



GERALDEVE

EXAMINATION IN PUBLIC OF

**East Herts District Plan**

**Hearing Statement in respect of Hearing Session for Chapter 7:  
Hertford - Question 8**

On behalf of Christ's Hospital Foundation

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## 1 Introduction

- 1.1 This Statement has been prepared by Gerald Eve LLP (**Gerald Eve**) on behalf of Christ's Hospital Foundation (**CHF**). It provides representations in relation to the Hearing Session in respect of Chapter 7 – Question 8: Hertford. CHF own site HERT 5.
- 1.2 This Statement should be read in conjunction with earlier Representations submitted in respect of the draft Plan, as well as the agreed Statement of Common Ground (March 2017) (**SOCG**).
- 1.3 As set out within the Inspector's Hearings Guidance Note, this Statement is limited only to matters considered necessary to assist consideration of the Sessions and specific questions raised.

## 2 Chapter 7: Hertford

### 2.1 Question 8) asks:

*“Are the allocated sites appropriate and deliverable, having regard to the provision of the necessary infrastructure and facilities, and taking account of environmental constraints?”*

Appropriate

2.2 The site (HERT 5) provides an opportunity to deliver a range of housing types and tenures in a location that benefits from excellent access to educational facilities, historic assets, and other town centre amenities. Development of the area will ensure the continued protection of the Green Finger at the western part of the site, including the existing treed area at the higher level, the tree belt at the lower level, and the sloped area of land between them leading towards Hagsdell Stream, while allowing public access to this valuable resource. (as identified at 7.2.12 - East Herts Council Pre Submission District Plan).

Deliverable

2.3 The site is under the control of a single landowner, **CHF**, and as set out within the housing trajectory within the SOGC, can provide homes within the next five years.

2.4 The SOCG sets out the opportunities for the provision of the necessary infrastructure and facilities within and around the site taking account of the investigations undertaken to date including: preliminary flood risk, land contamination and archaeology enquiries as well as ecological and tree and access surveys, and the site’s position in the context of the Green Finger. None of the infrastructure requirements of HERT5 are considered to make development of the site inappropriate or undeliverable, at the present time.

2.5 As set out within the SOCG and the additional information provided below there are opportunities for new utilities to serve the site, options with regard to site access and the opportunity to provide an upgraded pedestrian and cycle way (along Mangrove Road to Simon Balle School) if this is deemed appropriate by a Transport Assessment. The western part of the site can provide a large area of public open space within the site, including the provision of a play area and opportunities for outdoor health and fitness activities, as well as space for wildlife.

2.6 Section 5 and 6 of the SOCG refers to utilities advice that was being prepared at that time. Technical and Development (Southern) Services (TDSS) were instructed to determine the availability and sufficiency of existing utilities to serve a proposed residential development of 80 homes at the Site and to identify any utility apparatus on, or adjacent to the site, that may be affected by the development. The work has been completed and attached at Appendix 1.

2.7 The enquiries of the utility network providers, and their responses, have, to date, not revealed any significant utilities impediment to, the development of this site to provide 80 houses, as proposed. The key conclusions are:

#### 2.8 Availability

All mains utilities including the public foul sewer, water, gas, electric, telecoms (including fibre) and Virgin Media are available in Mangrove Road.

#### 2.9 Capacity

Drainage - Thames Water has confirmed that the foul drainage from the additional 80 units can be accommodated in the local sewer network and that surface water will need to discharge to ground or to any adjacent ditch.

Water – Affinity Water has a 100mm diameter ductile iron water main located on the opposite side of Mangrove Road to the site itself. Its analysis of the effect of the proposed development on this network has confirmed that it has the capacity to meet the additional demand without the need for off-site reinforcement.

Gas - National Grid have confirmed that there is sufficient capacity.

Electric - UKPN has electricity infrastructure has the required capacity to serve the development based upon a point of connection (PoC) onto its LV network along the Mangrove Road frontage.

Telecom - Given the location of the existing networks in Mangrove Road, it is not anticipated that there will be any difficulty supplying connections to the site.

Virgin Media - Virgin Media have shown an underground duct network within the footpath on site side of road

#### 2.10 On-Site Diversions

No on-site diversions will be required.

#### 2.11 Off-Site Diversions

Water - Affinity Water have reviewed their asset plans and have confirmed that their mains will not need to be diverted but will need to be abandoned if the development requires the laying of a new main to feed the development

Virgin Media – has a ducted network along the southern footpath of Wingate Road and

Gas - National Grid has identified that it has apparatus in the area of the proposed new access road in Mangrove Road and provided a diversion cost.

Electric - UKPN have indicated that the HV, LV and pilot cable crossing the proposed site access may require lowering and provided a diversion cost.

Telecoms - Openreach BT require a figure to carry out a Survey of their network in order to determine if diversions are required. From a review of their plans it is anticipated that diversions in the verge/footway are likely to be affected by the proposed new access way

## 2.12 Conclusion

The responses from the utility providers set out above, summarised within Appendix 1, confirm that the proposal to provide up to 80 units is acceptable, subject to the indicative works and costs set out within the responses. None of these are considered to be inappropriate or undeliverable, taking account of environmental constraints.

2.13 In our opinion it is appropriate to allocate Land South of Hertford (HERT 5) for more than 'approximately 50 homes'. Work undertaken since the preparation of the SOCG has demonstrated that the OAHN for East Herts has increased for the plan period from 16,390 to 18,396, this has been reflected in the council's updated Housing Topic Paper (August 2017). In the context of the increased housing need it is appropriate to revisit the site's capacity to ensure the best use is made of scarce land. This site provides the opportunity to deliver more homes than 'approximately 50' on scarce land.

2.14 The quantum of development, as well as the type and mix of homes, should be determined by the Site's developer in response to the local market and planning policy. We have provided evidence and an indicative layout drawing demonstrating that the Site could provide approximately 65 homes in-line with the unit mix set out at Appendix 8 of the SOCG. When compared to the unit mix set out in HOU1 (Type and Mix of Housing) and the recent SHMA figures as detailed in table 14.1 of the emerging local plan, the indicative 65 unit scheme over provides large units such as detached 3-bedroom and 4-bedroom homes and under provides smaller units such as 1-bedroom and 2-bedroom flats. However, these larger detached units could be redesigned to provide two smaller flats thus increasing the unit numbers. On this basis the illustrative 65 unit layout could be redesigned to provide a scheme of approximately 72 units that is in accordance with the unit mix set out in Table 14.1. Appendix 9 of the SOCG provides a summary of how this number of homes could be achieved.

2.15 The allocation should establish reasonable principles. Under draft Policy HERT 5, East Herts District Council has proposed the allocation of the Site for 50 homes. As set out in our submission to the Council dated 27 April 2016, which responded to the Developer Letter dated 4 March 2016, and our representations dated 15 December 2016, which responded to the Pre-Submission District Consultation (Regulation 19), we consider that the Site has capacity to accommodate a greater number of new homes. We have demonstrated that the Site could accommodate 65 new homes. Furthermore we have demonstrated that if a developer's scheme was designed strictly in accordance with the unit mix set out within Table 14.1 of the emerging local plan a reasonable estimate of the

capacity is 72 homes. Therefore whilst we agree the Site can deliver 'approximately 50 units', (albeit as a minimum), agreement of how many units the Site should be allocated for remains outstanding between CHF and the Council. CHF considers that, to make efficient use of land, Policy HERT 5 should provide greater flexibility which would allow a developer to deliver a greater number of homes that responds to local market conditions at the time.

- 2.16 Accordingly, as the site could provide at least 65 net additional homes, the policy text (HERT 5) should be revised to either express the 50 dwellings in the policy text as a minimum, or state approximately 65 homes, as per our previous submissions.

## **Appendix 1 – Initial Site Utilities Appraisal**

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

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**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

## 1. Background

### 1.1 The Brief

Christ Hospital Foundation (CHF) has engaged Technical and Development Services (Southern) Ltd. (TDSS) to determine the availability and sufficiency of existing utilities to serve a proposed residential development of 80 homes on the above site, and to identify any utility apparatus on, or adjacent to the site, that may be affected by the development. Budget Costs for provision of the mains and connections required to service the development were also sought.

### 1.2 The Site

The site has an area of 4.70 hectares overall, it is located in the suburban area of Hertford to the south of the Town Centre, adjacent to Mangrove Road. The 'Greenfield' site is currently occupied by woodland and grass scrubland/field areas.

The site is bounded to the north by a gated residential development known as Ashbourne Gardens, to the east by Hertford Cricket Club and beyond that the wider Balls Park, to the south by Mangrove Drive and a more established residential area, whilst to the west there is a small strip of open fields before reaching the residential area of Queens Road.

The site is bordered by a footpath to the east of Mangrove Road, whilst the remainder of the boundaries contain tree belts of various widths with the area that is to remain public open space being fairly densely wooded.

The site is indicated as a sportsground on Ordnance Survey Maps.

### 1.3 Proposed Re-Development

The Accommodation Schedule provided indicates a development of detached, attached and terraced homes in the following mix;

45 x 2 bed houses  
30 x 3 bed houses  
5 x 4 bed houses

**Total 80 Units**

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

#### 1.4 Planning History

From information provided by the client, it is understood that the site currently has no planning consent and is being promoted through the emerging East Herts Local Plan to secure a residential allocation. This allocation can be between 50 and 80 units along with a substantial area of public open space to the west.

#### 1.5 Information Provided

The information provided to TDSS, for the purpose of the initial enquiries to the utility network providers, comprised the following;

- Pro-Map Ordnance Survey Location Plan
- Land Registry Title Plan No. HD4471076
- Illustrative Masterplan Drg. No. 7245-L-01 Rev. B dated 22<sup>nd</sup> April 2016.

#### 1.6 Caution

In preparing this report TDSS has taken all reasonable steps to present the client with an accurate evaluation of the data available. However TDSS cannot accept responsibility for the accuracy of information provided by third parties (the utility network providers and/or their agents) and accepts no liability for any direct or consequential loss that may be incurred if information provided by those parties proves to be incorrect or inaccurate.

*A copy of the Location Plan, Land Registry Title Plan and Illustrative Masterplan are reproduced at Appendix 1.*

#### **Statutory Undertaker Initial Enquiries**

Initial enquiries of the statutory undertakers, as to the location and sufficiency of the utility supplies to serve the proposed development, were made by TDSS in March 2017. Budget costs for providing the site mains and house connections were also requested.

Plans of the location of utility apparatus that might constrain the development, or be affected by it, were also sought.

The responses and their implications in the redevelopment of this site, to provide up to 80 homes; are set out as follows;

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

## 2. Drainage Infrastructure

### 2.1 Sewerage Provider

The Sewerage Undertaker for the area is Thames Water Utilities Ltd. (TWUL).

### 2.2 Existing Apparatus

TWUL's sewer records indicate a 150mm or (225mm) diameter public foul sewer running along the centre of Mangrove Road flowing from south to north with a manhole located just to the north of the proposed site entrance. From the sewer records, this sewer is shown to be approximately 4.3m deep.

### 2.3 Available Capacity and Point of Connection

#### (i) Foul Drainage

In response to a Pre-Development Enquiry from Thames Water, it has confirmed that the existing foul sewer network does have sufficient capacity to accommodate the proposed foul discharges from the proposed development.

#### (ii) Surface Water Drainage

As there are no public surface water sewers immediately adjacent to the site it is anticipated that any surface water discharge will need to be channelled to the west into the adjacent watercourse or alternatively discharged to ground.

*Thames Water's Sewer Map and Pre-Development Enquiry Response are reproduced at Appendix 2.*

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

### 3. Water Infrastructure

#### 3.1 Water Supply Company

The potable water supplier for the area is Affinity Water (AW).

#### 3.2 Existing Apparatus

AW's main records indicate;

- a 100mm diameter ductile iron water main located on the opposite side of Mangrove Road to the site itself.
- a 180mm HPPE distribution main which joins the above mentioned main towards the south east corner of the site feeding in from the east across the cricket ground area.

#### 3.3 Available Capacity and Point of Connection

In response to a Pre-Development enquiry to Affinity Water, a letter dated 5<sup>th</sup> April was received. As a detailed site layout is not yet available Affinity Water has provided indicative budget costs for the provision of both off and on-site mains and connections, shown as below in 3.4;

#### 3.4 Budget Costs

ITEM	EXCAVATION	APPROX.UNIT COST	APPROX. SCOPE	BUDGET PRICE	ESTIMATED CONTRIBUTION
On-Site (development) water mains	Not included	£150/m	TBD	<b>£18,450</b>	<b>20%</b>
On-Site (development) service connections	included	£460 ea	80	<b>£36,800</b>	<b>100%</b>
On-Site large diameter (>63mm) services	Not included	£3450 ea	N/A		<b>100%</b>
Off-Site (in public Highway) (>63mm)	<b>Included</b>	£4600	N/A		<b>100%</b>

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

services					
Off-Site water mains laying (e.g. reinforcement)	<b>Included</b>	£310/m	N/A		<b>100%</b>
Off-Site (in public highway) Service Connections	<b>Not Included</b>	£2300 ea.	N/A		<b>100%</b>

Water Infrastructure Charges per property (payable to Affinity Water) - £354.00

Sewer Infrastructure Charges per property (payable to Thames Water) - £365.45

### 3.5 Diversions/Easements

With the location of the existing water main on the opposite side of Mangrove Road, it is not anticipated that any diversions/easements are required in order to facilitate the development.

*Affinity Water's Water Map & Budget Estimate/Capacity Enquiry Response are reproduced at Appendix 3.*

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

#### 4. Gas Infrastructure

##### 4.1 Gas Network Operator

The gas distribution network operator for the area is National Grid (NG).

##### 4.2 Existing Apparatus

NG's Network Records indicate;

- a 150mm diameter ductile iron gas main located on the opposite side of Mangrove Road to the site.
- a 4" Cast Iron main located in the footpath on the site side of Mangrove Road with interconnections to the above mentioned 150mm diameter main.
- a 4" steel main passing along the opposite side of Mangrove Drive to the site.
- a 90mm PE main appears to be laid just north of the northern site boundary adjacent to No. 10/11 Ashbourne Gardens which is indicated as being very close to the northern site boundary.

##### 4.3 Available Capacity and Point of Connection

NG has provided a 'Budget Indication' for the gas infrastructure required to serve the development, with a connection point on the 100mm diameter PE LP main located to the north east corner of the site, 3 metres from the site boundary within Mangrove Road.

##### 4.4 Budget Indication

NG does not provide budget estimates at initial enquiry stage. It will only provide an estimate in response to a firm application for supplies. For Budgeting purposes TDS suggest that an allowance of £20,000 is made.

##### 4.5 Diversions/Easements

NG has provided their budget estimate for the diversionary works required under their rebranded name of Cadent. The estimate of costs to, divert 18m of 100mm LP DI main, Lay 19m of 125mm LP PE Open cut in road, to also include 2 x 4" DI x 125mm Connections and 2 x 4" DI Cuts and Caps, is as follows;

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

<b>Estimated Costs</b>		
Contractors		£11,476.36
Materials		£212.79
PMC		£0.00
Fixed Costs		£0.00
Direct Labour		£0.00
Permit Scheme Fees (Excludes all overheads)		£0.00
Overheads		£1,636.48
Easement		£0.00
<b>Applicable Discounts</b>		
Betterment		-£0.00
Deferment of Renewal		-£0.00
NRWSWA*	18%	-£0.00
MCP	25%	-£0.00
Total Estimated Cost	100%	£13,325.63
Advance Payment Due	100%	£0.00
VAT	20%	£2,665.12
<b>Total Payment due with Order</b>		<b>£15,990.75</b>

*\*NRWSA – Discount is only applicable when 75% of the costs are paid in advance.*

*NG's/Cadent Network Records, Land Enquiry Response and C4 Estimate for Diversions are reproduced at Appendix 4.*

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

## 5. Electricity Infrastructure

### 5.1 Electricity Network Operator

The Distribution Network Operator (DNO) for the area is UK Power Networks (UKPN).

### 5.2 Existing Apparatus

UKPN's Network Records indicate;

- an HV cable located in the footpath on the site side of Mangrove Road passing on the whole length of the site frontage.
- a Low Voltage (LV) cable located in the footpath on the site side of Mangrove Road passing along the whole length of the site frontage with 2 joint pits indicated just to the north of the existing entrance to the site with a connection to the Cricket Pavilion on the opposite side of Mangrove Road. There are no indications for any connections onto the site itself.
- an LV cable passing along the whole length of Mangrove Drive on the opposite side of the roads to the site.
- 1 x pilot cable crosses the proposed site access.

### 5.3 Available Capacity and Point of Connection

UKPN has provided a 'Budget Estimate' for the electricity infrastructure required to supply the development – See 5.4 below based upon a point of connection (PoC) onto its LV network along the Mangrove Road frontage. UKPN have also indicated that they will require to carry out network alterations to provide the required capacity the cost of which is indicated in 5.4 below.

### 5.4 Budget Estimate

The Budget Estimate below is based upon carrying out network alteration works to cater for the required load and to lay any new LV cable into site to provide connections to 80 gas heated houses.

**Budget Estimate - £75,000 (exc. vat)**

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

5.5 Diversions/Easements

UKPN have indicated that if the HV, LV and pilot cable crossing the proposed site access requires lowering an additional fee will be required, as follows;

**Budget Estimate - £16,000 (exc. vat)**

*UKPN's Network Plans and Budget Estimate are reproduced at Appendix 5*

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

## 6. Dual Fuel Infrastructure

### 6.1 GTC Ltd.

A competitive Dual Fuel budget costing has been invited from Independent Network Operator GTC Ltd. for comparison with those of the incumbent operators.

The budget costing provided is as follows;

<b>On-Site Works</b>		<b>£43,524.40</b>
Off-Site Works – Gas	£3,058.94	
Off-Site Works – Electricity	£5,199.58	
Network Operator Costs – Gas	£ 66.00	
Network Operator Costs – Electricity	£3,000.00	
Steelwork (Internal) – Gas	£ NIL	
<b>Total Off-Site Costs;</b>	<b>£11,324.52</b>	<b>£11,324.52</b>
<b>Total Payment to GTC;</b>		<b>£54,848.92</b>

Note; This Budget Costing is based upon an Indicative Point of Connection (PoC) to the upstream electricity network.

*GTC's Budget Costing is reproduced at Appendix 6.*

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

## 7. Telecommunications Infrastructure

### 7.1 Network Operator

The local telecommunications Network Operator is Openreach BT.

### 7.2 Existing Apparatus

Openreach BT's Network Records indicate;

- an underground ducted network passing along the site side of Mangrove Road within the footpath area with a jointbox located in the footpaths approximately half way along the site frontage.
- there is also an overhead network passing along the southern boundary of the site in Mangrove Drive serving the adjoining properties.

### 7.3 Proposed Connections

BT's policy is that any requirement for reinforcement works up to a value of £3400 per connected property will be funded by BT. Given the location of the existing networks in Mangrove Road, it is not anticipated that there will be any difficulty supplying connections to the site, or that there will be any costs to the developer.

BT will also make payment to the developer of £140 for each house connected and £50 for each flat, in return for the developer undertaking the trenching and laying of the required ducts and chambers (supplied by BT) within the development.

BT will only prepare a site layout and proposal for a fully consented and detailed site layout, following submission by the developer of a firm application for connections. BT has confirmed that fibre connections are available.

### 7.4 Diversions

The site layout provided indicates that the BT ducts in the verge footway are likely to be affected by the proposed new access way and Openreach BT has noted this as well. In order to precisely understand the extent of the works required, it would be necessary to pay Openreach to provide an estimate and specification of these diversion works to the tune of £1,384.51 (exc. vat).

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

Bearing in mind the status of this site at present, we would suggest that we hold off these works until the site has a more a secure planning future and estimates can be sought.

*Openreach BT's Network Plans and Detailed Specification Estimate Letter are reproduced at Appendix 7.*

## **8. Communications Media/Cable Networks**

A search of all known Communications Media/Cable Network Operators has revealed 'NEGATIVE' i.e. 'not affected' responses from all, i.e. none of the operators have apparatus in the area of the site or its proposed accesses, except GTC and Virgin Media. GTC have just indicated that they have an LP network in the adjoining Ashbourne Gardens development. Virgin Media have shown a underground duct network within the footpath on site side of road and the proposed site entrance which will need diverting. A detailed estimate for a specification of works and detailed estimate of costs would need to be made to Virgin Media at a cost of £720 (Inc. vat).

*The Communications Media & Pipelines Search – Status Report, Virgin Media Response Letter & Plan and GTC Plan is reproduced at Appendix 8.*

## **9. 'Linesearch before U dig'**

A 'Linesearch' of the national database of utility asset owners, registered with 'Linesearch before U Dig', has not revealed any apparatus operated by them, within or adjacent to the development, that is likely to be affected by it. All responses are 'NEGATIVE', i.e. the site is 'Not in the Zone of Interest' of the relevant operators.

*The Linesearch response is reproduced at Appendix 9.*

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

**10. Summary of Utility Budget Costs**

**Water – Affinity Water**

ITEM	EXCAVATION	APPROX.UNIT COST	APPROX. SCOPE	BUDGET PRICE	ESTIMATED CONTRIBUTION
On-Site (development) water mains	Not included	£150/m	TBD	<b>£18,450</b>	<b>20%</b>
On-Site (development) service connections	included	£460 ea	80	<b>£36,800</b>	<b>100%</b>
On-Site large diameter (>63mm) services	Not included	£3450 ea	N/A		<b>100%</b>
Off-Site (in public Highway) (>63mm) services	<b>Included</b>	£4600	N/A		<b>100%</b>
Off-Site water mains laying (e.g. reinforcement)	<b>Included</b>	£310/m	N/A		<b>100%</b>
Off-Site (in public highway) Service Connections	<b>Not Included</b>	£2300 ea.	N/A		<b>100%</b>

Water Infrastructure Charges per property (payable to Affinity Water) - £354.00

Sewer Infrastructure Charges per property (payable to Thames Water) - £357.60

**Gas – National Grid**

National Grid does not provide budget estimates at initial enquiry stage. It will only provide an estimate in response to a firm application for supplies. For Budgeting purposes TDS suggest that an allowance of £20,000 is allowed.

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

**Electricity – UKPN**

UKPN has provided an estimate for the electricity connections including as follows;

**Budget Estimate - £75,000.00 (exc. vat)**

**Dual Fuel – GTC. Ltd.**

**On-Site Works** **£43,524.40**

Off-Site Works – Gas	£3,058.94
Off-Site Works – Electricity	£5,199.58
Network Operator Costs – Gas	£ 66.00
Network Operator Costs – Electricity	£3,000.00
Steelwork (Internal) – Gas	£ NIL

**Total Off-Site Costs;** **£11,324.52 £11,324.52**

**Total Payment to GTC;** **£54,848.92**

**Telecommunications – Openreach BT**

**Contribution to Developer** for on-site trenching and duct-laying; Service on Demand (SOD) Payments;

80 houses @ £140.00 = **£11,200.00**

**Total Contribution = £11,200.00**

**11. Site Photographs**

A selection of record photographs, taken on site in March 2017, to illustrate the current site conditions and constraints, are at Appendix 10.

**12. Conclusion/Key Issues**

The enquiries of the utility network providers, and their responses, have, to date, not revealed any significant utilities impediment to, the development of this site to provide 80 houses, as proposed;

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

The key conclusions are;

(i) Availability:

All mains utilities including the public foul sewer, water, gas, electric, telecoms (including fibre) and Virgin Media are available in Mangrove Road.

(ii) Capacity:

**Drainage** - Thames Water has confirmed that the foul drainage from the additional 80 units can be accommodated in the local sewer network and that surface water will need to discharge to ground or to any adjacent ditch.

**Water** – Affinity Water has a 100mm diameter ductile iron water main located on the opposite side of Mangrove Road to the site itself. Its analysis of the effect of the proposed development on this network has confirmed that it has the capacity to meet the additional demand without the need for off-site reinforcement.

**Gas** - National Grid have confirmed that there is sufficient capacity.

**Electric** - UKPN has electricity infrastructure has the required capacity to serve the development based upon a point of connection (PoC) onto its LV network along the Mangrove Road frontage.

**Telecom** - Given the location of the existing networks in Mangrove Road, it is not anticipated that there will be any difficulty supplying connections to the site.

**Virgin Media** - Virgin Media have shown an underground duct network within the footpath on site side of road

Key issues in the development of the site as proposed is diversions of existing apparatus in Mangrove Road in order to facilitate the proposed new site access.

(iii) On-Site Diversions

No on-site diversions will be required.

**Reference:** RSB.CN.TDSS.CHF.U.02  
**Client:** Christs Hospital Foundation  
**Site:** Land at Mangrove Road, Hertford, SG13 8AN

(iv) Off-Site Diversions

**Water** - Affinity Water have reviewed their asset plans and have confirmed that their mains will not need to be diverted but will need to be abandoned if the development requires the laying of a new main to feed the development

**Virgin Media** – has a ducted network along the southern footpath of Wingate Road and

**Gas** - National Grid has identified that it has apparatus in the area of the proposed new access road in Mangrove Road and provided a diversion cost.

**Electric** - UKPN have indicated that the HV, LV and pilot cable crossing the proposed site access may require lowering and provided a diversion cost.

**Telecoms** - Openreach BT require a figure to carry out a Survey of their network in order to determine if diversions are required. From a review of their plans it is anticipated that diversions in the verge/footway are likely to be affected by the proposed new access way