 10% embedded renewables required by Core Strategy Policy 3 (CS3 – Sustainable Living and Climate Change).

Flood Risk Management

The proposed development site is situated within flood zone 1. The submitted Drainage Assessment Report states that the surface water discharge from the site is limited to 3.5l/s per hectare giving a total discharge rate of approximately 60.6l/s. The runoff for the whole of the planning permission boundary site (17.300ha) has been calculated rather than the proposed development area. The total discharge rate must be recalculated using only the area to be drained by the system water system (car parking areas and buildings).

The development must not increase the risk of surface water run-off from the site or cause any increased flood risk to neighbouring sites. Any run-off must not exceed pre-development rates. Any increase in surface water generated by the development or existing surface water / groundwater issues on the site must be alleviated by the installation of a suitable drainage system within the site. The Council supports the use of sustainable drainage systems.

The proposed development site currently suffers from flooding in the southern corner of the site. The overland flow routes (blue corridors) should be considered and mitigated as part of the detailed design of the sustainable urban drainage system for the proposed development site. We would recommend that the developer commences early discussions with the local authority and Northumbrian Water with regards to their proposed solutions of the discharge of surface water from the development site.

Full design details of the surface water drainage scheme and calculations showing how the drainage system performs in a 1 year, 30 year and 100 year storm event must be provided, and the same again over the same periods with a 30% allowance for climate change. Calculations using the WinDes Software (Micro Drainage) are preferred.

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Informative

UDLV01 LANDSCAPING – HARDWORKS

Notwithstanding the proposals detailed in the Design and Access Statement/submitted plans no hard landscaping works (excluding base course for access roads and car park) shall commence until full details of proposed hard landscaping has been submitted to and approved in writing by the Local Planning Authority. This will include all external finishing materials, finished levels, and all construction details confirming materials, colours, finishes and fixings. The scheme shall be completed to the satisfaction of the Local Planning Authority according to the approved details within a period of 12 months from the date on which the development commenced or prior to the occupation of any part of the development. Any defects in materials or workmanship appearing within a period of 12 months from completion of the total development shall be made-good by the owner as soon as practicably possible.

Reason: To enable the LPA to control details of the proposed development, to ensure a high quality hard landscaping scheme is provided in the interests of visual amenity which contributes positively to local character of the area.

UDLV03 ENCLOSURE

Notwithstanding the proposals detailed in the Design and Access Statement/submitted plans, prior to the commencement of the erection of any permanent fencing, details of the enclosure shall be submitted to and approved in writing by the Local Planning Authority. Such means of enclosure shall be erected before the development hereby approved is occupied.

Reason: In the interests of the visual amenities of the locality.

UDLV06 LANDSCAPING – SOFTWORKS

Notwithstanding the proposals detailed in the Design and Access Statement/submitted plans, prior to the commencement of soft landscaping works full details of Soft Landscaping shall be submitted to and approved in writing by the Local Planning Authority. This will be a detailed planting plan and specification of works indicating soil depths, plant species, numbers, densities, locations inter relationship of plants, stock size and type, grass, and planting methods including construction techniques for pits in hard surfacing and root barriers. All works shall be in accordance with the approved plans. All existing or proposed utility services that may influence proposed tree planting shall be indicated on the planting plan. The scheme shall be completed unless otherwise agreed with the LPA in writing in the first planting season following: commencement of the development or agreed phases or prior to the occupation of any part of the development and the development shall not be brought into use until the scheme has been completed to the satisfaction of the Local Planning Authority.

Reason: To ensure a high quality planting scheme is provided in the interests of visual amenity which contributes positively to local character and enhances bio diversity.

UDLV011 MAINTENANCE- SOFTWORKS

Notwithstanding the proposals detailed in the Design and Access Statement/submitted plans, a soft landscape management plan including long term design objectives, management responsibilities and maintenance schedules for all landscape areas/retained

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vegetation, shall be submitted to and approved in writing by the Local Planning Authority prior to the occupation of the development or approved phases.

Any vegetation within a period of 5 years from the date of from the date of completion of the total works that is dying, damaged, diseased or in the opinion of the LPA is failing to thrive shall be replaced by the same species of a size at least equal to that of the adjacent successful planting in the next planting season unless the Local Planning Authority gives written consent to any variation.

Landscape maintenance shall be detailed for the initial 5 year establishment from date of completion of the total scheme regardless of any phased development period followed by a long-term management plan for a period of 20 years. The landscape management plan shall be carried out as approved

Reason: To ensure satisfactory landscaping to improve the appearance of the site in the interests of visual amenity.

LINF03 CONSTRUCTION DELIVERIES

It should be ensured that, during construction, deliveries to the site do not obstruct the highway. If deliveries are to be made which may cause an obstruction to the highway then early discussion should be had with the Highway Authority on the timing of these deliveries and measures that may be required so to mitigate the effect of the obstruction to the general public.

NMIN02 CONSTRUCTION OF HIGHWAYS FOR NEW DEVELOPMENTS*

The works may or may not require alterations or extensions to the existing adopted highway.

Where a development involves works requiring either improvement or alteration to the existing highway, the Developer may be required to enter into an agreement with the Council as Highway Authority under Section 278 of the Highways Act 1980. This requirement often occurs as a condition on the grant of planning permission.

As part of the new Development you may wish the Council to adopt highways (including carriageways, footways, verges, cycleways, highway drainage and street lighting) which would then be maintainable at public expense. In order to achieve this you would be required to enter into an agreement with the Council as Highway Authority under Section 38 of the Highways Act 1980.

The Council would only consider adoption provided any highways are designed and constructed in accordance with the 'Design Guide and Specification for Residential and Industrial Estates' which can be downloaded from the Stockton Council website at the following link:- www.stockton.gov.uk/urbandesign/designguide/

It is important for Developers to appreciate that obtaining a planning consent does not imply that a layout is suitable for adoption or give permission to work on an adopted Highway.

It is recommended that the Council is consulted about any of the above at an early stage as the Council are unlikely to adopt the highway without the Developer entering into a Bond with the Council for inspecting the construction and short term maintenance of the proposed highway at regular intervals.

If you require any further information please do not hesitate to contact:

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Highway Asset Manager
 Highway Network Management
 Stockton-on-Tees Borough Council
 Technical Services
 PO Box 229
 Kingsway House
 Billingham, TS23 2YL

Telephone: (01642) 526739
 Fax Number: (01642) 361690
 Email: technicalservices@stockton.gov.uk

NMIN03 Damage to Highway Verge

The developer is reminded that it is an offence to cause damage to the Highway or to deposit any item on the Highway that causes a nuisance or danger. Any damage to the Highway caused by the development must be repaired at the developer's expense. The Highway Authority will seek, wherever possible, to recover any expenses incurred repairing the Highway surfaces and prosecute persistent offenders. (Highways Act 1980 sections 131, 148, 149).

The developer should contact the Care For Your Area Highway technicians prior to any works on site to arrange an inspection of the Highway surfaces fronting the development.

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