
**PROPOSED DEVELOPMENT OF TRAVELLER-
SPECIFIC GROUP HOUSING AND ASSOCIATED
SITE WORKS AT STOCKHOLE LANE, CO.
DUBLIN**

**MECHANICAL AND ELECTRICAL ENGINEERING
SERVICES STRATEGY REPORT**

PROJECT NO: 18346

DATE: 14th December 2018

**Delap & Waller Ltd.
Bloomfield House,
Bloomfield Avenue,
Dublin 8
Tel: (01) 535 5900
Web: www.delapandwaller.com**



Project Title: Stockhole Lane

Project No. 18346

Document Title: Mechanical and Electrical Engineering Services Strategy Report

Revision: Issue 1

Revision	Date	Description	Preliminary Report issued for Client Review		
Issue 1	14/12/2018		Prepared by	Checked by	Approved by
		Name:	R. Fay / B. Ronan	C. McGinn	M. O'Doherty
		Title:	Electrical Engineer/ Mechanical Engineer	Managing Director	Managing Director
		Signature:			

CONTENTS

1.0 Introduction

2.0 Mechanical

- 2.1 Element 50: Site Services Mechanical**
- 2.2 Element 51: Heating Centre**
- 2.3 Element 52: Soils and Wastes**
- 2.4 Element 53: Water Services**
- 2.5 Element 54: Gas Services**
- 2.6 Element 56: Space Heating and Distribution Services**
- 2.7 Element 57: Ventilation Services**

3.0 Electrical

- 3.1 Element 60: Site Services Electrical**
- 3.2 Element 61: Electrical Distribution Services**
- 3.3 Element 62: General Power Services**
- 3.4 Element 63: Lighting Services**
- 3.5 Element 64: Communication Services**
- 3.6 Element 65: Electrical Associated with Mechanical Services**
- 3.7 Element 67: Security Services Installation**
- 3.8 Element 68: Fire Protective Services Installation**

4.0 BER

1.0 Introduction:

It is the intention of Fingal County Council to construct 7No. residential units in the form of Traveller Specific Group Housing on a site at Stockhole lane, Co. Dublin.

We have liaised with the project architect within Fingal to develop a strategy and design brief for the proposed development. The information attained from this process has been included within this report and will be further developed in the following detailed design stage.

2.0 Mechanical

2.1 Element 50: Site Services Mechanical

Gas Supply

Once planning has been granted for the development, a GNI application will be made for the connection of a natural gas supply for 7 No. houses.

2.2 Element 51: Heating Centre

Each of the units of the development are to be heated by high efficiency condensing, gas system boilers. Each house will be fitted with its own boiler. The boiler shall be room sealed with a balanced flue and discharge to the rear of each unit.

2.3 Element 52: Soils and Wastes

Soils and wastes will be run in UPVC piping and will include vents, anti-siphons and traps to all fittings as appropriate.

2.4 Element 53: Water Services

The water services will comprise of mains, cold and hot water.

The cold-water services will consist of a format 30 pre-insulated tank and pressurisation pump located in the attic area.

All water services pipe work throughout will be insulated in appropriate insulation and must meet council specification, current Irish and European regulations.

All hot water generation and storage will be provided via a single coil indirect hot water cylinder. The generation of hot water will be achieved via one of two ways, the use of one dedicated circuit from the high efficiency condensing gas boiler. Or 2 via the use of a cylinder immersion and electric solar panel generation (see the solar panel section).

2.5 Element 54: Gas Services

A gas supply will be provided to each property. The supply will service the high efficiency condensing gas boiler and a connection from this line for a gas hob/cooker will also be installed.

2.6 **Element 56:** Space Heating and Distribution Services

The low-pressure hot water heating system will be used which will consist of radiators and copper LPHW piping. The heating system will be piped using a two-pipe flow and return pressurized closed system.

2.7 **Element 57:** Ventilation Services

A Heat Recovery Ventilation System will be used in each house to provide tempered fresh air and extract stale/moist air from the wet rooms and kitchen/living spaces in compliance with Part F of the building regulations. A dedicated kitchen canopy extract shall be installed for each kitchen.

3.0 **Electrical**

3.1 **Element 60: Site Services Electrical**

ESB Supply

Once planning has been granted for the development, an ESB application will be made for the connection of 7No. houses (12-16kVA each). We made initial contact with the ESB and determined that the ESB's network capacity in the area is not strong and that there is an element of risk that they will require an upgrade of their network by means of a unit substation in order to serve the proposed development.

EIR Supply

An application will be made to Eir for the supply of telephony and broadband services to serve each of the units. The supplies to each of the units will terminate into an external termination unit (ETU) in close proximity to the ESB meter box.

Public Lighting Services

The development will require a public lighting services to serve the carriageway and footways within the development and on Stockhole Lane.

3.2 **Element 61: Electrical Distribution Services**

ESB

The electricity supplies to each of the units will run in underground ducting from an ESB mini-pillar and terminate in external meter boxes to ESB requirements.

3.3 **Element 62: General Power Services**

A complete power service installation will be installed throughout each unit serving specific equipment and for general use by the occupants.

3.4 **Element 63: Lighting Services**

Low energy (LED) lighting complete with manual control will be provided throughout each unit.

3.5 **Element 64: Communication Services**

Voice and data structured cabling will be provided to serve areas throughout the house as required from a central location for future connection of broadband services. A single telephone point will be included at this central location.

3.6 **Element 65: Electrical Associated with Mechanical Services**

A complete power and associated control system for the mechanical services will be provided within each unit.

3.7 **Element 67:** Security Services

Intruder alarm wiring will be installed for the future provision of an intruder alarm system.

3.8 **Element 68:** Fire Protective Services

It is proposed to include for the installation of a Grade D, Category LD2 mains interlinked smoke alarm system. This is the minimum specification in accordance with IS3218:2013 standards for dwellings and required smoke/heat detectors along all escape routes, bedrooms and other high-risk rooms (e.g. Kitchens, utility room etc)

4.0 **Provisional BER**

4.1 **Solar Photovoltaic System**

A provisional BER assessment will be carried out in order to determine the renewable technology requirement of each of the units in accordance with nZEB and part L 2017 requirements. It is estimated that this will consist of dedicated Solar PV system installations located in each of the units.