

# Core Strategy Review - Inspectors' Action Points

Matter 7a – New Garden Settlement –  
Infrastructure Costs

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# **Matter 7a – New Garden Settlement – Infrastructure Costs**

## **1. Introduction**

- 1.1. During the hearing session for Matter 7a, Strategy for the North Downs Area and the New Garden Settlement, the council was requested to provide a breakdown of the infrastructure items which make up the figure of £217.5m referenced in the Gerald Eve report (Executive Summary, Summary of Appraisal Inputs, page 8).
- 1.2. A breakdown of the sub-totals that comprise this figure is given in Appendix 1 to this note.

**Appendix 1: Summary of Appraisal Inputs – Base  
Infrastructure Costs**

## **Core Strategy Review Examination – Inspectors’ Action Points**

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Description	G&T Comments
<b>DIRECT WORKS</b>	
<b>GENERALLY</b>	All costs are set at Q1 2019. Costs will be updated for the viability model when that is started.
	This is a stage 1 - 2 cost model to prepare an order of cost only.
	No market testing has been carried out at this stage as the design is not sufficiently developed.
	Many of the costs are lump sum allowances. Many of these allowances are built up using assumed quantities based on similar projects of a similar build density.
<b>ENABLING WORKS</b>	
Tree / hedge removal and protection	Assumed quantities based on similar projects of a similar build density.
Site Wide Earthworks	Assumed quantities based on similar projects of a similar build density.
Haul Roads for strategic infrastructure.	Assumed quantities based on similar projects of a similar build density.
UXO.	There is no UXO survey detail available therefore a notional allowance has been calculated at this stage.
Contamination / Remediation	There isn't a soil report available to assess the risk of contaminated soil. Arcadis have made a notional allowance based on similar projects.
Silica Sand extraction	There is a risk of Silica sand being present on the site. It is assumed that removing this from site will be cost neutral as the value of the sand discovered will pay for the removal.
<b>Sub-Total</b>	<b>2,798,035.4</b>
<b>SECTION 278 HIGHWAYS</b>	
<b>GENERALLY</b>	Cost of primary and secondary roads included in these infrastructure costs. It has been assumed that cost of tertiary roads will be included in the house building cost plan.
	Most quantities are benchmark assumptions.
M20 Junction 11	Assumptions on quantities are made based on similar road junction costs and quantities taken off the master plan drawings.
Dualling of A20 south of M20 J11	See basis later in this report under S278 Highways for the detail assumptions.
Signalisation of southern arm of roundabout at north end of new dualling	Assumptions on Quantities made based on similar road junction costs and assumed similar works to M20 Junction 11.

Description	G&T Comments
<b>DIRECT WORKS</b>	
Newingreen Junction	Costs are based on design information described in the Basis section of this report. Assumptions on quantities made based on similar road junction costs and quantities taken off drawing. This assumes £1m telecoms diversion and nil contribution from other developments.
Newingreen Link Road	Costs are based on design information and assumptions described in the Basis section of this report.
Upgrading works to A20 (at either end of new site location)	Costs are based on design information and assumptions described in the Basis section of this report.
Highway Works to Barrow Hill	Costs assume resurfacing and lining and works to existing signalling at bridge.
Upgrading Otterpool Lane	Allowance only for enhancement at southern end. Full scope of works unknown at this stage.
Upgrade works to Stone Street at approach to station	Allowance only for enhancement at southern end. Full scope of works unknown at this stage.
New Primary Access Junctions (10a, 10b & 10c)	Costs assume new crossroads and a signalised pedestrian crossing. Cost based on similar schemes.
New Primary Access Junctions (11a & 1b)	Costs assume new T-junction a signalised pedestrian crossing. Cost based on similar schemes.
<b>Sub-Total</b>	<b>19,892,194</b>
<b>ON-SITE HIGHWAYS</b>	
Strategic Street (A20)	Streets have been measured from the masterplan drawings and road costs have been built up to suitable specifications.
Strategic Street (B2067)	As above
Primary Roads	As above
Secondary Roads	As above
Bridges over watercourses	11 nr bridges allowed for and costs have been benchmarked against similar schemes.
Bridges over flood zones	Included in the above costs.
Enhancements for high street sections	Assumed enhancement of £520/m to high street areas. Design information not available at this time.
<b>Sub-Total</b>	<b>71,486,479</b>
<b>ON-SITE PEDESTRIAN / CYCLE ROUTES (AWAY FROM SPINE ROADS)</b>	
Temporary diversions of Pedestrian / cycle routes within the site	Allowance only based on previous schemes. Scope currently unknown.

Description	G&T Comments
<b>DIRECT WORKS</b>	
Non Spine Road Cycle ways	Allowance only based on previous schemes. Design currently unknown however significant cycleways assumed.
Upgrade works to existing network	Allowance only based on previous schemes. Scope currently unknown.
Pedestrian Bridges over swales	Allowance only based on previous schemes. Scope currently unknown.
<b>Sub-Total</b>	<b>4,964,626</b>
<b>STRATEGIC SURFACE WATER DRAINAGE</b>	
GENERALLY	Measured the lengths of streets to arrive at quantities for the surface water pipes. Rates used are benchmark derived.
SW Drainage to Strategic Streets	As above
SW Drainage Strategic	As above
SW Drainage Strategic Secondary	As above
SW Drainage in Public Open Space	Allowance only based on previous schemes. Scope unknown.
Attenuation Basins	Based on current updated attenuation design information.
Existing Ditches, Pipes and Culverts	Assumed alterations to existing and realigning to new layout. Allowance only as no design available.
<b>Sub-Total</b>	<b>17,494,017</b>
<b>FOUL WATER DRAINAGE</b>	
On-Site Foul Water Drainage – Strategic Streets and Primary Roads	No allowance for onsite treatment plant.
On-Site Foul Water Drainage – Secondary Roads	See basis of the information detail.
Pumping station (PS1) and associate rising main	See basis of the information detail.
Pumping station (PS2) and associated rising main	See basis of the information detail.
Pumping station (PS2A) and associated rising main	See basis of the information detail.
Pumping station (PS3) and associated rising main	Excluded

Description	G&T Comments
<b>DIRECT WORKS</b>	
Pumping station (PS4) and associated rising main	Excluded
FW connection to Grove Bridge	Arcadis have included a temporary connection until Sellindge below is up and running. They have assumed this will be grouted up when switched over.
Off Site connection to Sellindge	Based on Southern Water quote.
Albion Water grey water recycling	This is an allowance and assumes pipes to and from Sellindge refinery with on-site grey water facility. This assumes pipework route runs under M20 and HS1.
Connection from on-site WwTW to discharge point south of NG Sub Station	
Diversion of existing rising main	Allowance only as full scope not available.
Additional allowance for temporary drainage measures due to phasing (i.e. pump upgrade / twin pipes)	Allowance only. Arcadis have assumed that due to the phased delivery of the scheme they will be required to install smaller pumped drainage pipework before upgrading to a larger pipe when capacity increases.
<b>Sub-Total</b>	<b>24,357,690</b>
<b>UTILITIES</b>	
GENERALLY	Measured the lengths of streets to arrive at quantities
TELECOMS – BWIC to onsite highways	
TELECOMS – Diversions	Allowance only
GAS – BWIC to on site highways	
GAS – Diversions	
GAS – Reinforcement based on electric scheme – first 1,000 units only	
WATER – BWIC & Main to on site highways	
WATER – Diversions	
WATER – Reinforcement	Affinity water charging connection arrangements 2018 to 2019 notes a 10% developer contribution is required towards costs. This has been included by Arcadis.

Description	G&T Comments
<b>DIRECT WORKS</b>	
ELECTRIC – BWIC to on site highways	Based on GTC quote
ELECTRIC – On Site mains	Based on GTC quote and includes £1.2m fibre rebate
ELECTRIC - Diversions	Allowance only and assumes for localised undergrounding alongside route of existing A20
ELECTRICITY - Reinforcement	This is based on UKPN quote and assumes a 60MVA demand connection at 33KV
Grey Water recycling network (primary infrastructure routes only)	
<b>Sub-Total</b>	<b>31,980,482</b>
<b>ECOLOGICAL MITIGATION WORKS</b>	
On-site mitigation	Allowance only
<b>Sub-Total</b>	<b>4,665,000</b>
<b>GREEN INFRASTRUCTURE INCLUDING PLAY / SPORTS PROVISION</b>	Sports pitches costed as per sports England cost recommendations as published. Play facilities as benchmark rates based on areas provided by Architect.
POS Phases 1A-8	
Sports Pitches	
Play Provision (NEAPs,	
Maintenance of advanced planting	Allowance only
<b>Sub-Total</b>	<b>39,833,303</b>
<b>GEOTECHNICS</b>	Excluded
Sub-Total	
<b>NOT USED</b>	
Sub-Total	
<b>SUB-TOTAL DIRECT WORKS</b>	<b>217,471,827</b>