

# Report



**Norman  
Disney &  
Young**

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## DESKTOP FIBRE STUDY

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### Thurrock Data Centre – Desktop fibre study Brookhouse Capital Limited

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CONFIDENTIAL

Revision: 2.0 - Final  
Issued: 12 February 2013





# NORMAN DISNEY & YOUNG

## CONSULTING ENGINEERS

NDY CONSULTING LIMITED  
A Registered Company in England and Wales. Company Registration No. 3890617  
180 Old Street  
London EC1V 9RQ

Telephone: +44 20 7553 9494  
Facsimile: +44 20 7553 9499

www.ndy.com

## OFFICES

Australia:	Sydney, Melbourne, Brisbane, Perth, Canberra, Adelaide, Darwin
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United Kingdom:	London, Manchester
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## 1. EXECUTIVE SUMMARY

Norman Disney & Young have been engaged to investigate the existing telecommunications infrastructure at Unit 1, Central Avenue, Essex, RM20 3WZ. This site is being considered for mirrored 10G services from the central business district in Central London.

Five carriers have been approached as part of this review to provide information on the proximity of the site to the carriers' fibre network, and budgetary pricing for diverse high capacity links.

Generally, the site appears to have fibre presence within close proximity from at least one vendor. The fibre infrastructure in the area could be used for High Capacity Services (HCS), i.e. 10G dual services for a potential data centre client without the need of aggregation points.

The following carriers have indicated keen interest in offering fibre services for the Thurrock site and would be interested in directly communicating with the customer to discuss in depth service offerings to suit their requirements:

- British Telecom (BT)
- COLT (utilising KPN dark fibre)
- Cable and Wireless (Thus)

Costs for civil works vary. BT has existing infrastructure, however the other providers will require some level of civil works. Exact details are to be confirmed.

At this stage, only two carriers have responded with budgetary offerings for the service, with BT offering dual links and Colt offering a single connection.

Cable and Wireless (Thus) could not provide the required information due to non-disclosure agreement (NDA) conflict. They have requested that they are contacted directly for this information.

Link latency and fibre routing across the dual 10Gb links has been estimated and is presented below.

Telco	Primary Route Distance (km) <sup>2</sup>	Est. Trip Latency (ms) <sup>3</sup>	Secondary Route Distance (km) <sup>2</sup>	Est. Trip Latency (ms) <sup>3</sup>
Virgin Media	Declined			
BT	40.74	0.203	56.61	0.282
Colt Telecom	25.75	0.19	NA	NA
Cable and Wireless	Declined <sup>1</sup>			
SSE	Declined			

<sup>1</sup>Please contact Cable and Wireless directly for more information

<sup>2</sup>All routes are estimated from desktop surveys completed by carriers

<sup>3</sup>All latencies are estimated from desktop surveys completed by carriers

**Figure 1-1 Link latency and fibre routing summary**

To develop a finer resolution of costs and connectivity information it is considered that detailed site surveys by the respective carriers would need to be completed.

The minimum period to obtain this information is considered to be in the order of 30 working days to complete. Lead times for provision of service vary; a minimum of six (6) weeks can be expected.



## 2. INTRODUCTION

### 2.1. Purpose

The report is a Desktop Telco fibre report for a site under consideration in Thurrock.

### 2.2. Objectives

This report is based upon Dual 10G links using dense over direct fibre from London to the nominated site. The following locations have been identified as the points of presentation:

- Unit 1, Central Avenue, Essex, RM20 3WZ, and
- The providers nearest exchange or Point of Presence to Bank station

The report identifies the following:

- Nearest Telco exchanges to site including the services available.
- Primary carriers and service distance to site.
- Provision of optical fibre infrastructure topological mapping for each primary carrier in the vicinity of Thurrock.
- Potential primary and secondary Telco routes to site if available.
- Costs for installation, connection and annual of primary and secondary services.
- Provision of latency of service information for links.

### 2.3. NDA

Please note that all information provided in this document is covered by the various providers NDAs and should not be distributed without permissions.

### 2.4. Authority

Authority to undertake this report was provided by Tony Smith of GVA Second London Wall on 8<sup>th</sup> October 2012.

### 2.5. Key Requirement

The following list of information was requested from the providers and will be summarised in this report:

- A delivery timescale from placement of order to delivery of circuits.
- Details on any existing connections to the site
- Please provide a breakdown of costs including the following:
  - Installation and connection costs for
    - Primary 10Gb link
    - Secondary 10Gb link
    - Telephone lines
    - Broadband
  - Ongoing cost quotations on a 1 year/3 year/5 year commercial basis for each of the items identified above.
- Maps/diagrams/sketches to indicate the proposed connection routes.



- Contact details to be used when a connection to site is ordered.

For the dual fibre links, the following additional information was requested:

- Nearest Point of Presence (PoP)/Exchange (PoE) to the site, for both primary and secondary links.
- Distances of PoPs/PoEs to the Monument exchange
- Link Latency (ms)
- Details on the fibre links including if the links will be point to point connections and if any of the fibre will need to be leased from other service providers.

The following carrier providers have been approached and have provided information to support the production of the report.

- BT
- Colt

## 2.6. Revision History

Revision	Description	Issue Date
1.0	Draft Issue for comments	26 November 2012
2.0	Final issue	12 February 2013





### 3. SITE DETAILS

#### 3.1. Location

The site under consideration is Thurrock which requires fibre infrastructure for a potential data centre tenant. It is anticipated to offer 8000m<sup>2</sup> of data centre floor space.

The objective of this report, in line with the above expectation, is to assess the infrastructure that can be provided to support this site as a future data centre

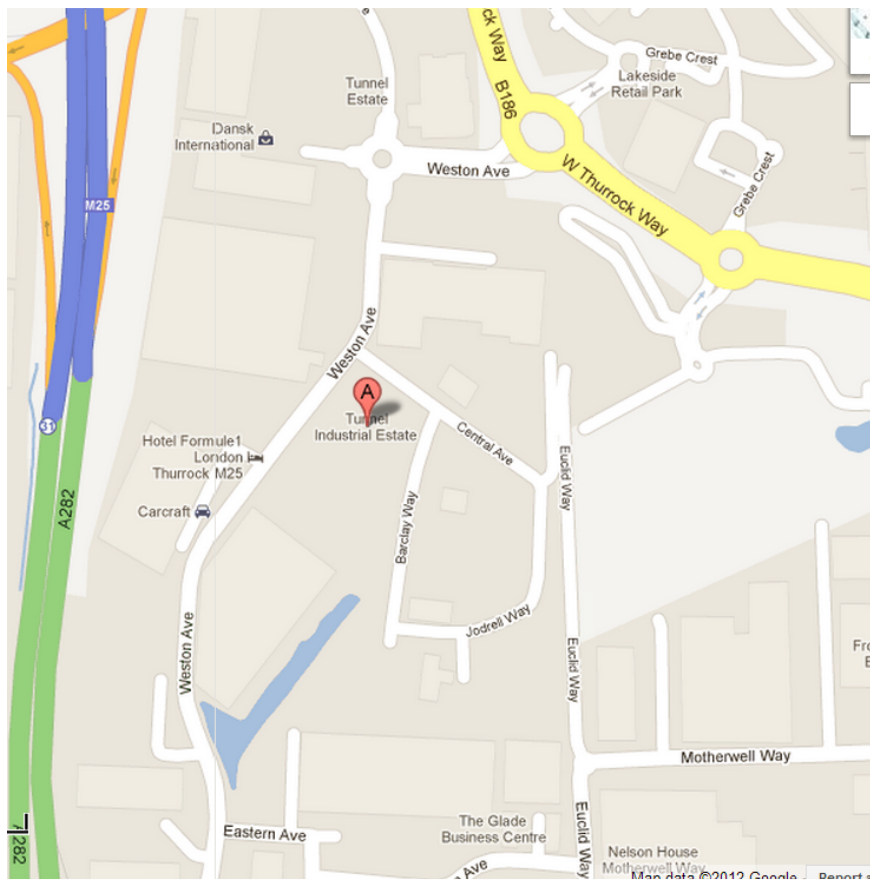
#### Site Details

Postcode (Approximated)	RM20 3WZ
Address	Unit 1, Central Avenue, Essex
Approximate Area(m <sup>2</sup> )	8000m2 of data space
Site Description	Existing warehouse

Figure 3-1 Thurrock site details table



Figure 3-2 Aerial View of Site (outlined in red) and Surrounding Area



**Figure 3-3 Road Map of Site and Surrounding Area**

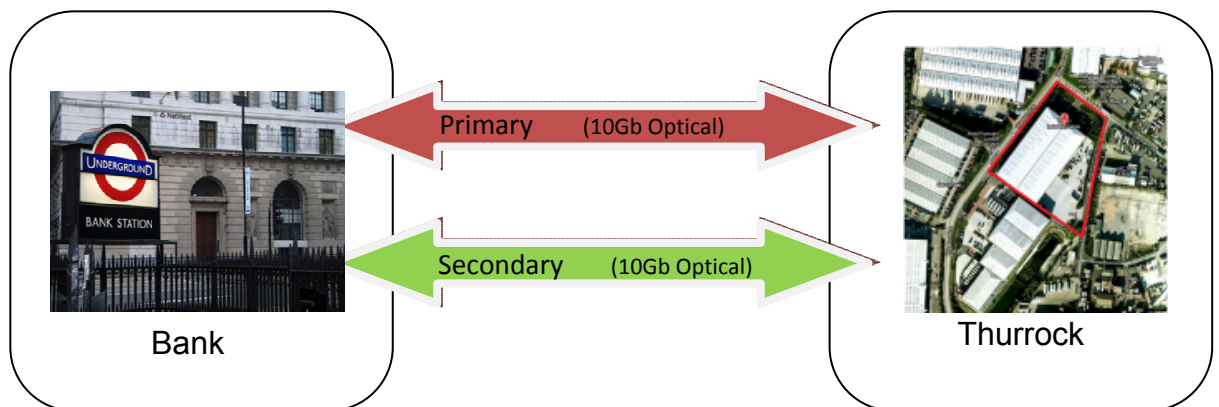


### 3.2. Proposed Connectivity

Detailed service requirements are not known at this stage; however the links are expected to provide full replication of services from the primary site. The following assumptions have been made for budget purposes:

Two (2) Diverse 10 Gigabit Optical Fibre links connecting the two nominated sites, namely:

- Unit 1, Central Avenue, Essex, RM20 3WZ, and
- The providers nearest exchange or Point of Presence (PoP) to Bank station (representing the centre of financial services sector in London)



**Figure 3-4 Proposed connectivity diagram**



## 4. FIBRE CARRIERS

### 4.1. Summary

The following carriers have been approached for this review:

- Virgin Media
- British Telecom (BT)
- Cable and Wireless (THUS)
- COLT Telecom
- Scottish and Southern Electric (SSE)

The following carriers, additionally, have a presence within 5km of the site:

- BT (existing)
- Virgin Media (circa 1.4km)
- Cable and Wireless (see section 4.3.2)

### 4.2. Route Distance

As confirmed by the carriers, no route can be guaranteed from a desktop survey. All routes and distances included in this report are best approximates and are indicative, subject to detailed site surveys.

The principle issues that lead to changes between a desktop assessment and an actual built route are:

- Special Engineering Difficulties- These are locations where the physical features on the ground can limit route options and/or add complexity to the civil works. For example bridges, waterways, railways, motorways etc.
- From the information provided by the carriers, special engineering difficulties are not envisaged for the site (subject to further confirmation following detailed site surveys).
- Council and Highway Agency Approvals- Council authorities and the Highways Agency have the right to restrict, delay approval to build or demand route changes in certain circumstances as detailed in the New Roads & Streetworks Act 1991 (NRSWA).
- Interconnection Points- It is only possible to connect to the backbone network infrastructure at certain points. Each provider has their own rules for this, which can potentially mean a longer build is required to reach a point on the network where an interconnect is possible.
- Availability at time of order

## 4.3. Individual Carriers

### 4.3.1. BT

BT has confirmed that they would be able to deliver 100% service. The infrastructure would be BT owned end to end and would be provided over diverse routes via different exchanges, point of presence and entry points into the site.

The network design would be planned using the using completely separate routes, ducting and entry points into the building site.

The following map outlines the existing BT infrastructure to the site

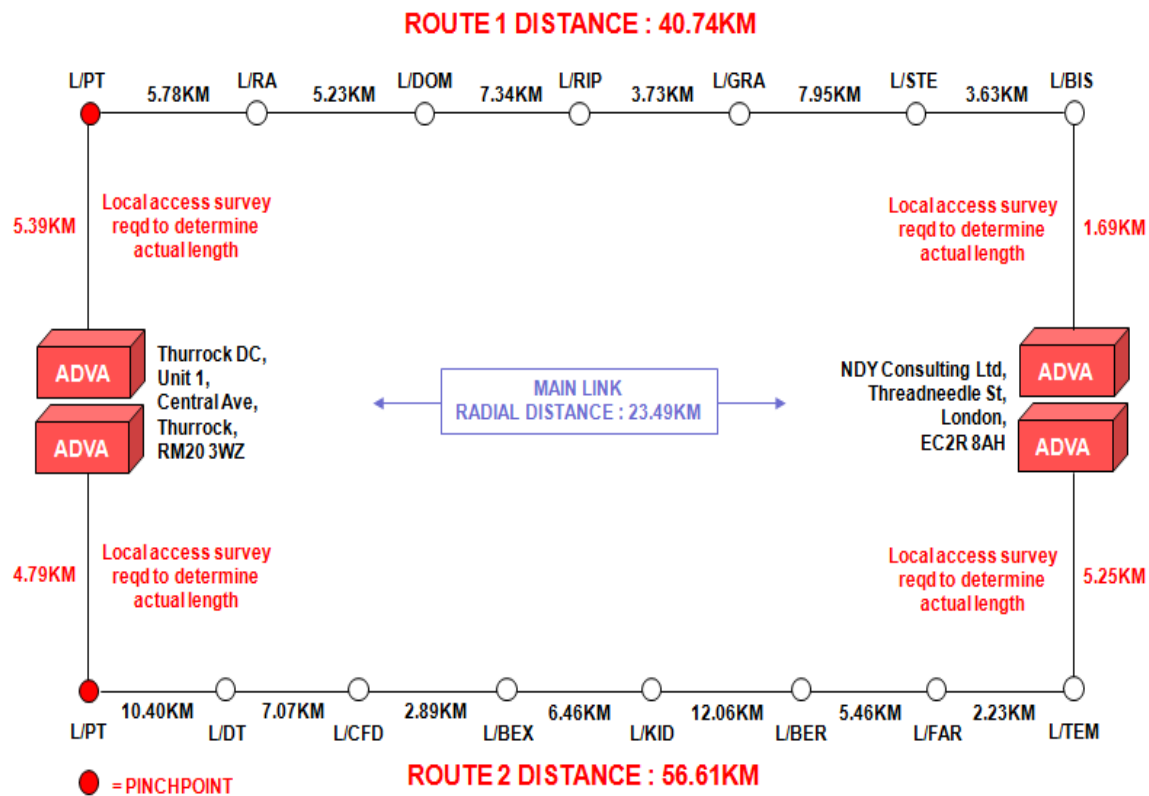


**Figure 4-1 BT Existing Infrastructure to the site**

The following table lists the indicative routes for the dual fibre links with estimated service latencies:

	Distance	Single Trip Link Latency
Primary Route	40.74km (estimated)	0.203ms
Secondary Route	56.61km (estimated)	0.282ms

**Figure 4-2 BT proposed route distances and latency table**



**Figure 4-3 BT Proposed diverse routes (subject to survey)**

BT has estimated the following budgetary costs for providing this service (subject to survey and re-assessment at the time of order):

Type of service			Minimum Term (Yrs)	Connection	Rental p.a.	Total cost of ownership (TCO)
Single connection	10G	Optical	1	£ 55 303	£ 30 120	£ 85 424
Single connection	10G	Optical	3	£ 45 349	£ 32 944	£144 181
Single connection	10G	Optical	5	£ 38 712	£ 30 120	£ 189 312

**Figure 4-4 BT budgetary route cost table**

For dual 10G connections the following costs will apply:

Type of service			Minimum Term (Yrs)	Connection	Rental p.a.	Total cost of ownership (TCO)
Dual 10G Optical connection			1	£110,607	£ 60,240	£ 170,847
Dual 10G Optical connection			3	£ 90,697	£ 65,888	£ 288,361
Dual 10G Optical connection			5	£ 77,425	£ 60,240	£ 258,145

**Figure 4-5 BT budgetary dual routes cost table**



### 4.3.2. Cable and Wireless (THUS)

In October 2008, THUS Group plc ("THUS") was acquired by Cable & Wireless. Following this acquisition, Cable & Wireless has sought to reorganise and segment the acquired THUS businesses which has resulted in the formation of a new THUS business, THUS Limited focused solely on the UK mid-market segment.

THUS have confirmed their presence in proximity to site and they have commented that they will be in a position to provide connectivity to the site however they have yet to provide a proposal.

Cable and Wireless has been excluded from this report as they require a direct NDA with the client to provide this information. This is because the Cable and Wireless NDA has limitations on sharing information with 3<sup>rd</sup> parties and so if NDY received this information we could not pass any of the details on.

Please see the Appendix B for NDA agreement that will need to be signed for the information to be obtained.

### 4.3.3. COLT Telecom

COLT has confirmed that a single route to the site is available and that they will work with KPN to provide dark fibre to the Thurrock site.

The nearest Colt PoP/PoE to the Bank Station is:

**King John Court**

Sovereign House

1 King John Court

EC2 3EZ

The nearest Colt PoP/PoE to the site is Telehouse East. Colt will utilise existing KPN infrastructure to connect into the site, with only a short civil dig required. This is shown in the figures below.



Figure 4-6KPN route from the site to the nearest Colt PoP





**Figure 4-7 KPN route from the site to the nearest connection pit**

The overall link latency to Thurrock is expected to be 0.19ms based on initial estimates but final testing will confirm the actual speed. This will be dependent on detailed site surveys.

COLT estimate a maximum of 90 working days as per their contracted SLA for this type of connection.

The following table lists the indicative routes for the dual fibre links with estimated service latencies:

	Distance	Link Latency
Primary Route	25.7km (estimate)	0.19ms (estimated)

**Figure 4-8 Colt proposed route distances and latency table**

Colt has provided the following budgetary prices utilising KPN dark fibre and managed by Colt (subject to detailed site survey):

Type of service	Minimum Term (Yrs)	Connection	Rental p.a.	Total cost of ownership (TCO)
Single 10G Optical connection	1	£ 8000	£ 88 800	£ 96 800
Single 10G Optical connection	3	£ 8000	£ 71 100	£221 300
Single 10G Optical connection	5	£ 8000	£ 49 680	£ 256 400

**Figure 4-9 Colt budgetary route cost table**





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#### 4.3.4. SSE Telecoms (formerly Neos Networks)

SSE Telecoms owns and operates one of the largest telecoms networks which spans the entire UK, specialising in high capacity next generation Ethernet, optical wavelengths and bespoke dark fibre solutions. SSE were contacted regarding this site however they declined to respond as they do not have any existing infrastructure in the area.

#### 4.3.5. Virgin Media

Virgin Media has confirmed their presence approximately 1.4km off the site. Unfortunately the civil work costs are estimated to be greater than £450 000 which Virgin Media feels would not be competitive. Virgin Media has declined to process this proposal any further unless it is confirmed to them that this is within the project budget.



## 5. ESTIMATIONS AND FINDINGS

### 5.1. Civil Works / Access Connection

Making an estimate of the cost of the civil engineering works to build the routes detailed in the table below is subject to an estimation of the proportion of the build that can be installed in the carriageway, footway or verge. A professional judgement has been taken on this, but can only be confirmed with a detailed site survey.

Using the above factor, a span of the upper-lower band of costs that could be anticipated for each leg is shown below and are intended to be used for guidance only.

Connection distances to site are summarised in the table below:

Telco	Primary Route Distance to Existing infrastructure	Civil Cost (est. max) <sup>2</sup>	Secondary Route Distance to PoP	Civil Cost <sup>2</sup> (est. max)
BT	Existing	-	Existing	-
Colt Telecom	0.5km <sup>1</sup>	<sup>3</sup>	NA	NA
Cable and Wireless	NA	NA	NA	NA
SSE	Declined	Declined	Declined	Declined
Virgin Media	1.4km	>£450k	NA	NA

<sup>1</sup> This is based on utilising existing KPN infrastructure

<sup>2</sup> Civil cost estimates based on distance to PoP. Subject to site findings and existing infrastructure, this may substantially reduce.

<sup>3</sup> Civil cost is not provided; however, it is assumed civil cost is included in connection cost.

**Figure 5-1 Estimated civil cost table**

### 5.2. Provision of Service

The following tables summarise the estimated overall routes and latency over the proposed links, and well as install and service pricing as quoted by each provider.

Please note that a more accurate result would be subject to detailed site surveys and information provide herein is indicative only:

Telco	*Primary Route Distance (km)	**Est. Trip Latency (ms)	*Secondary Route Distance (km)	**Est. Trip Latency (ms)
Virgin Media	NA	NA	NA	NA
BT	40.74	.203	56.61	.282
Colt Telecom	25.75	0.19	NA	NA
Cable and Wireless	NA	NA	NA	NA
SSE	NA	NA	NA	NA

\* All routes are estimated from desktop surveys completed by carriers

\*\* All latencies are estimated from desktop surveys completed by carriers



**Figure 5-2 Provision of service summary table**

Telco	Term length	Primary Route Install (Connection)*	Connection Rental (per Annum)	Secondary Route Install (Connection)*	Connection Rental (per Annum)
BT	1	£ 55 303	£ 30 120	£ 55 303	£ 30 120
	3	£ 45 349	£ 32 944	£ 45 349	£ 32 944
	5	£ 38 712	£ 30 120	£ 38 712	£ 30 120
Colt telecom	1	£ 8 000	£ 88 800	NA	NA
	3	£ 8 000	£ 71 100	NA	NA
	5	£ 8 000	£ 49 680	NA	NA
Cable and Wireless		**			
SSE		Declined			
Virgin Media		Declined			

\* One off connection fee applicable on day 1

\*\*Please contact Cable and Wireless directly for more information

**Figure 5-3 Budgetary costing and quotations table**

Please note that most telecommunications providers consider this information to be sensitive and do not provide this information readily. The figures noted above are best estimates calculated from the information provided by the carriers. The values do not necessarily represent the true costs of service charges imposed by the provider and should be used as indicative only. Should the customer indicate further interest in service offerings, the providers would then discuss the details of finance for best and final offer pricing.

Detailed site surveys will have to be undertaken to get more accurate cost information depending on the fibre connectivity service sought by the end user(s).



## 6. CONCLUSION

Five carriers were approached as part of this review to provide information on the proximity of the carriers' fibre network to the proposed site, and give budgetary pricing for diverse high capacity links.

The following carriers have indicated keen interest in offering fibre services for the Thurrock site and would be interested in directly communicating with the customer to discuss in depth service offerings to suit their requirements:

- British Telecom (BT)
- COLT
- Cable and Wireless

Virgin Media and SSE have declined to participate in this study as they do not believe their quotations will be competitive. Cable and Wireless require an NDA in place with the final client for the information to be obtained, and should be contacted directly for more information.

The following table summarises the findings of this report.

Telecommunications provider	Site access distance (Approx)	Primary Route (km)	Primary Est. Latency (ms)	Secondary Route (km)	Secondary Est. Latency (ms)	Min term (yrs)	Connection Cost	Rental p.a.	TCO
BT	Existing	40.74Km	.203	56.61 Km	.282	1	£55,303	£30,120	£85,424
						3	£45,349	£32,944	£144,181
						5	£38,712	£30,120	£189,312
Colt	500m	25.7Km	0.19	NA	NA	1	£ 8000	£ 88,800	£ 96,800
						3	£ 8000	£ 71,100	£221,300
						5	£ 8000	£ 49,680	£ 256,400
C&W	NA	NA	NA	NA	NA	NA	NA	NA	NA
Virgin Media	1.4Km	NA	NA	NA	NA	NA	> £450k	NA	NA
SSE	NA	NA	NA	NA	NA	NA	NA	NA	NA

Figure 6-1 Response summary table



## APPENDIX A – CARRIER CONTACT DETAILS

Telco	Contact Name	Contact details	
		Email	Phone
BT	Neil Lonergan	n.lonergan@btlocalbusiness.co.uk	02075394001
Colt telecom	Max Munro	Max.munro@colt.net	02073903024
Cable and Wireless	Mandeep Gill	Mandeep.Gill@thus.net	07872674947
SSE	Robert Widley	robert.widley@sse.com	07825015155
Virgin Media	Trevor Goddard	Trevor.Goddard@virginmedia.co.uk	07785387068

*Note. Contact with the above should ideally be made through NDY to build on our existing relationships with the individuals listed.*



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## APPENDIX B –CABLE & WIRELESS (THUS) NDA AGREEMENT



## **MUTUAL CONFIDENTIALITY AGREEMENT**

THIS AGREEMENT is made between:-

1. THUS Limited, a company incorporated under the laws of England and Wales (Company Number: 6798969) whose registered office is at Vodafone House, The Connection, Newbury, Berkshire RG14 2FN ("THUS"); and
2. Brookhouse Capital Limited, a company incorporated under the laws of England and Wales/Scotland (Company Number: ) whose registered office is at Berkeley Square House, 9th Floor London, W1J 6DD.

### **WHEREAS:**

- (A) The parties have agreed to provide and allow access to each other's Confidential Information (defined below) with a view to the parties establishing commercial relations (the "Purpose").
- (B) In order to facilitate discussions and make evaluations in connection with the Purpose, the parties wish to exchange information, including confidential and proprietary information, to each other on and subject to the provisions of this Agreement.
- (C) Each party agrees to protect the Confidential Information of the other.

### **IT IS AGREED AS FOLLOWS:**

1. Interpretation
  - 1.1 The following words and expressions shall have the following meanings unless the context otherwise requires:

"Agreement"	means this Agreement on these terms and conditions;
"Affiliate"	means a company or corporation which is the ultimate holding company of a party or a subsidiary of such ultimate holding company and for the purpose of such definition "holding company" and "subsidiary" shall have the meanings assigned to them in Section 1159 of the Companies Act 2006 as amended;
"Confidential Information"	means any business, financial, technical, operational, staff, management and all other information in whatever form whether disclosed orally, in writing or electronically or otherwise or whether eye readable, machine readable or in any other form including, without limitation, the form, materials and design of any relevant equipment or any part thereof, the methods of operation and the various applications thereof, processes, formulae, plans, strategies, analyses, computer files (whether or not reduced to written form), compilations, memoranda, notes, reports, studies, data, know-how, designs, photographs, drawings, films, specifications, technical literature, information and documentation of all kinds (including all copies, extracts and summaries thereof and all other material containing or based in whole or part on any such information whichever party may have prepared the same) and any other material disclosed by one party (the "Disclosing Party") directly or indirectly to the other party (the "Receiving Party") or gained by the visit of the Receiving Party to any establishment of the Disclosing Party or which comes into the possession or knowledge of the Receiving Party as a result of or in connection with the Purpose or of the parties' relationship arising from this Agreement and whether before or after this Agreement is entered into; and
"Personnel"	means officers, employees and professional advisers.
  - 1.2 The headings in this Agreement are provided for ease of reference only and shall not be taken into account in the construction or interpretation thereof.
  - 1.3 Words importing the singular number shall include the plural and vice versa, words importing one gender shall include all genders and words importing persons shall include bodies corporate, unincorporated associations and partnerships.
2. Obligations of the Receiving Party
  - 2.1 In consideration of the Disclosing Party disclosing the Confidential Information to the Receiving Party for the Purpose, the Receiving Party hereby undertakes with the Disclosing Party both for itself and as trustee for and on behalf of its Affiliates and Personnel that the Receiving Party shall:
    - 2.1.1 not communicate, disclose or make available all or any part of the Confidential Information to any third party;
    - 2.1.2 not directly or indirectly use, or permit others to use, the Confidential Information other than for the Purpose;
    - 2.1.3 not make any announcement or disclosure in connection with the Confidential Information or the Purpose without the prior written consent of the Disclosing Party;

- 2.1.4 not copy, reproduce or reduce to writing any material part of the Confidential Information except as may be reasonably necessary for the Purpose;
  - 2.1.5 notwithstanding the above, the Receiving Party shall be entitled to disclose the Confidential Information under this Agreement without the prior written consent of the Disclosing Party to the Receiving Party's Affiliates where necessary for the Purpose.
- 2.2 The obligations and restrictions provided in this Clause 2 shall survive termination of this Agreement for a period of five (5) years.
- 3. Exceptions to the Receiving Party's Obligations
- 3.1 The obligations of confidentiality and non-use provided in Clause 2 above will not apply with respect to any of the following:
  - 3.1.1 information which is or becomes generally available to the public in any way without breach of this Agreement by the Receiving Party;
  - 3.1.2 information already known to the Receiving Party or in the possession of the Receiving Party at the time of disclosure as evidenced by being in its use or being recorded in its files or computers or other recording media or by previously existing written documentation other than Confidential Information supplied to the Receiving Party by the Disclosing Party prior to the date of this Agreement;
  - 3.1.3 information which is subsequently disclosed to the Receiving Party by third parties having no obligations of confidentiality to the Disclosing Party;
  - 3.1.4 information which is developed by or for the Receiving Party without reference to the Confidential Information of the Disclosing Party;
  - 3.1.5 Confidential Information to the extent it is required to be disclosed by law or pursuant to the rules of any recognised stock exchange but only to the extent that such disclosure is compellable by law, provided always that wherever possible, the Disclosing Party shall be given by the Receiving Party not less than two (2) business days prior notice of such disclosure with a view to avoiding such disclosure if reasonably practicable.
- 3.2 The onus shall be on the Receiving Party to prove that any of the exceptions set out in this Clause 3 apply to Confidential Information under this Agreement.
- 3.3 Without prejudice to the generality of this Clause 3 information shall not be deemed to be generally available to the public by reason only that it is known to only a few of those people to whom it may be of commercial interest and a combination of two or more parts of the Confidential Information shall not be deemed to be generally available to the public by reason only of each separate part being so available.
- 4. Further Assurances
- 4.1 The Receiving Party shall ensure that all measures necessary are taken to secure the confidentiality of the Confidential Information including but not limited to:
  - 4.1.1 keeping separate all Confidential Information and all information generated by the Receiving Party based on the Confidential Information from all other documents and records;
  - 4.1.2 keeping all documents and any other material bearing or incorporating any of the Confidential Information at the Recipient's usual place(s) of business;
  - 4.1.3 not transmitting it in any form or by any means whatsoever outside the Receiving Party's usual place(s) of business and not copying all or any part of the Confidential Information except only to the extent that the same is reasonably necessary for the Purpose;
  - 4.1.4 allowing access to the Confidential Information only to those Personnel of the Receiving Party who have reasonable need to see or use it for the Purpose and informing each of those Personnel of the confidential nature of the Confidential Information and of the obligations on the Receiving Party in respect of the Confidential Information and ensuring such Personnel comply with the confidentiality and non-disclosure obligations contained in this Agreement;
  - 4.1.5 on the request of the Disclosing Party at any time, (i) delivering up to the Disclosing Party all documents, CD-Roms, diskettes and other materials in tangible form (and all copies thereof) containing Confidential Information and (ii) in the case of information stored electronically, deleting or expunging the same from personal computers and other such electronic devices in the possession, custody or control of the Receiving Party, its Affiliates or Personnel that bear or incorporate any part of the Confidential Information and on request providing the Disclosing Party with written confirmation of the same.
- 5. General

- 5.1 Waiver. The failure by either party to enforce at any time any one or more of the terms or conditions of this Agreement shall not be a waiver of them or of the right at any time subsequently to enforce all terms and conditions of this Agreement.
- 5.2 Remedies. The parties agree that damages might not be a sufficient remedy to any breach of the terms of this Agreement and that as a result in addition to damages, injunctive or other equitable relief may be obtained in respect of any breach or anticipated breach. Such remedy shall not be deemed to be the exclusive remedy for the breach of this Agreement but shall be in addition to all other remedies available at law or in equity.
- 5.3 Assignment. Neither party shall be entitled to assign or otherwise transfer its rights or obligations (or both) under this Agreement without the prior written consent of the other, such consent not to be unreasonably withheld, except that each party may assign or transfer its rights or obligations (or both) under this Agreement to any Affiliate without the prior written consent of the other party, provided it notifies the other party as soon as legally possible of any such assignment or transfer.
- 5.4 No Publicity. Each party agrees to keep the existence and nature of this Agreement, and the discussions between the parties regarding the Purpose, confidential and not to release or make any publicity statement, advertisement or other disclosure with regard to this Agreement without the prior written consent of the other party.
- 5.5 Notices. Any notice or other communication to be given under this Agreement must be in writing and may be hand delivered or sent by pre-paid first class letter post or facsimile transmission to the party to be served at the address set out as follows or any such other address as notified in writing by one party to the other:

**THUS Limited**

1-2 Berkeley Square  
99 Berkeley Street  
Glasgow  
G3 7HR

Fax: 0141-566-3086

For the attention of: THUS Legal Department

Brookhouse Capital Limited  
Berkeley Square House, 9th Floor  
London, W1J 6DD

Fax:

For the attention of: Tony Smith

- Any notice shall be deemed served if hand delivered, at the time of delivery; if posted two (2) UK business days after posting; and if sent by facsimile transmission, when the sender's facsimile system generates a message confirming successful transmission of the total number of pages of the notice during normal UK business hours (9.00 a.m. to 5.00 p.m.).
- 5.6 Duration. This Agreement shall be effective as of the last date of execution of this Agreement and shall continue in force for the Purpose for as long as the Receiving Party has knowledge or possession of any Confidential Information received or derived from the Disclosing Party subject to a maximum duration of three (3) years. The provisions of Clauses 2, 5.4, 5.5 and 5.11 shall survive any such termination.
- 5.7 No Licence. All rights in the Confidential Information are reserved by the Disclosing Party and no rights or obligations other than those expressly set out in this Agreement are granted or to be implied from this Agreement. In particular no licence is granted directly or indirectly by this Agreement relating to any invention, discovery, patent, copyright or other industrial or intellectual property right now or in the future held, made, obtained or licensable by the Disclosing Party.
- 5.8 No Warranty. The Disclosing Party makes no representation or warranty as to the accuracy or completeness of the Confidential Information which is provided by or on behalf of the Disclosing Party to the Receiving Party and the Disclosing Party shall have no liability to the Receiving Party resulting from the use or accuracy of such Confidential Information, any such use being at the sole risk of the Receiving Party.
- 5.9 No Obligation. Nothing in this Agreement shall be construed or implied to obligate the Disclosing Party to furnish any specific type of information hereunder, whether confidential or not.
- 5.10 Entire Agreement. This Agreement constitutes the entire agreement between the parties concerning the Purpose. It supersedes all prior and contemporaneous agreements and communications, whether oral or written, between the parties relating to the Purpose. Where

there is a conflict of any terms, the terms and conditions of this Agreement shall prevail. Any alteration or modification of this Agreement must be agreed in writing between the parties.

5.11 Liability. Notwithstanding anything to the contrary in this Agreement, the liability of each party under or in connection with this Agreement whether in contract or in tort/delict, in negligence, for breach of the statutory duty or otherwise (other than in respect of personal injury or death) shall not exceed in aggregate the sum of £1,000,000.00.

5.12 Governing Law and Jurisdiction. The rights, duties and obligations of the parties and the validity, interpretation, performance and legal effect of this Agreement shall be governed and determined by the laws of England and the parties hereby submit to the exclusive jurisdiction of the English Courts.

**AGREED** by the parties:

**SIGNED** by \_\_\_\_\_

Name (print)

Position

Authorised signatory  
for and on behalf of

**THUS Limited**

Date                      \_\_\_\_/\_\_\_\_/\_\_\_\_

**SIGNED** by \_\_\_\_\_

Name (print) \_\_\_\_\_

Position \_\_\_\_\_

Authorised signatory  
for and on behalf of

**Brookhouse Capital Limited**

Date                      \_\_\_\_/\_\_\_\_/\_\_\_\_