New East Manchester/English Partnerships

Proposed Redevelopment of

Former Weir Pumps Factory Site, Newton Heath, Manchester

Utilities Assessment

November 2006

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Status: Final

Approved: Project Manager

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Utility Assessment

November 2006

Prepared By:	Checked By:	Authorised By:
S Walsh	N Byrne	C Barker
14th Nov 2006	20th Nov 2006	20th Nov 2006

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1.0 Introduction

Background

Scott Wilson has been appointed to undertake a Transport and Utilities Assessment of the Weir Pumps development site by New East Manchester Ltd.

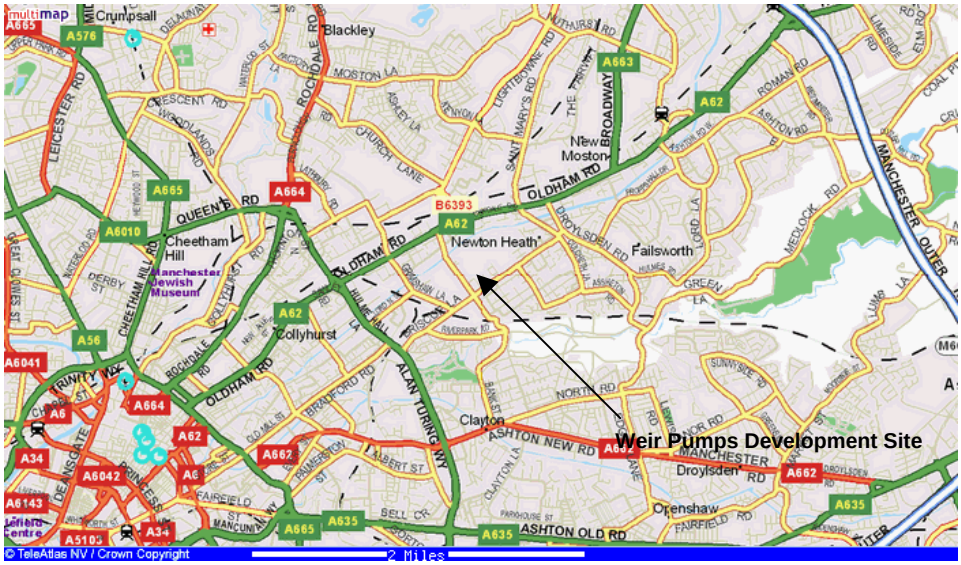
New East Manchester Ltd (NEM) has received several expressions of interest to redevelop the former Weir Pumps Ltd site for industrial/warehouse use. The site is currently owned by English Partnerships (EP) and NEM proposes working with EP to help facilitate the regeneration of this industrial land. As such the intention is to conduct all the necessary preparatory work in order to seek planning permission. This Utilities Assessment has therefore been prepared in support of a future planning application.

2.0 Site Location and Proposed Development

Location

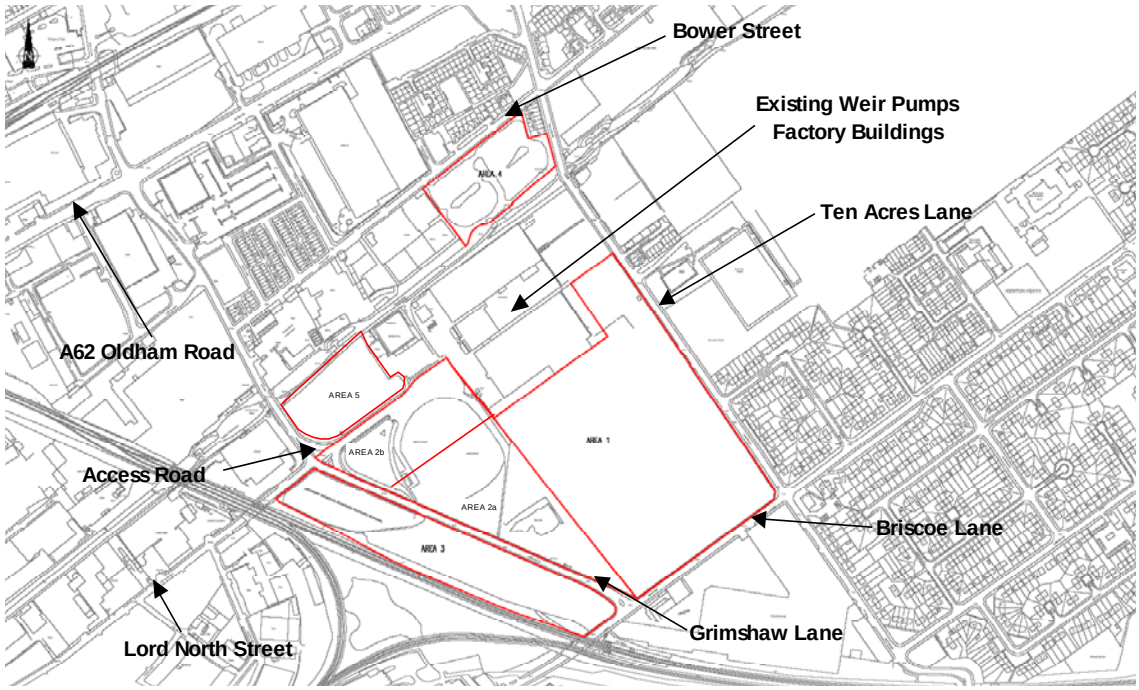
The site is located in the Oldham Road Corridor area of East Manchester as shown below in Figure 2.1.

Figure 2.1 Development Site location



The development site currently consists of derelict former industrial land previously occupied by factory buildings belonging to the Weir Pumps Company whom still occupy premises located adjacent to the development site. The overall area for development comprises of six smaller areas as shown in Figure 2.2 below. Areas 1, 2a, 2b, 3 and 5 are on a site bounded by Ten Acres Lane to the East, Briscoe Lane to the South, Ashton railway line to the West and industrial works to the North. Area 4 is on a site bounded by Ten Acres Lane, Bower Street and the Rochdale Canal.

Figure 2.2 Development Site Plan



Residential, industrial and warehousing areas surround the development site. Residential properties are primarily located along Ten Acres Lane to the North East , however further residential areas are located at the Southern end of Bower Street to the West of the development site. Light industrial areas are located along Bower Street and Lord North Street to the South of the development site, with warehousing located to the West along Briscoe Lane.

Development Content

The proposed development content is primarily B2 industrial and B8 warehouse uses. There are currently two potential occupiers for the development site who are actively working towards submitting formal planning applications. Due to reasons of commercial sensitivity, both companies shall not be referred to by name within this report. Company 'A' propose to establish a new bakery located within Area 3 accessed from Grimshaw Lane. Company 'B', a food processing company, proposes to amalgamate four of their existing premises within Areas 1 and 2a, incorporating production and warehousing/distribution processes at the same location. Currently there are no further potential site occupiers for Areas 2b, 4 and 5.

3.0 Review of New East Manchester Utility Strategy Study

The NEM Utility Strategy Study (prepared by Arup in April 2006) was developed to provide a strategy for the whole of the area within the New East Manchester boundary. It included:

- A GIS based record of the major utility services in the area (excluding distribution mains/services)
- Predictions of likely increases in utility demands from current regeneration proposals
- Review of these predictions with utility companies regarding capacity reinforcement required
- Proposed strategy for procurement of any reinforcement

However, the typical utility demands used were only estimates based on other similar developments due to a lack of published information.

Also the study was not able to obtain definitive information from the gas, water and sewerage undertakers on the implications on their networks of the demand projections.

The NEM Utility Strategy Study has developed the demand estimations for the Weir Pumps Site at Grimshaw Lane. Under the Strategy Study the NEM area is divided into 22 sub areas. Each sub area is divided into potential development sites. The Weir Pumps sites are within the Central Park South sub area (sub area number 4) and are effectively designated as Site 11 and 12 – 'Weir Pumps Grimshaw Lane, Briscoe Land' and 'Land at Grimshaw Lane' respectively. At the time the Strategy Study was prepared it was on the assumption that the (i) Weir Pump Site along Briscoe Lane (Site number 11) is redeveloped for a food factory of 50,000m^2 building footprint, and for a new warehouse of 3000m^2 building footprint, and (ii) the Grimshaw Lane site is redeveloped for new commercial/retail with 19,110m^2 building footprint (refer to Figure 3.1).

The principle relevant findings of the previous Arup Strategy Study are outlined below:-

Electricity

The report states that the demand projection for the full development of Central Park South, which the Weir Pumps/Grimshaw Lane sites form only a part, will give rise to the need for a new primary substation.

It further states that United Utilities (UU) have not been able to comment on when in the phased load projections that this primary substation is likely to be required.

Also the requirement for the new substation is subject to the take-up of load from the new primary substation that has already been provided by EP on Central Park North and the exact types of development that will ultimately occupy the Central Park South area.

FIGURE 3.1 - Site 4: Central Park South

Urban Capacity Study Ref Number: 4
Other Reference: Discussions with John Craven/Peter Hill (Meeting 11th April 2005)
Bold - Arup Assumptions

Proposed Housing 70 Homes per hectare (10,000m^2)
Proposed Housing 100 Apartments per hectare (10,000m^2)
Assume 75m^2 area footprint for residential bldg surface water flow estimation, all other areas assume permeable area equates to 75% of site area to include for car park and road discharge. For derelict ground assume 10% area for discharge purposes.

EXISTING LANDUSE											EXISTING UTILITY DEMAND									
Site No.	Location	Description	No. of Houses	House Type	Class	Site Area (m²)	Permeable Area (m²)	Building Footprint (m²)	No. of Floors	Total Building Area (m²)	Electric Rate (W/m²)	Electric M.D. (kW)	Demand Timing: 13:00 - 15:00	Demand Timing: 16:00 - 18:00	Demand Timing: 18:00 - 20:00	Gas Rate (W/m²)	Gas M.D. (kW)	Water Rate (l/m²/day)	Water Demand (Ml/day)	Notes
3	Fletcher St & Pilling St	Community Centre, clinic, Newton Heath Upper School			D1*	25,000	18,750	12,500	1	12,500	30	375	375	338	38	115	1,438	#REF!	#REF!	
4	Irlam St, Evan St & Oldham Rd	Vacant Site			N/A	5,500	550	5,500	0	0	0	0	0	0	0	0	0	0	0.000	
5	Grimshaw Lane, end of Chapter St	Landscaped/playground			N/A	2,300	230	2,300	0	0	0	0	0	0	0	0	0	0	0.000	
6	Former Job Centre Bower St / Thompson St	Vacant Site			N/A	400	40	400	0	0	0	0	0	0	0	0	0	0	0.000	
7	Sleepdown Textiles, Bower St & Ten Acres Lane	Warehouse (See Note 2)			B8	18,400	13,800	5,520	1	5,520	35	193	174	174	193	85	469	0.23	0.001	
8	Site at Bower St	Vacant Site			N/A	12,700	1,270	12,700	0	0	0	0	0	0	0	0	0	0	0.000	
9	Former Wilsons Brewery Sports Ground, Ten Acres Lane	Sports ground / open land now vacant			N/A	22,200	2,220	22,200	0	0	0	0	0	0	0	0	0	0	0.000	
10	Jacksons Brickworks, Briscoe Lane	Vacant Site / Derelict Ground			N/A	169,600	16,960	169,600	0	0	0	0	0	0	0	0	0	0	0.000	
11	Weir Pumps Grimshaw Lane, Briscoe Lane	Vacant Site / Derelict Ground			N/A	164,300	16,430	164,300	0	0	0	0	0	0	0	0	0	0	0.000	
12	Land at Grimshaw Lane	Vacant Site / Derelict Ground			N/A	27,300	2,730	27,300	0	0	0	0	0	0	0	0	0	0	0.000	
13	Railways Sidings, West of Briscoe Lane	Vacant Railways sidings			N/A	14,600	1,460	14,600	0	0	0	0	0	0	0	0	0	0	0.000	
14	Wedgewood St & Clifton St	Derelict land			N/A	4,200	420	4,200	0	0	0	0	0	0	0	0	0	0	0.000	
15	Lord North St & Wedgewood St	Derelict land			N/A	5,000	500	5,000	0	0	0	0	0	0	0	0	0	0	0.000	
16	Wedgewood St & Corelli St	Derelict land			N/A	7,000	700	7,000	0	0	0	0	0	0	0	0	0	0	0.000	
17	Tripe Colony, Hulme Hall Lane	Derelict land			N/A	25,000	2,500	25,000	0	0	0	0	0	0	0	0	0	0	0.000	
18	Site at Norton St	Vacant Site / Derelict Ground			N/A	1,200	120	1,200	0	0	0	0	0	0	0	0	0	0	0.000	
19	Site at Drewett St	Vacant Site / Derelict Ground			N/A	1,400	140	1,400	0	0	0	0	0	0	0	0	0	0	0.000	
20a	Land between Hulme Hall Lane, Oldham Rd, railway & Lord North St	8 No. Warehouse (See Note 2)			B8	122,400	91,800	36,720	1	36,720	35	1,285	1,157	1,157	1,285	85	3,121	0.23	0.008	
20b	Land between Oldham Rd, railway & Ashton canal	Derelict land			N/A	12,000	1,200	12,000	1	12,000	0	0	0	0	0	0	0	0	0.000	
		3 No. Warehouse (See Note 2)			B8	27,300	20,475	8,190	1	8,190	35	287	258	258	287	85	696	0.23	0.002	
		Car Park			N/A	8,760	876	8,760	1	8,760	0	0	0	0	0	0	0	0	0.000	
		Commercial units (3)			B1*	6,850	5,138	6,850	1	6,850	50	343	343	274	69	77	527	1.92	0.013	
		Industrial Units (3)			B2	6,800	5,100	6,800	1	6,800	50	340	340	272	68	85	578	0.58	0.004	
20c	Land between Oldham Rd and Bower St	2 Bedroom Terraced Housing	86	2 Bedroom	C3(ii)						3,200	275	110	206	275	9,100	783	400	0.034	
20d	Land between Briscoe Lane, Ten Acres Line and railway line	2 Bedroom Terraced Housing	130	2 Bedroom	C3(ii)						3,200	416	166	312	416	9,100	1,183	400	0.052	
		Industrial Unit			B2	38,200	28,650	25,510	1	25,510	50	1,276	1,276	1,020	255	85	2,168	0.58	0.015	
		Total No. of Existing Houses =	216				232,059				Total =	2,936	2,492	2,343	1,369	Total =	10,963	Total =	0.120	

PROPOSED LANDUSE																PROPOSED UTILITY DEMAND								
Site No.	Location	Description	Demolished Houses	House Type	Retained Houses	House Type	Proposed Houses	House Type	Phasing	Class	Site Area (m²)	Permeable Area (m²)	Building Footprint (m²)	No. of Floors	Total Building Area (m²)	Electric Rate (W/m²)	Electric M.D. (kW)	Demand Timing: 13:00 - 15:00	Demand Timing: 16:00 - 18:00	Demand Timing: 18:00 - 20:00	Gas Rate (W/m²)	Gas M.D. (kW)	Water Rate (l/m²/day)	Water Demand (Ml/day)
3	Fletcher St & Pilling St	Retain existing land use										18,750					375	375	338	38		1,438		#REF!
4	Irlam St, Evan St & Oldham Rd	New Warehouse (See Note 2)							A	B8	5,500	4,125	1,650	1	1,650	35	58	52	52	58	85	140	0.23	0.000
5	Grimshaw Lane, end of Chapter St	Retain existing land use										230			0		0	0	0	0		0		0.000
6	Former Job Centre Bower St / Thompson St	New Light Industrial Unit (Note 1)							B	B1*	400	300	280	1	280	50	14	14	11	3	77	22	1.92	0.001
7	Sleepdown Textiles, Bower St & Ten Acres Lane	Retain existing land use										13,800					193	174	174	193		469		0.001
8	Site at Bower St	Retain existing land use										1,270					0	0	0	0		0		0.000
9	Former Wilsons Brewery Sports Ground, Ten Acres Lane	Retain existing land use										2,220					0	0	0	0		0		0.000
10	Jacksons Brickworks, Briscoe Lane	New Housing development					150	2 Bedroom	B	C3A(ii)*	169,600	127,200				2,400	360	144	270	360	9,100	1,365	400	0.060
							450	3 Bedroom	B	C3A(iii)*	169,600	127,200				3,350	1,508	603	1,131	1,508	13,400	6,030	500	0.225
							400	4 Bedroom	B	C3A(iv)*	169,600	127,200				4,400	1,760	704	1,320	1,760	14,375	5,750	700	0.280
11	Weir Pumps Grimshaw Lane, Briscoe Lane	Princess Food Factory							A	B2	164,300	123,225	50,000	1	50,000	50	2,500	2,500	2,000	500	85	4,250	0.58	0.029
		New Warehouse (See Note 2)							A	B8	10,000	7,500	3,000	1	3,000	35	105	95	95	105	85	255	0.23	0.001
12	Land at Grimshaw Lane	New commercial / retail (Note 1)							B	B1	27,300	20,475	19,110	1	19,110	50	956	956	764	191	77	1,471	2.30	0.044
13	Railways Sidings, West of Briscoe Lane	No plans - landlocked										1,460												
14	Wedgewood St & Clifton St	New commercial / retail (Note 1)							B	B1	4,200	3,150	2,940	1	2,940	50	147	147	118	29	77	226	2.30	0.007
15	Lord North St & Wedgewood St	New Light Industrial Unit (Note 1)							B	B1*	5,000	3,750	3,500	1	3,500	50	175	175	140	35	77	270	1.92	0.007
16	Wedgewood St & Corelli St	New commercial / retail (Note 1)							B	A1	7,000	5,250	4,900	1	4,900	125	613	551	613	123	115	564	0.70	0.003
17	Tripe Colony, Hulme Hall Lane	Fish Processing Factory							A	B2	25,000	18,750	3,500	1	3,500	50	175	175	140	35	85	298	0.58	0.002
		Warehouse							A	B8	25,000	18,750	2,500	1	2,500	35	88	79	79	88	85	213	0.23	0.001
		Restaurant							A	A3	25,000	18,750	1,500	1	1,500	70	105	105	84	105	134	201	35.71	0.054
18	Site at Norton St	New commercial / retail (Note 1)							B	A1	1,200	900	840	1	840	125	105	95	105	21	115	97	0.70	0.001
19	Site at Drewett St	New Light Industrial Unit (Note 1)							B	B1*	1,400	1,050	980	1	980	50	49	49	39	10	77	75	1.92	0.002
20a	Land between Hulme Hall Lane, Oldham Rd, railway & Lord North St	Retain existing land use										91,800					1,285	1,157	1,157	1,285		3,121		0.008
20b	Land between Oldham Rd, railway & Ashton canal	Retain existing land use										1,200					0	0	0	0		0		0.000
												20,475					287	258	258	287		696		0.002
												876					0	0	0	0		0		0.000
												5,138					343	343	274	69		527		0.013
												5,100					340	340	272	68		578		0.004
					86	2 Bedroom											275	110	206	275		783		0.034
20c	Land between Oldham Rd and Bower St	Retain existing land use			130	2 Bedroom											416	166	312	416		1,183		0.052
20d	Land between Briscoe Lane, Ten Acres Line and railway line	Retain existing land use										28,650					1,276	1,276	1,020	255		2,168		0.015
		No. of Demolished Houses =	0									798,544				Total =	13,505	10,641	10,971	7,815	Total =	32,189	Total =	#REF!
		No. of Retained Houses =	216																					
		No. of Proposed Houses =	1,000																					

Note 1: Assume for A1, B1 & B1* footprints are 70% of site area to account for car parking etc..
Note 2: Energy Consumption for a warehouse is based on the offfice part of the building: Assume 30% of the site area

SURFACE & FOUL WATER DISCHARGE ESTIMATION.

Existing hardstanding area (not including residential)=	232,059	m²
Proposed hardstanding area (not including residential)=	798,544	m²
NET INCREASE	**566,485**	m²

Existing Number of housing	216
Proposed Number of Housing	1,216
NET INCREASE	**1,000**

According to the estimations given in the report, 2700kW of the total projected maximum demand of 9269kW for the whole of Central Park South is attributed to the Weir Pumps/ Grimshaw Lane proposed developments on Sites Nos 11 and 12.

Gas

The Strategy Study report advises that there would be no need for major reinforcement to any of the sites, based on the present situation at the time the report was prepared and the loads provided on the table in Figure 3.1 The report also states that there is little experience of developers being significantly restricted by the capacity for trunk gas supply network in Manchester.

This is however disclaimed by the utility company and considered as guiding advice only, such that the actual need for reinforcement of the gas network can only be assessed when a "full" connections enquiry is received.

Water

The existing water demand for Central Park South was anticipated to be increased six fold from 0.12Ml/day to 0.845Ml/day due to the industrial, commercial and residential development, proposed under the Strategy Study. Of this total of 0.845Ml/day for the whole of Central Park South, only 0.074Ml/day (approximately 9%) of the demand is attributed to sites 8,11 and 12 however.

The report confirms that there is a robust mains infrastructure available but that there could be a requirement for network reinforcement from large diameter trunk mains around the periphery of the areas to support the increases in demand of the sites in Central Park South. Due to these increases there will also be a need to develop Demand Management Areas (DMAs) which will require the installation of meters and possibly pressure management systems.

Sewerage

Surface Water

The report advises that a significant net increase in surface run-off is anticipated for Central Park South as a whole. The net increase in hardstanding area was estimated at 566,485m^2 (not including residential). For the Weir Pumps sites, the report estimates the hardstanding area to increase from the existing 19160m^2 to 151200m^2 on full development and so have assumed a sevenfold increase in surface water discharge requirements. The flooding history indicates that previous incidents have been a result of lack of capacity in the localised sewer network and not in the trunk sewer network.

Discharge to sewer was proposed as likely to be the adopted solution for surface water discharge. The report states that UU's preference will be to discharge to a surface water sewer where available with the last resort being to discharge to a combined sewer.

The Strategy Study also advises that a "like-for-like" approach to discharge limits will probably be specified by UU i.e. discharge from a new development not to exceed that of the former development on the site. This could then result in UU allowing either (i) an unrestricted discharge to sewer or (ii) requesting that attenuation of surface water on-site be provided through SUDS, storage or new larger capacity sewers.

The increase in surface water discharge may therefore require local reinforcement and also possibly attenuation by each specific developer.

Foul Sewerage

Drainage generally currently discharges to the Davyhulme Wastewater Treatment Works (WWTW) which treats a population equivalent of 1.2 million including a significant proportion of trade waste.

The report states that the overall increase in demand for whole NEM area, calculated at a 2.4% increase is not likely to affect the Davyhulme WWTW providing that there are no other major developments that may push the envelope up to 5%. It is therefore deemed unlikely that UU will cite capacity of the WWTW as a restriction on the development at the Weir Pumps sites. The developments should be phased in gradually to allow the WWTW to gradually acclimatise to higher loadings.

Similarly, as for surface water, a "like-for-like" approach will be taken in assessing the local and trunk main foul sewerage network. The impact of peak foul flows on the network will need to be assessed through a UU network modelling exercise.

The report concluded that where reinforcement works are required, it should be possible to ensure that these are funded either by individual developers or through UU's general income.

General

The Utility Strategy Report concluded that should new works be required to the strategic gas, water or sewerage networks, mechanisms are in place such that the cost to the strategic network can be shared by a number or all consumers rather than by the single connection that takes the part of the network over capacity.

4.0 Details of Proposed Developments and Utility Demands

The locations of the two proposed industrial developments are indicated on the plan in Figure 2.2.

Details of the proposed operations, facilities and utility demands were obtained through meetings and various correspondence with the owner/operator and/or their Agent (Ms S. Sheldon for the Bakery and Mr N. Short for the Food Processing Plant).

The finalised demand estimations developed by SW were again agreed with the owner/operator and Agent, prior to holding discussions with the utility companies.

The following are the details of the proposed developments and the developed demand estimations as advised in August / September 2006. It is to be noted that the designs for the planned developments were still evolving at that time and any subsequent significant changes would need to be taken into account.

4.1 Food Processing Plant (Grimshaw Lane/Briscoe Lane/Ten Acres Lane)

(i) New development comprises partly of a relocation of an existing operational food processing plant located along West side of Lord North Street (300m distance approx) together with the addition of new packaging and other processes which are being relocated from other areas of the UK.

(ii) Board approval anticipated December 2006. Programming to be operational in 2009 with a 6 month transition period with both Manchester plants operating.

(iii) New facility to include on-site warehousing on the 20 acre site with 31,000m^2 production building footprint and 15,500m^2 high bay automated warehousing.

(iv) To be built and engineered with space and capacity for 10 years growth projection

(v) Accommodating: 131 staff per shift (3 shifts over 24 hour operation, 5 days/week) with 39 office staff giving a total of 170 staff on site at any one time.

(vi) Car parking to be provided to accommodate 360 employees.

(vii) Utility requirements (as advised by the Agent)

Electricity Maximum Demand

- 3040 kW (or 3700 kVA) when operational in 2009

- 9300 kW (or 11 MVA) engineered to allow for growth by 2016 (including allowance for refrigeration plant)

The Agent advised that the electricity supply will be required through a dual supply in order to maintain continuity of operations / surety of supply.

Gas Maximum Demand

- 6200kW (or 690m^3/hour) when operational in 2009
- 10,900kW (or 989 m^3/hour) engineered to allow for growth by 2016

Current supply for their existing plant is through 150mm diameter natural gas supply main.

Water Demand

- 3600 m^3/day (or 3.6Ml/day) when operational in 2009
- 6500m^3/day (or 6.5Ml/day) need to engineer to allow for growth by 2016.

The Agent advises that the above demands are required to be supplied through either dual mains or through a ring main to ensure surety of supply. (The existing plant includes storage of water on-site for up to 12 hours of supply).

Sewerage

Foul Water

- Trade effluent generated mostly through flushing of the process systems will be pH balanced on-site prior to discharge to sewer in order to achieve the appropriate discharge consent levels.
- Estimated discharge for trade effluent and foul sewerage totals:
  - 1170m^3/day for when operational in 2009
  - 2680m^3/day – need to engineer to allow for growth by 2016

Surface Water

At their existing location in Manchester surface water from the existing food processing plant is discharged directly into a combined public sewer. For any new facility, the surface water will need to discharge to a public surface water sewer, if available.

The estimated discharge for surface water is 1,500 litres/second for return period of 30 years and storm duration of 30 minutes, and 725 litres/second for 2 year storm return period and 30 minute storm duration. This is based on a 90% impermeable area of the developed site discharging directly to the sewer network.

4.2 Bakery (South of Grimshaw Lane)

(i) New development is required as a result of expansion of the owner's existing facility at Openshaw. This new facility to produce a wider range of products than the existing facility.
(ii) Owners anticipate submitting a planning application December 2006 and are programming to be operational in 2009
(iii) New facility will fully occupy the proposed site, with two accesses off Grimshaw Lane and up to 100 car parking spaces.
(iv) New facility to be engineered for growth to up to 6 times the production level at commissioning.

(v) Accommodating 60 employees on the day shift and 40 on the night shift. The bakery operates 24 hours per day, 7 days per week using a 2 shift system.
(vi) Utility requirements (as advised by the developer):-

Electricity maximum demands
- 320 kW or 400 kVA when operational in 2009
- 960 kW or 1200 kVA to be engineered to allow for growth by 2016

Gas maximum demand
- 804 kW or 75m^3/hour when operational in 2009
- 2411 kW or 225m^3/hour to be engineered to allow for growth by 2016

Water demand
- 40m^3 /day when operational in 2009
- 120m^3/day to be engineered to allow for growth by 2016

Sewerage

Foul
- Estimated trade and foul water discharge is 40m^3/day for discharge to sewer – when operational in 2009
- To be engineered to allow for growth up to 120m^3/day for discharge to sewer by 2016

Surface water
- For any new facility, the surface water will need to discharge to a public surface water sewer if available.
- The estimated discharge for surface water is 325 litres/second for 30 year storm return period and duration of 30 minutes and 163 litres/second for 2 year storm return period and duration of 30 minutes. This is based on a 90% impermeable area of the developed site discharging directly to the sewer network.

4.3 Comparison of Utility Demands with Utility Strategy Study Estimates

A summary chart of the demand estimates provided by the developer, as compared with those previously estimated under the Utility Strategy Study is given overleaf in Figure 4.1.

The estimation developed under the Strategy Study appear fairly realistic for the bakery development but are generally low for the Processing Food Plant. The estimates given for the water demand appear to be too low in the Strategy Study compared with developers requirements by a factor of twelve at 2009 which increase to a factor of over twenty by 2016. This will then also impact on the drainage requirements.

Food Processing Plant (Site 11)					
	NEM Strategy Study Estimation of Demand	Developer Estimation of Demand at 2009	Increase over Strategy Study Estimate	Developer Estimation of Demand at 2016	Increase over Strategy Study Estimate
Electricity	1983kW	3040kW	53%	9300kW	368%
Gas	4505kW	6200kW	38%	10900kW	142%
Water	30m^3/day	3600 m^3/day	11900%	6500 m^3/day	21500%
Bakery (Site 12)					
Electricity	717kW	320kW	-55% (decrease)	930kW	30%
Gas	1471kW	804kW	-45% (decrease)	2411kW	64%
Water	44 m^3/day	40 m^3/day	-9% (decrease)	120 m^3/day	173%

Figure 4.1 Comparison of Utility Demands with Utility Strategy Study Estimates

5.0 Existing Services, Available Capacities and Necessary Reinforcements

5.1 Food Processing Plant (Grimshaw Lane)

Refer to Figure 5.1 which shows existing utilities apparatus in the vicinity of the site.

5.1.1 Electricity Supplies

Existing Apparatus

There is a single 33kv cable to the South of the site running along Grimshaw Lane, continuing to the east and northeast of the site on Briscoe Lane and Ten Acres Lane respectively. At the point of the 33kV cable termination on Ten Acres Lane there appears to be an existing substation. There are also 6.6kV underground cables running through the proposed site according to UU records.

Other Issues Relating to Existing Electricity Apparatus

Referring to the plans included in the NEM Utility Strategy Study report it appears that there are 6.6kV cables running through the proposed development site. Although it is not known if these cables are live or abandoned they appear to serve the existing building to the North of the site boundary. These cables may require diversion or to remain in place with an easement when the proposed facility is constructed. This may have implications for the layout of the site if the cables are retained or will incur additional costs if they require diversion.

Capacity & Necessary Reinforcement

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (3040kW / 3700kVA) to 2016 (9300kW / 10MVA). The original NEM report gave a substantially lower estimated load of approximately 1983kW.

UU have been supplied with preliminary details of the proposed development on the Weir Pumps site and estimated loads. UU advised that they would require to carry out a system load study in order to determine the connection point. This study would identify the point of connection, the need for reinforcement works and any requirements for the provision of new primary substations. UU have advised that if the developer wished to examine connections to provide both approximately 3.7MVA (2009) and 10MVA (2016) then two separate studies would be required to be carried out. UU advised that these load studies should be commissioned in advance of the developer making an application for a connection.

UU did however advise that it was unlikely that a new primary electrical substation would be required to be constructed just to supply two developments such as those at the Weir Pumps site. However UU advise that the existing and currently planned primary substations (such as Central Park North Primary substation) are nearly at capacity currently. It may therefore be necessary that in order to provide the 3700kVA supply at 2009 for the Food Processing Plant, additional lengths of cabling could be required to connect to an electrical network with adequate capacity.

Scott Wilson have written to UU requesting this information but details of this would only be identified following the aforementioned UU system load study. UU further advised that electrical supply is taken up on a first come – first served basis and

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NOTES

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KEY

- FOUL SEWER
- WATER
- GAS — GAS
- ELECTRIC 6.6kV
- ELECTRIC 33kV

Revision Details	By / Check	Date	Suffix

Drawing Number: FIGURE 5.1 — Revision

WEIR PUMPS SITE MANCHESTER

Drawing Title

EXISTING SERVICES

Scale at A1			
1:1250			
Drawn: SV	Detailed		Approved
Check: SW	Tech Check	Det Check	Date: 20.09.6

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Plot Date :
AutoCAD File Name :
DB1V

According to the estimations given in the report, 2700kW of the total projected maximum demand of 9269kW for the whole of Central Park South is attributed to the Weir Pumps/ Grimshaw Lane proposed developments on Sites Nos 11 and 12.

Gas

The Strategy Study report advises that there would be no need for major reinforcement to any of the sites, based on the present situation at the time the report was prepared and the loads provided on the table in Figure 3.1 The report also states that there is little experience of developers being significantly restricted by the capacity for trunk gas supply network in Manchester.

This is however disclaimed by the utility company and considered as guiding advice only, such that the actual need for reinforcement of the gas network can only be assessed when a "full" connections enquiry is received.

Water

The existing water demand for Central Park South was anticipated to be increased six fold from 0.12Ml/day to 0.845Ml/day due to the industrial, commercial and residential development, proposed under the Strategy Study. Of this total of 0.845Ml/day for the whole of Central Park South, only 0.074Ml/day (approximately 9%) of the demand is attributed to sites 8,11 and 12 however.

The report confirms that there is a robust mains infrastructure available but that there could be a requirement for network reinforcement from large diameter trunk mains around the periphery of the areas to support the increases in demand of the sites in Central Park South. Due to these increases there will also be a need to develop Demand Management Areas (DMAs) which will require the installation of meters and possibly pressure management systems.

Sewerage

Surface Water

The report advises that a significant net increase in surface run-off is anticipated for Central Park South as a whole. The net increase in hardstanding area was estimated at 566,485m^2 (not including residential). For the Weir Pumps sites, the report estimates the hardstanding area to increase from the existing 19160m^2 to 151200m^2 on full development and so have assumed a sevenfold increase in surface water discharge requirements. The flooding history indicates that previous incidents have been a result of lack of capacity in the localised sewer network and not in the trunk sewer network.

Discharge to sewer was proposed as likely to be the adopted solution for surface water discharge. The report states that UU's preference will be to discharge to a surface water sewer where available with the last resort being to discharge to a combined sewer.

cannot be reserved – hence the actual supply arrangements and available capacities can only be confirmed when a formal application for a connection is made by the developer. Any offer of supply from United Utilities is only valid for 90 days from issue. Since the developer is
also requesting for a dual supply to the plant, this would further add to the likelihood that extended cable connections to other electrical networks with available capacities located some distance from the site would possibly be required.

Unofficially UU commented that a 10MVA load (as required at 2016) was likely to trigger the need for a new primary substation. UU did add that the cost for any new primary substation would be shared pro-rata to those customers drawing the load.

Details of the share of costs for extended cabling and primary substations etc, which may be attributable to the Food Processing Plant could only be determined upon a formal application for a connection and further discussions with the developer.

Refer to Appendix A for details of correspondence between Scott Wilson and UU.

5.1.2 Gas

Existing Apparatus

There are existing 12" and 355mm diameter low pressure gas mains to the South of the site running along Grimshaw Lane. There is an existing 12" low pressure gas main to the South East of the site running along Briscoe Lane and there is a 450mm medium pressure main which appears to terminate at the Eastern corner of the site on Briscoe Lane. In addition there is a 18" intermediate pressure main running up Lord North Street and West along Grimshaw Lane.

Capacity and Necessary Reinforcements

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (6200kW or 680m^3/hour) to 2016 (10,900kW or 989m^3/hour). The original NEM Utility Strategy Study report gave an estimated load of approximately 4505kW for this site.

National Grid (Transco) were supplied with preliminary details of the proposed development and estimated loads.

Discussions with National Grid confirmed that there is no requirement for any reinforcement works to accommodate the development. The location of the site is between two major supply points on the gas network. As a result the area is well served by gas supply infrastructure.

National Grid advised that the existing 12" low-pressure pipe on Grimshaw Lane has sufficient capacity for the site. The connection point is approximately 1 metre from the site boundary.

National Grid's connection service providers, Fulcrum Connections have been contacted to provide a connection cost. The proposed connection point is shown in Figure 5.2.

Refer to Appendix B for details of correspondence between Scott Wilson and National Grid.

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NOTES

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KEY

- EXISTING FOUL SEWER
- POSSIBLE FOUL SEWER CONNECTION
- EXISTING WATER
- POSSIBLE WATER CONNECTION
- GAS — EXISTING GAS
- GAS — POSSIBLE GAS CONNECTION
- EXISTING ELECTRIC 6.6kV
- EXISTING ELECTRIC 33kV

N

FOOD PROCESSING SITE

BAKERY SITE

POSSIBLE WATER MAIN CONNECTION

POSSIBLE GAS CONNECTION

POSSIBLE WATER MAIN CONNECTION

POSSIBLE GAS CONNECTION

POSSIBLE SEWER CONNECTION

POSSIBLE SEWER CONNECTION

PROPOSED 300mm DIA WATER MAIN (FEEDER MAIN CONNECTION TO PROVIDE DUAL SUPPLY FOR FOOD PROCESSING PLANT)

APPROXIMATE DISTANCE TO EXISTING WATER MAIN 640m (REFER TO INSET)

INSET (SCALE: 1:5000)

EXISTING WATER MAIN

PROPOSED WATER MAIN

Revision Details	By Check	Date	Suffix

Drawing Number: FIGURE 5.2 — Revision

WEIR PUMPS SITE MANCHESTER

Drawing Title

POSSIBLE FUTURE CONNECTIONS

Scale at A1: 1:1250

Drawn	Detailed		Approved
SV			
Check	Tech Check	Det Check	Date
SW			20.09.06

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5.1.3 Water

Existing Apparatus

There is an existing 24" cast iron water trunk main to the South of the site along Grimshaw Lane. There is also an existing 700mm diameter trunk main located further to the South of the site running along Hulme Hall Lane near Alan Turing Bridge. Smaller distribution mains exist along Lord North Street (4" water main).

Capacity and Necessary Reinforcements

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (3600m^3/day) to 2016 (6500m^3/day). The original NEM Utility Strategy Study report gave an estimated load of approximately 30m^3/day. This substantial increase will be due to the nature of the facility when compared with the original assumptions in the NEM Utility Strategy Study report.

A meeting was held with United Utilities on 25th August 2006 to discuss the proposals (refer to Appendix C for details, notes of meeting and additional correspondence).

UU advised that for a new development of this type with high water usage, UU would require on-site water storage of between 12 – 24 hours of water usage.

The provision of this storage would then allow for a connection to the 24" diameter trunk main on Grimshaw Lane to serve the site for the estimated 2009 demand being 3.6Ml/day. UU advised that this main is pressure managed and although over 100 years old is still reliable with only 1 – 2 bursts over the last 10 years.

The possibility of provision of a dual supply was discussed to provide surety of supply and to reduce on site storage requirements. UU confirmed that this could potentially be accommodated by constructing a new feeder main along Briscoe Lane to connect into the existing 700mm diameter main on Alan Turing Way. The proposed main would be approximately 300mm diameter and would be adopted by UU. If this main were to be installed UU indicated that the amount of on site storage required by UU could potentially be reduced to 8 hours of water usage.

The existing 24" trunk main along Grimshaw Lane would not however be sufficient for the 2016 demand of 6.5Ml/day, but with the feeder main connecting to the 700m diameter main on Alan Turing Way, then this would probably provide adequate capacity for 2016.

This cost would be expected to be borne by the developer but could be financially beneficial when offset against savings on provision of larger storage tanks. The proposed feeder main is shown in Figure 5.2.

The transition period for the relocation of the site was discussed with UU. UU advised that as demand falls at the existing facility and increases at the proposed new facility they would require on site storage to cater for any increase in demand over and above the estimated 2009 average operating demand (3,557m^3/day).

5.1.4 Sewerage

The developer is entitled to have drains or sewers connected to existing public sewers under the provisions of Section 106 of the Water Industry Act 1991. UU may attach conditions to any Agreement which is required to make the proposed connection and discharge foul or surface water. In addition a Trade Effluent Discharge Consent will be required.

United Utilities have requested a meeting with NEM to formulate a drainage strategy for the wider NEM study area to assist in planning sewerage for future developments in a coherent way.

Existing Apparatus

There is an existing 375mm diameter combined sewer to the South of the site running along Grimshaw Lane. There is also a 950x670 brick combined sewer to the North East of the site, which connects to the 1530mm diameter combined sewer to the South East of the site, running along Briscoe Lane. To the North of the site there is a 450mm diameter combined sewer running along Ten Acres Lane. There are no existing separate surface water systems in the vicinity of the sites.

Capacities and Network Reinforcements

Preliminary details of the proposed sewerage discharges were submitted to UU. UU advised that the existing 375mm diameter VC combined sewer in Grimshaw lane has a capacity at full bore of 200 litres/second and the existing 300-450mm diameter combined sewer along Ten Acres Lane varies in capacity from 213 litres/second to 563 litres/second. These capacities do not take into account any existing flows, however, UU cannot advise on connections to these sewers without undertaking additional modelling work. In general however, UU advise that the sewer capacity in this area is severely limiting. UU advised that the most likely suitable connection point would be the 1530mm diameter combined sewer along Briscoe Lane. The possible connection point is shown in Figure 5.2.

Refer to Appendix D for details of correspondence between Scott Wilson and UU.

Foul and Trade Effluent

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (1170m^3/day) to 2016 (2680m^3/day). The original NEM Utility Strategy Study report did not specifically examine foul sewerage provision.

The developers Agent has advised that effluent from the site would be pH balanced on site to an acceptable level appropriate for the discharge consent limits and discharged to the adopted foul sewer network, as is currently the case at the existing nearby plant. UU have advised that they do not anticipate any major problems in obtaining discharge consent and a suitable connection point however there may be financial implications attached to the new consent. The developers Agent advised that the existing discharge consents for the existing plant totals 900m^3/day with a peak flow of 20 litres/second. Therefore the additional flow into UU's sewerage system at 2009 resulting from the new plant is actually 1170m^3/day less the existing flow of 900m^3/day, giving an increase of 270m^3/day of foul / trade effluent. The 2016 estimated flows represent a threefold increase on agreed discharge levels for the existing plant. UU advise that discharge would probably be to the existing 1530

combined sewer along Briscoe Lane. UU further advice that the capacity within this sewer is “good” and should be satisfactory for the 2009 flows. However, for the 2016 flows particularly, UU would wish to undertake modelling to ascertain impact on the network.

Clearly the most appropriate connection to the 1530mm diameter combined sewer along Briscoe Lane will need to be discussed with the Developers as to whether a new length of connecting services along Grimshaw Lane to the new site access would need to be installed, or a direct connection into the site from Briscoe Lane.

Surface water

As detailed in Section 4 Scott Wilson calculated the estimated surface water discharge flows for a 1 in 2 year and 1 in 30 year storm events (725 litres/second and 1500 litres/second respectively). The original NEM Utility Strategy Study report estimated a seven fold increase in surface water drainage provision.

UU advise that since the existing sewer capacity in the area is severely limiting, then considerable volumes of attenuation will be required on both developments, possibly up to 80 – 90%.

However, UU advise that as an alternative, they would like to explore the possibility of conserving surface water in their combined sewers by draining some or all of it to the Rochdale Canal, located only some 130m distant along Grimshaw Lane via adoptable drainage. This would obviously involve consultation with the Environment Agency for a discharge consent and possibly British Waterways if they are responsible for the canal, in order to confirm the canal would have capacity to accept such additional surface water discharges.

UU have indicated that they would be willing to adopt such a carrier drain to the canal. This would require further investigation to ascertain whether there is a feasible solution, in conjunction with the EA/BW.

If this solution is found to be unworkable UU would allow surface water to be discharged to their combined sewer network via the 1530mm diameter combined sewer along Briscoe Lane. However the flow would be required to be attenuated as mentioned above. The allowable discharge rate and volume of storage for attenuation have not been confirmed UU as they would again require further modelling and investigation works before committing to an allowable discharge rate.

However, typical planning and Section 104 conditions for a brownfield site of this type would stipulate that proposed runoff discharges would need to be attenuated to match flows from previous developments on the site on a like for like basis.

UU confirmed that it would be possible to transfer flows from the existing plant site, therefore if existing discharge rates were maintained overall this may be acceptable to UU pending the preparation of an overall drainage strategy. However, the new site is larger and will generate more surface water than the existing plant, although this can be by the existing discharge rates.

5.2 Bakery (South of Grimshaw Lane)

5.2.1 Electricity

Existing Apparatus

There is a 33kV underground cable to the north of the site running along Grimshaw Lane. There are also two 6.6kV mains to the west of the site running along Lord North Street.

Capacity and Network Reinforcements

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (320kW or 400kVA) to 2016 (930kW or 1200kVA). The original Utility Strategy report gave an estimated load of approximately 717kVA for this site.

UU were supplied with details of the proposed development and estimated loads. UU advised that they would most likely require to carry out a system load study to determine the connection point. However this would only give information relating to the existing situation and UU would not be able to guarantee that this information would be accurate at the time a formal application for connection, and hence another study would most likely be required.

As detailed in Section 5.1.1 it is unlikely that a primary substation would be required to be constructed for these two developments alone. The required electrical demand for the Bakery site is only 10% of that required for the proposed Food Processing Plant. However due to the limited available capacity within the existing power network, the Developer may still be required to contribute pro-rata to any cable extensions required for connection to other nearby networks where there is available capacity.

Scott Wilson have requested details from UU as to which network could provide capacity but are still awaiting this information.

Refer to Appendix A for details of correspondence between Scott Wilson and UU.

5.2.2 Gas

Existing Apparatus

There is an existing 12” low pressure gas main to the North of the site running along Grimshaw Lane and there is an 18” intermediate pressure gas main to the West of the site running along Lord North Street.

Capacity and Network Reinforcements

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (804kW or 75m^3/hour) to 2016 (2411kW or 225m^3/hour). The original NEM Utility Strategy Study report gave an estimated load of approximately 1471kW for this site.

National Grid (Transco) were supplied with details of the proposed development and estimated loads.

Discussions with National Grid indicate that there should be no requirement for any major reinforcement works to accommodate the development. This is due to the location of the site, which is between two major supply points on the gas network, and also due to the previous use of the area as a whole, which was previously a heavily developed residential and industrial area. As a result the area is well served by gas supply infrastructure.

National Grid advised that the existing 12" low-pressure pipe on Grimshaw Lane has sufficient capacity for the site. The connection point is approximately 12 metres from the site boundary.

The proposed connection point is shown in Figure 5.2.

Refer to Appendix B for details of correspondence between Scott Wilson and National Grid.

5.2.3 Water

Existing Apparatus

There is an existing 24" water main to the North of the site along Grimshaw Lane, which is a trunk feeder (not normally used for direct connection for consumers). There is also a 100mm diameter feeder main to the West of the site running along Lord North Street.

Capacities and Network Reinforcements

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (40m^3/day) to 2016 (120m^3/day). The original NEM Utility Strategy Study report gave an estimated load of approximately 44m^3/day.

A meeting was held with United Utilities on 25th August 2006 to discuss the proposals (refer to Appendix C for details and additional correspondence).

UU advised that the existing water supply network would have capacity to supply the Bakery site, but that nevertheless the facility may require on site storage as part of demand management proposals for the area as whole. The exact requirement for this will be determined in discussion with the developer when a formal application is made.

UU confirmed that for a single supply to the site the existing 4" main on Lord North Street would be suitable. If a dual supply were required by the Bakery this could be achieved by making a connection to the proposed connection main serving the proposed Food Processing Plant. The possible connection point is shown in Figure 5.2.

5.2.4 Sewerage

The developer is entitled to have drains or sewers connected to existing public sewers under the provisions of Section 106 of the Water Industry Act 1991. UU may attach conditions to any Agreement which is required to make the proposed connection and discharge foul or surface water. In addition a Trade Effluent Discharge Consent will be required.

Existing Apparatus

There is an existing 375mm diameter combined sewer to the North of the site running along Grimshaw Lane connecting to a 1530mm diameter combined sewer to the East of the site running along Briscoe Lane. To the West of the site running along Lord North Street is a 1130x760 brick combined sewer and a 300mm diameter combined sewer. There are no existing separate surface water systems in the vicinity of the sites.

Capacities and Network Reinforcements

Details of the proposed sewerage discharge flows were submitted to UU. UU advised that the existing 375mm diameter combined sewer along Grimshaw Lane has a capacity at full bore of 200 litres/second max and the existing 300-450mm diameter VC combined sewer along Ten Acres Lane varies in capacity from 213 litres/second to 563 litres/second. These capacities do not take into account any existing flows. UU cannot advise on connections to these sewers without undertaking additional modelling work.

UU advised that the most likely suitable connection point is the existing 1530mm diameter combined sewer along Briscoe Lane. The proposed connection point is shown in Figure 5.2.

Refer to Appendix D for details of correspondence between Scott Wilson and UU.

Foul / Trade Effluent

As detailed in Section 4 Scott Wilson calculated the estimated loading for 2009 (40m^3/day) to 2016 (120m^3/day). The original NEM Utility Strategy Study report did not specifically examine foul sewerage provision.

The estimated discharge from the Bakery is only 3% of that for the Food Processing Plant and is not substantial compared to the size of the existing sewers and UU have advised that they do not anticipate any major problems in obtaining discharge consent and a suitable connection point, however, there may be financial implications attached to the new consent.

Figure 5.1 shows that the area is well served by combined sewers which would be suitable to receive the effluent discharge and foul sewerage from the development, although as detailed above the most likely discharge would be via the existing 1530mm diameter combined sewer along Briscoe Lane which has some available capacity.

Surface water

As detailed in Section 4 Scott Wilson calculated the estimated surface water discharge flows for a 1 in 2 year and 1 in 30 year storm events (163 litres/second and 325 litres/second respectively). The original NEM Utility Strategy Study report estimated a seven fold increase in surface water drainage provision upon development.

UU advise that since the existing sewer capacity in the area is severely limiting, then considerable volumes of attenuation will be required on both developments, possibly up to 80 – 90%.

However, UU advise that as an alternative, they would like to explore the possibility of conserving surface water in their combined sewers by draining some or all of it to the Rochdale Canal located only some 130m distant along Grimshaw Lane via adoptable drainage. This would obviously involve consultation with the Environment Agency for a discharge consent and possibly British Waterways if they are responsible for the Canal, in order to confirm the Canal would have capacity to accept such additional surface water discharges.

UU have indicated that they would be willing to adopt such a carrier drain to the canal. This would require further investigation to ascertain whether if it is a feasible solution, in conjunction with the EA/BW.

If this solution is found to be unworkable UU would allow surface water to be discharged to their combined sewer network via the 1530mm diameter combined sewer along Briscoe Lane. However the flow would be required to be attenuated as mentioned above. The allowable discharge rate and volume of storage for attenuation have not been confirmed by UU as they would again require further modelling and investigation works before committing to an allowable discharge rate.

However, typical planning and Section 104 conditions for a brownfield site of this type would stipulate that proposed runoff discharges would be attenuated to match flows from previous developments on the site on a like-for-like basis. To determine this flow value investigation works and modelling would need to be undertaken by UU to determine the extent of attenuation / storage on site required.

6.0 Procurement Issues

6.1 Electricity

The major reinforcement works that may be required to the electricity network can be summarised as:-

- Cable connection to a nearby network with available capacity for the 2009 power demand.
- New primary substation likely to be required in the area to provide adequate supply for the 2016 power demand estimations.

Since the requirement for a new primary substation by 2016 is not solely due to the demand from the two developments, then it would be likely that UU would fund the provision of the new primary substation. UU would however seek to recover the cost pro-rata from the developers of these two sites and subsequent applicants for connection.

UU would also require the two Developers to contribute pro-rata to the cost of any cable connections to a existing substation / network with capacity to cater for the 2009 power demand.

Works to the 6.6kV network may also be required to reallocate demands within the network. Such works, whilst potentially costly, are normally accepted by developers as a necessary part of an electricity connection.

6.2 Gas

National Grid Transco have not identified a need for the reinforcement of the trunk gas supply network. If it does eventuate that reinforcement to the strategic network is required then there is a mechanism whereby costs can be recovered from Developers requesting additional supplies. Quotations received from Fulcrum Connections (National Grid's agent for connections) are valid for three months from issue. Once three months have passed it is necessary to resubmit the application. There are no major issues with procurement of gas supplies.

6.1.3 Water

In general water companies are obliged to supply water to most developments.

There has been some limited competition introduced recently for large water consumers which allows new entrant companies to develop new water sources and pass the water through water company mains to large consumers. This may be considered by the developer for the Food Processing Plant.

With regard to the laying of new water mains and associated service connections the Water Industry Act allows companies to recover the costs from developers. The laying of the new mains or new service connections could be procured competitively through self-lay, or alternatively a developer can requisition a main where the water company used its powers to lay the necessary pipework on third party land.

6.1.4 Sewerage

As for water, there is an obligation on water companies and S106 of the Water Industry Act to accept discharges, albeit that the costs of this may be borne in part by the developer, and that it is not prejudicial to the sewerage network.

Also the Act allows companies to recover the costs of new sewers and connections which can be procured competitively or alternatively a developer can requisition a sewer where the water company lays the necessary pipework.

The cost of any surface water attenuation or storage facilities will need to be borne by the developers. The alternative of a new sewer discharging to the Rochdale Canal will also be a cost which would be borne pro-rata by the developers who discharge into it. There will also be a standard charge payable to UU for the connection for checking of the design and inspection of the works. This does not allow for any ongoing charges relating to Trade Effluent Discharge consents.

7.0 Conclusions and Recommendations

7.1 Conclusions

(i) The previous Utility Strategy Study estimated that the Central Park South sub-area of NEM was one of the sub-areas with the highest increase in utility demand resulting from potential development areas. The Strategy Study utility demand estimates were based on general industry figures and were not specific to the exact industrial operation being proposed. As a consequence, the utility demand estimates given in the Strategy Study are low compared to the developers demand estimates, particularly for the Food Processing Plant. For the Food Processing Plant the Developer estimates the electricity and gas demands at 40 – 50% higher than the Utility Strategy Study and for water the developers estimates are some 12 times greater than the figure estimated in the Strategy Study for 2009. This differential increases substantially by 2016 as a result of the future growth predicted by the Developers.

(ii) For the proposed Bakery development, the Utility Strategy Study estimates are generally in line with the developers utility demand figures for being operational in 2009. However the developers 2016 figures are 30%, 64% and 173% higher for electricity, gas and water respectively due to anticipated growth of the Bakery operations.

(iii) In summary the previous utility demand estimates given in the Utility Strategy Study are particularly low for the two development sites for 2009 in terms of electricity, water supply and sewerage. For 2016 the previous demand estimates are all low compared to those established recently with the developers.

(iv) The requirement of the Food Processing Plant Developer for a dual supply for electricity and water, or alternatively a ring main supply for water in order to safeguard the supply, has a significant effect on the network arrangements for provision of supply.

(v) Electricity

It is unlikely that a primary electrical substation would be required solely for the two developments at 2009 on the Weir Pumps site. It is more likely that a power connection to a nearby network with available load capacity would be required.

Further details can only be ascertained by UU undertaking a system load study prior to a formal application for a connection.

The demand estimates at 2016 however indicate that a primary electrical substation will be required in the area as the power demand for both developments increases three fold over the period 2009 – 2016. The developer will need to engage at an early stage with UU in order to obtain more definitive information on network reinforcements required and to negotiate pro-rata contributions.

(vi) Gas

The two development sites are well served by gas supply infrastructure and there are no requirements for network reinforcement to accommodate the development.

(vii) Water

The proposed Bakery development has a water demand relatively unchanged since the Utility Strategy Study and could relatively readily be accommodated by the existing water supply network in the vicinity of the site; probably via the 4" water main along Lord North Street.

The proposed Food Processing Plant however not only has a 50% greater demand than originally anticipated and which increases threefold by 2016, but also requires a dual supply for surety of supply and to decrease water storage requirements. This plant would need to be supplied direct off the 24" trunk main along Grimshaw Street with another connection required to another network / ring main for further available capacity.

The likely network reinforcement required would therefore comprise laying a new length of approximately 300mm diameter feeder main some 700m in length along Briscoe Lane to connect to another existing trunk main along Hulme Hall Lane.

In addition, UU anticipate that they will require the two proposed developments to operate some form of on-site water storage as part of a demand management system.

(viii) Sewerage – Foul Water / Trade Effluent

The substantially higher water use by the proposed Food Processing Plant than originally anticipated results in an associated increase in trade effluent / foul water generated by that plant.

The water company is obliged to accept the flows under the Water Industries Act and preliminary indications are that discharge from both developments can be made to the 1530mm diameter combined sewer adjacent to the site along Briscoe Lane which has spare capacity.

The proposed 2009 estimated flows for the Food Processing Plant are not however substantially greater than the existing flows discharging from the developers existing plant nearby; and this will be taken into account by UU in assessing the available capacity of the network.

UU have advised that further modelling of the network will be required in order to assess the available network capacity at 2016 and UU advise that they need to discuss with NEM the wider programme of development, in order to facilitate this.

The capacity of the waste water treatment works is not likely to be a constraint on the developments.

(ix) Surface Water

The original strategy study estimated a seven fold increase in surface water run off following the development of the two sites, which is in line with the actual developers proposals.

UU advise that substantial volumes of attenuation / storage may be required by the developers in order to limit the discharge flows into the adopted sewers, since the existing sewer capacity in the area is severely limiting.

An alternative to be considered is the laying of a new surface water adoptable drain from the two sites along Grimshaw Lane westwards to discharge into the Rochdale Canal. This could avoid having to construct extensive attenuation facilities within the development plots.

Please refer to Figure 7.1 which provides a tabular summary of the requirements for utilities supplies to each of the two developments for the 2009 and 2016 scenarios.

Figure 7.1 - Summary of Requirements for Utilities Supplies for Each Development at Operation (2009) and at 2016

Site	Electricity Supply Requirements	Gas Supply Requirements	Water Supply Requirements	Foul and Trade Effluent Requirements	Surface Water Drainage Requirements
Food Processing Plant	**2009 Estimated Load - 3040 kW (approximately 3700 kVA)** United Utilities (UU) advised that they require to carry out a system load study to determine the exact connection point. This study would identify the point of connection, the need for reinforcement works and any requirements for the provision of new primary substations. Unofficially however UU advised that it is unlikely that a new primary substation will be required for one or two developments such as those proposed. More likely that new power cable connections will need to be made to nearby networks with available capacity. **2016 Estimated Load - 9300 kW (approximately 10 MVA)** Unofficially UU advised that this level of load was likely to trigger the need for a new primary substation. UU advised that the cost for any new primary substation would be shared pro-rata to those customers drawing the load. A load study would be required to identify the point of connection, the need for reinforcement works and any requirements for the provision of new primary substations. Note that this study would be separate from the study related to the 2009 requirements.	**2009 Estimated Load - 6200kW (approximately 690m3/hour)** Discussions with National Grid confirmed that there is no requirement for any reinforcement works to accommodate the development. National Grid advised that the existing 12" low-pressure pipe on Grimshaw Lane has sufficient capacity for the development. **2016 Estimated Load - 10,900kW (approximately 989 m3/hour)** As above.	**2009 Estimated Load - 3600 m3/day** UU advised that for a new development of this type with high water usage, UU would require on-site water storage of between 12 - 24 hours of water usage. The provision of this storage would then allow for a connection to the 24" diameter trunk main on Grimshaw Lane to serve the site for the estimated 2009 demand being 3.6Ml/day. The possibility of provision of a dual supply was discussed to provide surety of supply and to reduce storage capacity requirements. UU confirmed that this could potentially be facilitated by installing a new feeder main along Briscoe Lane to connect into the existing 700mm diameter trunk main on Alan Turing Way. UU advised that the amount of on site storage required by UU could potentially be reduced to 8 hours of water usage if a dual supply was constructed. **2016 Estimated Load - 6500m3/day** The existing 24" diameter trunk main along Grimshaw Lane is insufficient for the 2016 demand of 6.5Ml/day. Installing the proposed feeder main connecting to the 700mm diameter main on Alan Turing Way (as detailed above) should provide adequate capacity for 2016.	**2009 Estimated Discharge Rate - 1170m3/day** The effluent from the site is required to be pH balanced on site to an acceptable level (appropriate for the discharge consent limits) and discharged to the adopted foul sewer network, as is currently the case at the existing nearby plant. UU advised that they do not anticipate any major problems in obtaining discharge consent and a suitable connection point to public sewer however there may be financial implications attached to the new consent. UU cannot advise on connections to the existing sewers without undertaking additional hydraulic modelling work of the sewer network. UU advised that the most likely suitable connection point is the existing 1530mm diameter combined sewer along Briscoe Lane. UU further advised that the capacity within this sewer should be satisfactory for the 2009 flows. **2016 Estimated Discharge Rate - 2680m3/day** For the 2016 flows, UU require to undertake hydraulic modelling to ascertain impact on the swer network to determine the point of discharge. Comments above relating to effluent treatment will apply.	**2009 Estimated Discharge Rate - 1,500 litres/second peak flow (for 30 year storm return period)** UU advise that since the existing public sewer capacity in the area is severely limiting, then considerable volumes of storage attenuation on-site will be required within both developments, possibly up to 80 - 90%. UU advise that as an alternative, they would like to explore the possibility of conserving surface water capacity within their combined sewers by draining some or all of the surface runoff in a new drain to the Rochdale Canal. UU have indicated that they would be willing to adopt such a carrier drain to the canal. If this solution is found to be unworkable UU would then allow surface water to be discharged to their combined sewer network via the 1530mm diameter combined sewer along Briscoe Lane. **2016 requirements** As above.

Site	Electricity Supply Requirements	Gas Supply Requirements	Water Supply Requirements	Foul and Trade Effluent Requirements	Surface Water Drainage Requirements
Bakery	**2009 Estimated Load - 320 kW (or approximately 400 kVA)** UU advised that they require to carry out a system load study to determine the exact connection point. It is unlikely that a dedicated primary substation would be required for this development. Nevertheless, the Developer may still be required to contribute pro-rata to any cable extensions required for connection to other nearby networks where there is available capacity. **2016 Estimated Load - 960 kW (or approximately 1200 kVA**) UU advised that they would most likely require to carry out a system load study to determine the exact connection point. Unofficially UU advise that a new primary substation will likely be required, the cost of which may require to be shared pro-rata with those customers drawing the load.	**2009 Estimated Load - 804 kW (approximately 75m3/hour)** Discussions with National Grid confirmed that there is no requirement for any reinforcement works to accommodate the development. National Grid advised that the existing 12" low-pressure pipe on Grimshaw Lane has sufficient capacity for the site. **2016 Estimated Load - 2411 kW (approximately 225m3/hour)** As above.	**2009 Estimated Load - 40m3 /day** UU advised that the existing water supply network would have capacity to supply the Bakery development, but that nevertheless the new facility may be required to provide on site storage as part of demand management proposals for the area as whole. UU confirmed that for a single supply to the site the existing 4" main on Lord North Street would be suitable for a connection. If a dual supply were required by the Bakery this could be achieved by making a connection to the proposed connection main serving the proposed Food Processing Plant. **2016 Estimated Load - 120m3/day** As above.	**2009 Estimated Discharge Rate - 40m3/day** UU advise that they do not anticipate any major problems in obtaining discharge consent and a suitable connection point to existing public sewers, however there may be financial implications. UU cannot advise on appropriate connections to the existing sewers without undertaking additional hydraulic modelling. UU advised that the most likely suitable connection point is the existing 1530mm diameter combined sewer along Briscoe Lane. UU further advised that the capacity within this sewer should be satisfactory for the 2009 flows. **2016 Estimated Discharge Rate - 120m3/day for discharge to sewer** UU require to undertake hydraulic modelling to ascertain impact on the sewer network. This would confirm whether the existing 1530mm diameter sewer is suitable to receive the 2016 predicted discharge flow.	**2009 and 2016 Estimated Discharge Rate - 325 litres/second peak flow (for 30 year storm return period)** UU advise that since the existing public sewer capacity in the area is severely limiting, then considerable volumes of storage attenuation on-site will be required within both developments, possibly up to 80 - 90%. UU advise that as an alternative, they would like to explore the possibility of conserving surface water capacity within their combined sewers by draining some or all of the surface runoff in a new drain to the Rochdale Canal. UU have indicated that they would be willing to adopt such a carrier drain to the canal. If this solution is found to be unworkable UU would then allow surface water to be discharged to their combined sewer network via the 1530mm diameter combined sewer along Briscoe Lane. . **2016 requirements** As above.

7.2 Recommendations

(a) United Utilities (Sewerage) to consult further with New East Manchester regarding the drainage strategy for the wider NEM area so that sewerage provisions can be planned coherently and in parallel with future developments. UU to undertake hydraulic modelling of network.

(b) Further discussion with UU and investigation of a possible new surface water drain from the development sites discharging to the Rochdale canal, which could result in substantial savings and avoid difficulties in providing large volumes of attenuation within the development plots.

(c) Developers to engage with UU Water to discuss on-site water storage requirements / provisions as this is interrelated to the water supply network reinforcements required.

(d) Arrange for UU to undertake a power supply studies in order to more clearly ascertain extent of reinforcement cabling required and timing for any new primary substation.

(e) Food Processing Plant developer / NEM to consult further with UU on power requirements for 2016 (10MVA) which are substantially higher than the initial operational supply required at 2009 (3.7MVA). The infrastructure necessary to deliver 3.7MVA is substantially different to that required to deliver 10MVA and there are a number of options for potentially deferring connection costs which would be of benefit to the developer / NEM.

Appendix A

Correspondence with United Utilities Electricity Representative

From: Stella Walsh
Sent: 30 August 2006 09:45
To: 'phil.davies@uuplc.co.uk'
Cc: Neil Byrne
Subject: Weir Pump Site

Phil,

Following our telephone conversation this morning please find the requested data attached.

Site A - Electricity Demands

Current demand = 3700kVA
Proposed demand by 2016 = 10MVA

Site B - Electricity Demands

Current demand = 400kVA
Proposed demand by 2016 = 1200kVA

The supply for these demands is expected on site by mid 2009.

Please do not hesitate to contact me if you have any queries.

Kind Regards,
Stella Walsh.

Scott Wilson
St. James's Buildings
Oxford Street
Manchester
M1 6EF
0161 236 8655

The following attachment was removed >>

Site location .xls

Newton Heath - Ten Acres Lane Grimshaw Lane Weir Pump Site

From: Davies, Phil [Phil.Davies@uuplc.co.uk]
Sent: 30 August 2006 11:38
To: Stella Walsh
Cc: Cooper, Lisa
Subject: Newton Heath - Ten Acres Lane/ Grimshaw Lane Weir Pump Site

Stella,
It is likely that we will need to undertake a system study to enable us to determine how and where such a development load can be connected, the study charge being £3,686.00 plus VAT.

Given the high load requirement for this site, 8.4MVA in total, (as per your subsequent e-mail attached) I would advise your team coming in to discuss your requirements in more detail. This would enable us to understand your client's requirements in more detail.

Can you suggest 2 or 3 suitable meeting dates from 11th September onwards?

Regards,
Phil Davies
Major Projects Engineer
United Utilities
Network & Developer Services
Hathersage Road
Manchester M13 0EH
Tel 0161 257 4734

From: Stella Walsh
Sent: 30 August 2006 16:35
To: 'phil.davies@uuplc.co.uk'
Cc: Colin Barker; Neil Byrne
Subject: New East Manchester Ltd - Weir Pumps Site / Grimshaw Lane

Attn: Phil Davies

New East Manchester Ltd - Weir Pumps Site / Grimshaw Lane
Re: Formal Application for Point of Connection - Electricity

As discussed we are commissioned by New East Manchester Ltd to undertake a utilities assessment for two proposed industrial developments that are planned for the Weir Pumps / Grimshaw Lane sites (refer attached plan).

Both proposed developments will be submitting for planning consent in Dec 2006 and anticipate being operational in 2009. Both developments also expect significant growth in their operations thereafter. These are not speculative developments.

Details of the proposed developments are as follows:-

Weir Pumps Site, Bruce Lane / Grimshaw Lane

Food Processing / Fruit Juice Plant.
Relocation of existing factory nearly (located west side of Lord North St) and introduction of packaging process.
Anticipate a 6 month transition period whilst existing plant production tails off and new plant comes on stream (2009).
Estimated 2009 demand = 3700 KVA. But need to engineer to allow for growth by 2016 for a demand of approx 10 MVA.
The plant will require a dual supply for guarantee of supply.

Site South of Grimshaw Lane

Bakery.
Relocation and expansion of bakery from Parkhouse St Industrial Estate, Openshaw.
Anticipate operational 2009.
Estimated 2009 demand = 400 KVA. But need to engineer to allow for growth by 2016 for a demand of 1,200 KVA.

Please can you advise the following as soon as possible:-

(i) Whether there is likely to be adequate capacity in the existing electricity networks in the vicinity of the sites, and likely connection details.
(ii) Whether an extended cable connection would be required to another network which could provide the capacity.
(iii) Confirm that a new primary sub-station would not be required to be constructed to cater for these two developments in isolation.
(iv) An indication of cost for the point of connection (this can follow if a study is required, which we understand may take some time).

Kind Regards,
Stella Walsh

on behalf of Colin Barker.

The following attachment was removed >>

Site location .xls

Appendix B

Correspondence with National Grid (Transco) Gas Representative

From: Stella Walsh
Sent: 30 August 2006 17:21
To: 'stuart.sayles@uuplc.co.uk'
Cc: Colin Barker; Neil Byrne
Subject: New East Manchester - Weir Pumps Site

Attn: Stuart Sayles

New East Manchester Ltd - Weir Pumps Site / Grimshaw Lane
Re: Formal Application for Point of Connection - Gas

Following your telephone conversation with Neil Byrne please find the requested information enclosed.

We are commissioned by New East Manchester Ltd to undertake a utilities assessment for two proposed industrial developments that are planned for the Weir Pumps / Grimshaw Lane sites (refer attached plan).

Both proposed developments will be submitting for planning consent in Dec 2006 and anticipate being operational in 2009. Both developments also expect significant growth in their operations thereafter. These are not speculative developments.

Details of the proposed developments are as follows:-

Weir Pumps Site, Bruce Lane / Grimshaw Lane - Site A

- Food Processing / Fruit Juice Plant.
- Relocation of existing factory nearly (located west side of Lord North St) and introduction of packaging process.
- Anticipate a 6 month transition period whilst existing plant production tails off and new plant comes on stream (2009).
- Estimated 2009 demand = 6195kW or 562m3/hr. But need to engineer to allow for growth by 2016 for a demand of approx 10911kW or 989m3/hr.

Site South of Grimshaw Lane - Site B

- Bakery.
- Relocation and expansion of bakery from Parkhouse St Industrial Estate, Openshaw.
- Anticipate operational 2009.
- Estimated 2009 demand = 804kW or 75m3/hr. But need to engineer to allow for growth by 2016 for a demand of 2411kW or 225m3/hr.

Please can you advise the following as soon as possible:-

(i) Whether there is likely to be adequate capacity in the existing gas networks in the vicinity of the sites, and most likely suitable points of connection.
(ii) An indication of cost for the point of connection and any reinforcement works, if required.
(iii) The likehood of having to carry out reinforcement works to the network to accommodate the new supplies.

If you have any questions please feel free to give me a call.

Kind Regards,
Stella Walsh.

Scott Wilson
St. James's Buildings
Oxford Street
Manchester
M1 6EF
0161 236 8655

From: Sayles, Stuart [stuart.sayles@uk.ngrid.com]
Sent: 31 August 2006 11:06
To: Stella Walsh
Subject: RE: Weir Pumps Site, New East Manchester

Stella,

In response to your question on the fax....

1) LP/MP and IP mains cross the area near to where you potentially require the loads. I can't advise suitable points of connection, that would be up to you to identify when you are ready to submit either a land enquiry (stage 1) or detailed request (stage 2). What I can say, today and dependent on the exact location of connection, there should be no real need for reinforcement to accept these loads, a land enquiry response would confirm either way.

2) Costs (contributions) would only be determined once a detailed request is submitted, reinforcement unlikely as stated above.

3) Again, reinforcement not likely but dependent on exact location of connection supplied in the request.

For Stages 1 and 2, please write to our connections team, a contact is given below.

Steff McDermott,
National Grid,
Connections Team,
Block 4, Area 6,
Brick Kiln St.,
Hinckley,
Leic.,
LE10, 0NA.

Hope this helps,

Stuart Sayles

Network Strategy
National Grid
Tel. Ext. 01455 231656
Tel. Int. 7153 1656
Tel. M/b 07976 641048

E-mail: Stuart.Sayles@uk.ngrid.com
Network Strategy website: http://ngtuk/dist_networkstrategy/
-----Original Message-----
From: Stella Walsh [mailto:Stella.Walsh@scottwilson.com]
Sent: Thursday, August 24, 2006 3:06 PM
To: Sayles, Stuart
Subject: Weir Pumps Site, New East Manchester

Stuart,

I have spoken to Jeff Plat from Transco and he has given me your details to discuss the weir pumps site.
I shall follow this email up with a telephone call.

Kind Regards,

Stella Walsh
Scott Wilson
St. James's Buildings

Oxford Street
Manchester
M1 6EF
0161 236 8655

Visit our web site at www.scottwilson.com

Site location .xls

Tracking:

Recipient	Read
'stuart.sayles@uuplc.co.uk'	
Colin Barker	Read: 30/08/2006 17:52
Neil Byrne	Read: 30/08/2006 17:22

Our Reference : E3896627
Your Reference : NOT GIVEN

nationalgrid

NORTH WEST LDZ
BLOCK 4 AREA 6
BRICK KILN STREET
HINCKLEY LEICESTERSHIRE
LE10 0NA

FAO: MS STELLA WALSH
SCOTT WILSON (MANCHESTER)
ST. JAMES BUILDINGS
OXFORD STREET
MANCHESTER
LANCASHIRE
M1 6EF

Date: 11/09/2006
Contact: STEPHANY MCDERMOTT
Tel: 01455 231120
Fax: 0845 0700868

Dear MS WALSH,

Land Enquiry Re : SITE A AND B,WEIR PUMPS,GRIMSHAW ALNE,MANCHESTER,M40 2BA

Thank you for your enquiry dated 04-Sep-2006, which we received on 04-Sep-2006.

The nearest main with sufficient capacity is 1 metres from the site boundary and it is a Low Pressure main.

Plans Attached: YES

Should you require connection costs please contact National Grid's connection service provider, Fulcrum Connections on 0870 606 4750 for a quotation.

If you have any queries, please contact STEPHANY MCDERMOTT on the number above.

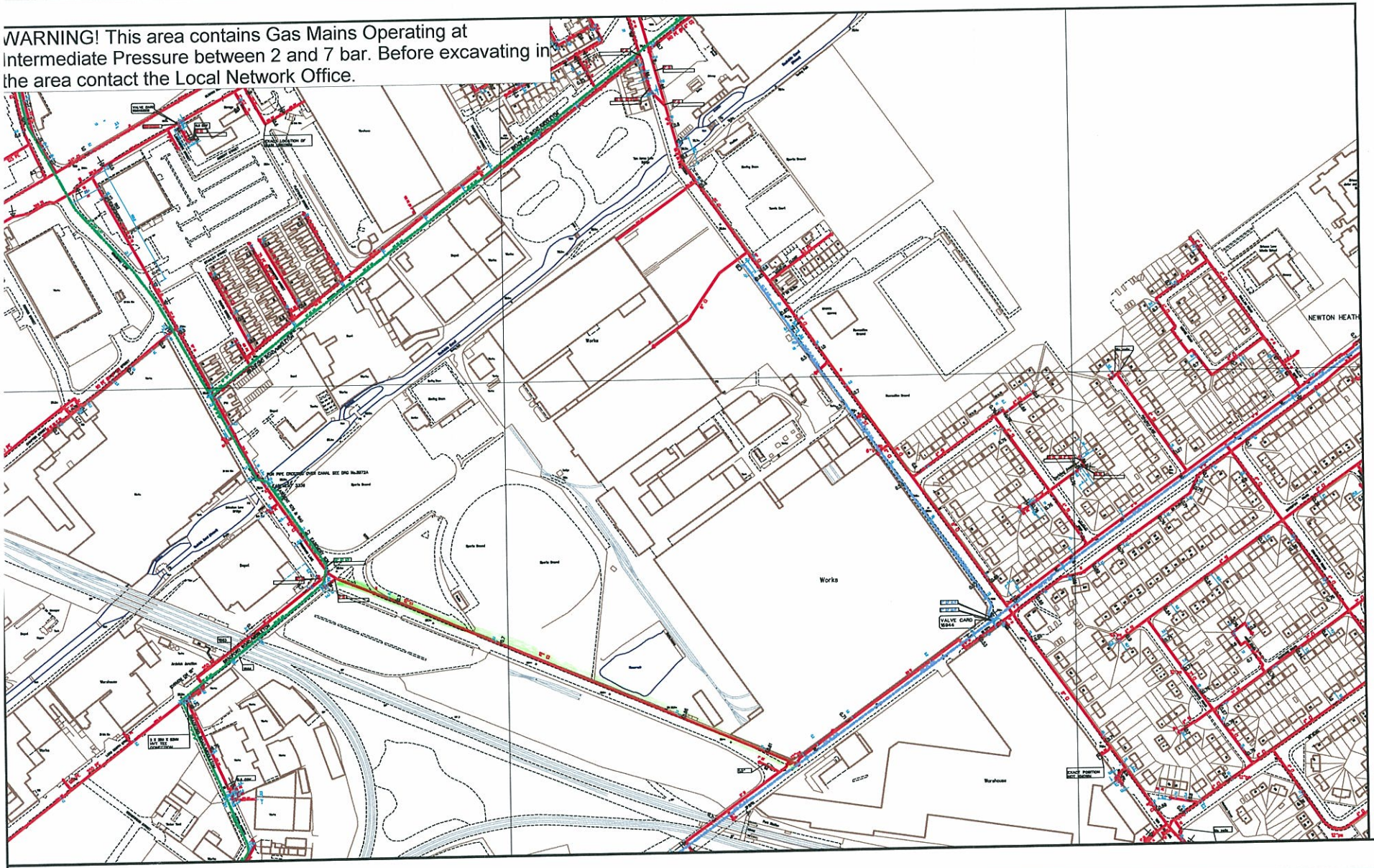
Yours sincerely,

N. Mcslop.

pp STEPHANY MCDERMOTT
(ADMIN ASSISTANT)

Job
Original Stella Walsh
Enclosure
13 SEP 2006
Action
S. W. MANCHESTER
Copy
Copy
Copy
Copy

WARNING! This area contains Gas Mains Operating at Intermediate Pressure between 2 and 7 bar. Before excavating in the area contact the Local Network Office.



SCALE: Not to scale

USER ID: nicola.heslop

DATE: 05/09/2006

INTERNAL USE ONLY

GRID REFERENCE : 387156, 399952, SJ8799

LP MAINS
MP MAINS
IP MAINS
LHP MAINS
NHP MAINS
HISTORY DATA
LAs
GTs
SSSIs

Some examples of Plant Items:

Valve | Depth of Cover | Syphon | Diameter Change | Material Change

This plan shows those pipes owned by Transco plc or the relevant Gas Distribution Network in their roles as Licensed Gas Transporters (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Transco plc, the relevant Gas Distribution Network, or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

Desktop MAPS Version 4.3.0

3896627.

Hinckley Area

Appendix C

Correspondence with United Utilities Water Representative

From: Stella Walsh
Sent: 23 August 2006 11:39
To: 'joe.jazmik@uuplc.co.uk'
Cc: Colin Barker
Subject: Redevelopment of Weir Pumps Site[Filed 23 Aug 2006 11:40]

Joe,

Further to our telephone conversation this morning, we confirm the meeting for Friday 25th August at 14.00.

We also wish to meet Phil Davies (United Utilities - electricity), however Phil is on leave until the end of August. Is there an alternative contact that could join us at the meeting on Friday to discuss the electric issues on site?

Please find attached our office location here in Manchester.

If you have any further queries please do not hesitate to contact me.

Kind Regards,

Stella Walsh

Scott Wilson
St. James's Buildings
Oxford Street
Manchester
M1 6EF
0161 236 8655

Scott Wilson
Manchester office...

Tracking:

Recipient	Read
'joe.jazmik@uuplc.co.uk'	
Colin Barker	Deleted: 24/08/2006 11:02

Meeting Notes

Project Weir Pump Site, New East Manchester

Job No D113142 **Date of Meeting** 25.08.06 **Meeting No** **Page** 1 **of** 3

Location of Meeting Scott Wilson Manchester

Time of Meeting 2.00pm

Subject of Meeting Water Supplies

Persons present including representation

Colin Barker	Scott Wilson
Stella Walsh	Scott Wilson
Joe Jazmik	United Utilities

Distribution of notes to

As above plus

Clive Posford
Neil Byrne
Janet Heron (NEM)
Steve Dowan (EP)

Date of Notes **30.08.06**

Meeting Notes

Project Weir Pump Site, New East Manchester

Job No D113142 **Date of Meeting** 25.08.06 **Meeting No** **Page** 2 **of** 3

NOTES	ACTION
1.0 Introductions CB introduced the background to the project and the reason for requesting the meeting; • Identifying the two sites in question (1 no. Sheldons Bakery, 1 no. Fruit Juice Plant) • Highlighting the existing water demand of the companies and their proposed demand (2009 up to 2016). • Both plants were due to be operational in 2009. 2.0 Existing Network 2.1 Currently there is a 24" water main along Grimshaw Lane which is a trunk feeder (not normally used for direct connection for consumers). There is also a 700mm dia trunk main along Hulme Hall Lane nr Alan Turing Bridge. Small diameter feeder mains comprise a 100mm dia main along Lord North Street. 3.0 Demand from Proposed Fruit Juice Plant 3.1 CB advised that there were some uncertainties in the projected demand but it was estimated that the average water demand was likely to be: 3,557 m³ / day @ 2009 5,213 m³ / day @ 2016 This was considerably more than was previously estimated in the Arups NEM Utilities Study (2006). 3.2 UU agreed to double check existing billing records for Fruit Juice Plant for comparison purposes. 3.3 UU advised that it would be necessary for the Fruit Juice Plant to have 12 – 24 hrs water storage on site as part of Demand Management. 3.4 If on-site storage is provided, then UU should be able to supply the 3000 – 4000 m³ / day @ 2009 from the existing 24" trunk main along Grimshaw Lane via a direct connection with control valve / meter etc. 3.5 CB further advised that the Fruit Juice Plant would involve automation and therefore either a ring main or dual mains supply would be required to provide backup of supply in the event of bursts etc. UU advised that this could only be provided through installing a new feeder main to connect to the existing 700m dia trunk main	JJ

Date of Notes **30.08.06**

Meeting Notes

Project Weir Pump Site, New East Manchester

Job No D113142 **Date of Meeting** 25.08.06 **Meeting No** **Page** 3 **of** 3

NOTES	ACTION
at Hulme Hall Lane to provide the dual supply. This feeder main (say 300mm dia) could extend some 700m along Briscoe Lane to Grimshaw Lane and could cost around £100,000. However with a dual mains supply, UU may accept a lower on-site storage for the plant, which could possibly be reduced to 8 hours supply. 3.6 UU advised that if new feeder main is provided along Briscoe Lane to the site then this should also provide adequate supply up to the project 2016 demand figure of 5,213 m³ / day. 3.7 CB advised there would be an initial 6 month transition period whilst the new factory comes on stream and the demand at the existing plant tails off. UU advised that on-site storage would have to cater for any demand over and above the 3,557 m³ / day @ 2009 (normal operating average demand). To be agreed with UU. 3.8 UU confirmed the water supply network is currently pressure managed. The existing 24" along Grimshaw Lane is 100 years old but quite reliable with only 1 – 2 bursts in last 10 years. 4.0 Demand from Sheldons Bakery 4.1 CB advised that again there were uncertainties as the plant design was evolving but the estimates for water demand were:- 20m³ / day @ 2009 (commissioning) to 120m³ / day @ 2016 This was not greatly different to that estimated in the previous Arup NEM Utilities Study. 4.2 UU advised that again they would prefer that the Bakery provided some amount of on-site water storage as part of demand management measures. 4.3 UU confirmed that they would be able to supply demand to the Bakery from the existing 4" main along Lord North St. Alternatively, or for a dual supply, a connection could be made from the proposed connection to the existing 24" main along Grimshaw Lane which may be provided for the Fruit Juice Plant.	

Date of Notes **30.08.06**

From: Jazmik, Joe [Joe.Jazmik@uuplc.co.uk]
Sent: 01 September 2006 09:56
To: Stella Walsh
Subject: RE: Redevelopment of Weir Pumps Site

Stella,

With regards to the long term changes in demand at the Weir site. I indicated at the meeting that as an individual request for supplies at the site there is sufficient capacity in the existing network to support this request. Unfortunately, using the original Arup scope it is evident that the original assessment of demand increase may be greatly under estimated. I will need to revisit the original demand review carried out in 2005 and respond back to Graham Campbell (Arup)accordingly.

In addition, and in light of the issues above, I will also be arranging a network model of the East Manchester Area to allow demand strategies to be developed based on what is currently known, and potential increases based on our first meeting re Weirs' site.

Regards

Joe Jazmik
Water Sector Manager - East
Water Strategy and Planning

Postal Address:
Thirlmere House
Lingley Mere
Lingley Green Avenue
Great Sankey
Warrington
WA5 3LP

* 01925 537052 (77052)

* 01925 (4)64766

* Joe.Jazmik@uuplc.co.uk

-----Original Message-----
From: Stella Walsh [mailto:Stella.Walsh@scottwilson.com]
Sent: 31 August 2006 09:20
To: Jazmik, Joe
Subject: Redevelopment of Weir Pumps Site

Joe,

Following our meeting last Friday the demand for 2016 has increased from 5300m3/d to 6500m3/d. Please advise if this increase has an affect on what was stated at the meeting.

Kind Regards,
Stella Walsh.

copies and destroy any paper copies.
Thank you.

Scott Wilson Ltd
Registered in England & Wales: No. 880328
Registered office: Scott House, Basing View,
Basingstoke, Hampshire, RG21 4JG. United Kingdom.

Appendix D

Correspondence with United Utilities Sewerage Representative

From: Stella Walsh
Sent: 01 September 2006 14:08
To: 'krishnan.narayanan@uuplc.co.uk'
Cc: Colin Barker; Neil Byrne
Subject: New East Manchester Ltd - Weir Pumps Site

Attn: Krishnan Narayanan

New East Manchester Ltd - Weir Pumps Site / Grimshaw Lane
Re: Formal Application for Discharge - Drainage

Following our recent telephone conversation please find the requested information enclosed.

We are commissioned by New East Manchester Ltd to undertake a utilities and drainage assessment for two proposed industrial developments that are planned for the Weir Pumps / Grimshaw Lane sites (refer attached plans).

Both proposed developments will be submitting for planning consent in Dec 2006 and anticipate being operational in 2009. Both developments also expect significant growth in their operations thereafter. These are not speculative developments.

No proposed adoptable sewers are envisaged to be constructed unless absolutely necessary. All drainage to be constructed within the development sites will remain private.

Details of the proposed developments are as follows:-

Weir Pumps Site, Bruce Lane / Grimshaw Lane - Site A - Impermeable area

Food Processing / Fruit Juice Plant.
Relocation of existing factory nearly (located west side of Lord North St) and introduction of packaging process.
Anticipate a 6 month transition period whilst existing plant production tails off and new plant comes on stream (2009).
Estimated 2009 effluent and foul discharge = 1168M3/day to be discharged to foul/combined sewer. But need to engineer to allow for growth by 2016 for a demand of approx 2680m3/day to be discharged to the same sewer.
For foul sewer proposed connection to existing 375VC on Grimshaw Lane or 450VC on Ten Acres Lane.
Surface water runoff = 1500L/s to be discharged to sewer.1500L/s flow for return period of 30 years and storm duration of 30 minutes. 725L/s flow for return period of 2 years and storm duration of 30 minutes.
For surface water proposed connection to existing 1130 X 760BR supply on Lord North Street or 950 X 670BR or 1530 CO supply on Briscoe Lane.

Site South of Grimshaw Lane - Site B - Impermeable area

Bakery.
Relocation and expansion of bakery from Parkhouse St Industrial Estate, Openshaw.
Anticipate operational 2009.
Estimated 2009 effluent and foul discharge = 40m3/d to be discharged to foul/combined sewer . But need to engineer to allow for growth by 2016 for a demand of 120m3/d to be discharged to the same sewer.
For foul sewer proposed connection to existing 300VC on Lord North Street.
Surface water runoff = 330L/s to be discharged to sewer. 325L/s flow for return period of 30 years and storm duration of 30 minutes. 163L/s flow for return period of 2 years and storm duration of 30 minutes.
For surface water proposed connection to existing 1530CO OR 1130 x 760BR supply on Briscoe Lane and Lord North Street respectively.

Please can you advise the following as soon as possible:-

(i) Whether there is likely to be adequate capacity in the existing sewage network in the vicinity of the sites, and acceptability of proposed connection details.
(ii) Whether any new adoptable sewers would be required to drain the proposed developments.
(iii) Confirmation that no off site improvement works to the existing network (for example works to the existing treatment plant) would be required as a result of these developments.

Please do not hesitate to contact us if you have any additional questions.

Kind Regards,
Stella Walsh

Scott Wilson
St. James's Buildings
Oxford Street
Manchester
M1 6EF
0161 236 8655

The following attachments were removed >>

Site location .xls
DC_25027.pdf

From: Narayanan, Krishnan [krishnan.narayanan@uuplc.co.uk]
Sent: 11 September 2006 16:08
To: Stella Walsh
Subject: RE: New East Manchester Ltd - Weir Pumps Site

Stella,
We definitely to meet with NEM to ensure that all developments are planned together in a coherent way.

I have studied our sewer maps and note the following from a desktop view :-

The Rochdale canal is not far from your proposed developed area. I would like to explore the possibility of conserving SW in our combined sewers by draining some or all of it to the canal via adoptable sewerage.Otherwise a considerable amount of attenuation will be required on both developments (80-90%) as the sewer capacity in this area is severely limiting:-

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regards

krishnan

-----Original Message-----
From: Narayanan, Krishnan
Sent: 01 September 2006 16:20
To: 'Stella.Walsh@scottwilson.com'
Cc: Wong , Josephine
Subject: FW: New East Manchester Ltd - Weir Pumps Site

Stella,
I will attend to a response on my return from leave , 11 September 2006 onwards

thanks for your patience

krishnan
-----Original Message-----
From: Stella Walsh [
Sent: 01 September 2006 14:08
To: Narayanan, Krishnan
Cc: Colin Barker; Neil Byrne

Subject: New East Manchester Ltd - Weir Pumps Site

Attn: Krishnan Narayanan

New East Manchester Ltd - Weir Pumps Site / Grimshaw Lane
Re: Formal Application for Discharge - Drainage

Following our recent telephone conversation please find the requested information enclosed.

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Both proposed developments will be submitting for planning consent in Dec 2006 and anticipate being operational in 2009. Both developments also expect significant growth in their operations thereafter. These are not speculative developments.

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Details of the proposed developments are as follows:-

Weir Pumps Site, Bruce Lane / Grimshaw Lane - Site A - Impermeable area

* Food Processing / Fruit Juice Plant.
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Site South of Grimshaw Lane - Site B - Impermeable area

* Bakery.
* Relocation and expansion of bakery from Parkhouse St Industrial Estate, Openshaw.
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St. James's Buildings
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Visit our web site at www.scottwilson.com

From: Stella Walsh
Sent: 12 September 2006 11:18
To: 'Narayanan, Krishnan'
Subject: RE: New East Manchester Ltd - Weir Pumps Site

Krishnan,

Thank you for your email.

Can I just confirm that the 2016 estimated foul flows represent a threefold increase on existing discharge levels. I understand from our telephone conversation yesterday that the existing network has suitable capacity for this flow.

Regards,
Stella

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Attn: Krishnan Narayanan

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Sent: 13 September 2006 09:31
To: Stella Walsh
Subject: RE: New East Manchester Ltd - Weir Pumps Site

Stella,
Probably within the trunk sewer but the trunk sewer models will have to be checked thoroughly with our modellers first.

Still need to meet very soon

krishnan

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Thank you.

Scott Wilson Ltd
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