

NOTE FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

Supplementary Information on 90WC - Replacement and rehabilitation of water mains, stage 1 phase 1 174WC - Replacement and rehabilitation of water mains, stage 1 phase 2

INTRODUCTION

In considering PWSC(2000-01)91 on projects **90WC** and **174WC** at the Public Works Subcommittee meeting held on 21 February 2001, Members requested and the Administration undertook to provide supplementary information on -

- (a) what pipe materials would be used for the two projects; and
- (b) whether these materials would be up to international standard.

THE ADMINISTRATION'S RESPONSE

2. Based on findings of the consultants' investigations under **95WC**¹ "Replacement and rehabilitation of water mains, stage 1 phase 1B – investigation", the Director of Water Supplies will use the following pipe materials for the projects –

Size Range [diameter in millimetres (mm)]	Existing pipe materials	Pipe materials for replacement projects	Specifications for new pipe materials
700mm and above	Mild steel (with bituminous lining)	Mild steel (with cement mortar or epoxy lining) ²	British Standards BS 534 ³

¹ In November 1999, Finance Committee approved the upgrading of part of **90WC** as **95WC** to Category A under **Head 709** at an estimated cost of \$66.3 million in money-of-the-day prices.

² Compared to bituminous lining, cement mortar or epoxy lining is superior in corrosion resistance.

³ British Standards are national specifications for materials, processes and technologies adopted in the United Kingdom. BS534 covers the specification for steel pipes, joints and specials for water and sewage.

Size Range [diameter in millimetres (mm)]	Existing pipe materials	Pipe materials for replacement projects	Specifications for new pipe materials
200mm to 600mm	Cast iron and asbestos cement	Ductile iron (with cement mortar lining)	British Standards BS 4772 ⁴
150mm and below	Galvanised iron and unplasticised polyvinyl chloride (UPVC)	Polyethylene	Water Industry Specifications WIS 4-32-13 ⁵

3. The pipe materials stated above have proven to be durable and suitable, and are widely used in Japan, the United States, the United Kingdom and other European countries for comparable projects.

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⁴ BS 4772 covers the specification for ductile iron pipes and fittings.

⁵ Water Industry Specifications are national specifications adopted in the United Kingdom water industry. WIS 4-32-13 covers the specification for higher performance polyethylene pressure pipes.