
7.0 PUBLIC UTILITIES AND SERVICES

7.1 Introduction

The effects that the proposed restoration of the canal to full navigable standard would have on any services have been investigated. All statutory undertakers, utility companies, local councils and others who have any apparatus in or in the vicinity of the canal have been consulted. These are as follows:

British Gas plc
British Telecom
NYNEX Cablecomms Ltd
Mercury Communications Ltd
North West Water Ltd
Manweb
National Rivers Authority
British Waterways
British Pipeline Agency
St Helens Metropolitan Borough Council
Halton Borough Council
Warrington Borough Council
British Rail Engineering
Pilkingtons
ICI plc
BOC plc

Details of any services under or over the canal or within the canal itself were requested from the above. NYNEX and Mercury advised that they have no services in the vicinity of the canal. The remainder supplied details of their affected services. This information was then assessed and schedules of proposed diversions produced. Diversion costs were estimated and comments with regards to the proposals and the costs were requested from the appropriate organisations.

On receiving the comments, modifications were made to the proposals as necessary and the cost estimates amended accordingly. [Replies from some authorities and statutory undertakers are still outstanding]. Schedules showing all the services in and in the vicinity of the canal, with proposed diversions and costs, are shown in Table 4.1.

In general, most of the services can be diverted or they can be moved into purpose built ducts beneath the canal at a relatively low cost. All of the methods proposed as solutions to the problems are accepted as viable methods by the owners of the services affected.

The utility companies and other owners of services would not guarantee the positions of their services to be shown on their record drawings and so, these would require checking on site at the detail design stage. The costs included in Table 7.1 are estimates only and would be subject to confirmation at the detail design stage.

7.2 Detailed Consideration

7.2.1 New Double Lock to Pilkington's Weir

Pilkingtons are supplied from British Oxygen (BOC) with hydrogen and nitrogen gases directly via 2no. 200mm pipelines which run alongside the canal between New Double Lock and Pilkington's weir. The route of these pipelines crosses the canal at Church Street, Corporation Street and at Ravenhead Glass.

To allow navigation these pipes would have to be moved into one bank. The works associated with the new structures at the Technology Campus access and the Ravenhead Glass access would also affect these services and it is proposed that the service diversions at these locations are incorporated into the new structures.

These pipelines are critical to the operation of Pilkington's plant; disruption could cost the company as much as £250,000 per day.

7.2.2 Blackbrook Branch

There are two gas pressure regulating stations on the East bank of the canal, one at the Black Brook feeder connection near the branch terminal basin and one near Laurel Road between Blackbrook Road and the canal main line. For over 600 metres between these two locations a multiple pipeline has been laid in the bed of the canal, comprising:

16" diameter British Gas
12" diameter Shell
8" diameter ICI (ethylene)

and in the towpath along the East bank there are two further pipelines:

18" diameter British Gas

8" diameter British Gas (now disused South of Blackbrook Road)

A 12.75" diameter British Gas pipe crosses the road immediately South of the second regulating station and towards the junction with the main line of the canal a weir has been constructed across the branch, presumably to maintain a depth of water as a protective cover over the multiple pipeline.

The National Rivers Authority has advised that, although this section of the canal is "main river" (Black Brook), the Authority does not carry out any maintenance works because of the hazard created by these pipelines.

Ethylene, which is highly flammable, is transmitted at very high pressures and ethylene pipelines, therefore, are constructed to exacting engineering specifications. Because of the potential hazards that these pipelines present, they are strictly regulated by Health and Safety Executive guidelines.

It is perhaps worth commenting that it is most unlikely that, under present day regulations, ethylene pipelines could be constructed as close to existing residential properties as they are along this section of canal.

Exact details of the location and construction of the multiple pipeline have not been obtained but it would appear that the pipelines have been laid on the canal bed, not buried within it, and approximately along the centreline and within the eastern half of the canal.

It is most unlikely that navigation could be restored over the full length of the branch without the need to remove all three of the pipelines from the canal bed. This would require detailed discussions with the owners and operators of the pipelines and, even assuming that suitable alternative routes could be identified, it is likely to incur considerable expenditure. For example, engineering costs could be in the order of £3M and, should the proposed diversion route meet objections, a Public Enquiry could be required.

7.2.3 Penkford Bridge

Four pipes cross the Sankey Brook and the canal to the east of Penkford Bridge and then follow the bed of the canal for approximately 360m. These are as follows:

- 16" diameter British Gas
- 12" diameter Shell
- 6" diameter Shell
- 8" diameter ICI (ethylene)

This section of the canal is currently infilled and, as the proposal for the alignment of the canal restoration follows the original route, these pipelines would have to be diverted. The proposed solution is to divert them into the North Bank.

7.2.4 Sankey Bridges

The multiple pipeline running in the bed of the canal for approximately 450m at Sankey Bridges consists of the following:

- 10" diameter British Gas
- 16" diameter British Gas
- 6" diameter Shell (oil product, now in nitrogen)
- 12" diameter Shell (crude oil)
- 8" diameter ICI (ethylene)

The work associated with constructing new bridges for Liverpool Road and the Warrington/Widnes Railway would affect these pipes, and consequently, they would have to be moved. The proposed solution is to put these services in the East Bank of the restored canal. From discussions with the pipeline operators, it is understood that diversion of the pipelines at this location would be easier than at the Blackbrook Branch.

7.2.5 Diversion Procedures

The rights that the new canal authority will have to divert utilities and services, as part of the canal restoration programme, will depend on the conditions under which the services were originally placed in the canal corridor.

The wayleave and easement agreements in connection with that part of the canal owned by Warrington Borough Council, for example, show that in some cases the agreements can be terminated by the Council giving due notice to the utility/service owner.

In such cases the procedure needed to procure diversion of services should be relatively straightforward. In all other cases the diversion of services will require negotiation with the owners and operators of the utilities and services.

Service	Utility Company	chainage	ref.to structure	Description	Description of diversion	Cost £
electricity	Manweb	0	N3	33kV crossing canal	Replace with similar	13110
gas	B.G.	120		Abandoned—in canal	remove	13110
electricity	Manweb	210		33kV along canal	no action	
electricity	Manweb	480		33kV along canal	no action	
gas	B.G.	530		main along canal	no action	
Brook		740	N1	Bowers Brook culvert along and into canal	no action	
Brook		1120		private	no action	
surface	H.B.C.	1770		600mm crossing canal	no action	
surface	H.B.C.	1770		private crossing canal	no action	
gas	B.G.	2680		16" along canal	no action	
sewer	H.B.C.	3100	M12	Public open sewer	Syphon under canal.This is part of Fiddlers Ferry and could be removed completely if the site is abandoned.	39330
water	NWW	5310		0.75" crossing canal	no action	
water	NWW	5310	L24	80mm on bridge—private	Replace with similar connection under canal	45885
electricity	Manweb	5560		415kV along canal	no action	
electricity	Manweb	5560		11kV along canal	no action	
water	NWW	5835	L11	25mm crossing	Replace with similar connection under canal	6555
electricity	Manweb			1no.11kV and 1no.415kV		
sewer	H.B.C.	6335	L9	400mm pumping main	no action	
electricity	Manweb	6335		33kV along canal	no action	
		6335		o/h along canal	no action	
surface	W.B.C.	7390		15" under canal	no action	
gas	B.G.	7390		16" under canal	no action	
surface	W.B.C.	7390		24" under canal	no action	
sewer	NWW	7775	L7	400m pumping main on bridge	400 DI beneath canal	78660
water	NWW	8040	L3A	10" crossing canal	Replace with similar under canal	39330
water	NWW	8040		8" crossing canal	Replace with similar under canal	39330
sewer	NWW	8100		775mm crossing canal	no action	
multiple	Shell ICI B.G.	8000 to 8300	L3 L2 L1	6" steel hydrogen,16" steel gas,10.75" PFD in canal	Put services in East bank of restored canal.Design road and rail abutments to suit.	131100
electricity	Manweb	8155	L1 L2 L3	2no. 415kV on Sankey Br. 3no.11kV in canal 2no.33kV in canal 1no.33kV on Railway Br.	Replace with similar under canal	83904
surface	W.B.C	8400		450mm outfall into canal	no action	
	NWW	8755	K13	16" water in road	Replace with similar under canal	19665
surface	W.B.C.	8755		750mm crossing canal	no action	
surface	W.B.C.	9805	K10	2no.1000mm crossing canal	no action	
water	NWW	9805		600mm astbestos cement crossing canal	no action	
electricity	Manweb	9900		3no.11kV along canal	no action	
surface	W.B.C.	10000		2no.1000mm crossing canal	no action	
sewer	W.B.C.	10050		525mm foul crossing canal	no action	
electricity	Manweb	10200		2no.11kV along canal	no action	
electricity	Manweb	10280	K6A,K6	2no.11kV across bridge	Replace with similar under canal	15732
water	NWW	10280		1" under canal	no action	
sewer	W.B.C.	10575	K1	1500mm foul crossing canal	no action	
gas	B.G.	10825		16"main	no action	
sewer	W.B.C.	11100		2no.1000mm crossing canal	no action	
electricity	Manweb	11165	J16	2no.11kV across bridge	Replace with similar under canal	15732
sewer	W.B.C.	11700		outfall	Syphon under the canal	13110
electricity	Manweb	11715	J15	1no.11kV across bridge	Replace with similar	10488
		11715	J15	1no.33kV across bridge	Replace with similar	13110
water	NWW	11715	J15	300mm main crossing bridge		
sewer	W.B.C.	11715	J15	outfall	Syphon overflow to canal	13110
water	NWW		J13	400mm crossing bridge		
sewer	W.B.C.	11750		outfall	no action	
gas	B.G.	11875	J12	324mm steel across foot bridge	Cross Sankey Brook at proposed canal aqueduct crossing	89148
water	NWW	11875	J12	400mm crossing on bridge		
electricity	Manweb	11900		1no.11kV crossing canal	no action	

TABLE 7.1 SERVICES IN THE CANAL

Service	Utility Company	chainage	ref.to structure	Description	Description of diversion	Cost £
sewer	W.B.C.	12125		750mm foul crossing canal	Levels indicate that with new location of Hulme Lock, canal will pass over this	
water	NWW	12795	H15	Private gas crosses on both sides of M62	Replace with similar under canal	32775
sewer	W.B.C.	14475		450mm foul crossing	Syphon beneath channel	78660
sewer	W.B.C.	14475		450mm	no action	
Brook		14635	G17	Newton Brook	Pass through 1m high 3m box culvert beneath canal	26220
sewer	ST.H.	16075	G3	1350mm crossing canal	Replace with similar under canal	426075
sewer	ST.H.	16455		300mm foul crossing	Syphon beneath canal	39330
sewer	ST.H.	16455		300mm	no action	
gas	B.G.	17075		24" steel crossing canal	Replace with similar under canal	157320
telecom	B.T.	17100		o/h cables	no action	
gas	B.G.	17190		450mm crossing canal	Replace with similar under canal	78660
ethylene		17425		suspected 12" crossing	Replace with similar under canal	557175
ethylene		17560		suspected 12" crossing	Replace with similar under canal	557175
sewer	ST.H.	17675	E14	450mm crossing canal	Replace with similar under canal	117990
water	NWW	19900		10" crossing canal	Replace with similar under canal	13110
multiple	Shell ICI,B.G.	21275	C6	12"Shell,8"ICI,16" gas in road bridge	Provide similar on new structure	589950
electricity	Manweb	21275	C6	415kV crossing	no action	
electricity	Manweb	22425	B26	11kV crossing	Provide similar on new structure	10488
BOC (Gerards br.)	Shell ICI,B.G.	22425	B26	2no.200mm hydrogen, hydrogen/nitrogen pipes	Diverted prior to construction	524400
BOC	Shell ICI,B.G.	22825	B17	2no.200mm hydrogen, hydrogen/nitrogen pipes	Provide similar on new structure	524400
gas telecom electricity BOC	B.G. Manweb Shell ICI,B.G.	23220	B11	6" abandoned in bridge (Church St.) 2no.33kV crossing 2no.200mm hydrogen, hydrogen/nitrogen pipes	Provide similar on new structure	546687
BOC	Shell ICI,B.G.	23800	A19	2no.200mm hydrogen, hydrogen/nitrogen pipes	No action	
TOTAL						4960824

BLACKBROOK BRANCH

Service	Utility Company	chainage	ref.to structure	Description	Description of diversion	Cost £
gas	B.G.	BB200		12.75" steel crossing	Replace with similar under canal	15732
multiple	Shell ICI B.G.	BB200 to BB800	C14	12" Shell,8" ICI,16" gas in bed,8" and 18" gas in path East Bank	As regulations for moving such pipes are very stringent, and the surrounding area is mainly residential, finding a new route may prove very difficult. As yet a new route has not been identified. Notional diversion cost:	3080850
water	NWW	BB500	C14	15" crossing canal	Brook Rd. structure	19665
TOTAL						3116247

TABLE 7.1 SERVICES IN THE CANAL