# McElligott consulting engineers

# MULTIPLE OCCUPANCY BUILDING CAR CHARGING STRATEGY Blackwood Square, Northwood

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#### 1. OVERVIEW

The purpose of this document is to identify a car charging power infrastructure and management strategy which can be implemented in multioccupancy developments. The aim of this strategy is to allow for the efficient installation of new and future car charging point within multioccupancy residential developments, while avoiding large capital and lifetime running costs for the car charging end users, and residents of the of the same development not availing of the car charging services. The proposal can be summarised as follows:

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- Car charging strategy.
- Fully installed car charging point.
- Provision for future car charging points.
- Car charging infrastructure layout.
- Management of car charging system.
- Electrically powered club cars will be provided on site for residents.

#### 2. CAR CHARGING STRATEGY:

Currently providing Electric Vehicle (EV) charging solutions to individual apartment dwellers with basement or surface parking areas is difficult as the car parking space is not in immediate proximity to the apartments metered supply. For this reason the EV charging point needs to be powered from an alternative source other that the individual apartments metered supply. An individual apartment dweller may also not hold two separate electricity supply accounts, this is due to the fact the ESB will only issue one Meter Point Reference Number (MPRN) per address. The only alternative viable option is to supply the EV charging capacity from the enhanced landlord supply for the adjacent building core. In order to differentiate which costs are then associated with car charging, a check meter is fitted to the supply from the landlord's distribution panel.

The EV charging points will not be tied to any apartment meters, so an interface system such as "Prepago" (<u>http://www.prepago.ie/</u>), which all the apartments are registered with for their heat supply, will be implemented in order to manage usage and payment for use of any given charging point. The Prepago solution for EV charging / billing is currently in operation in the Cualanor scheme in Dun Laoghaire and in Pappen Grove and Bridgefield apartment scheme, Northwood, Santry. All of these reference sites are by Cosgrave Developments.

Once the customer has an active account, which is effectively when they move in, the billing for their e car charging can be assigned to their account. This facility will also be available to visitors to the scheme, allowing them to charge their cars, once they have an account with Prepago, or avail of the account held by the person they are visiting.

The development will have the capability to install car charging points at the outset to meet the future demand within the scheme. This will be a combination of allocated



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and non-allocated (visitor and disabled parking) spaces. Thereafter, where a resident wishes to install a charge point at their designated parking space, they can apply to the SEAI for the grant, this can be passed to the management company, who will then install the infrastructure required to complete the installation and setup of the EV charging point for the customer. Every car space will either be ducted back to the adjacent landlord ESB meter or have a designated sub soffit route to facilitate the easy roll out of EV charging points. Billing of EV charging point will also be managed through a system such as Prepago, as outlined above.

#### **3. PROVISION FOR FUTURE CAR CHARGING POINTS:**

On completion of the residential development, the developer will make provision for the roll out of car charging points as requested within the residential development. Once a resident decides they wish to have a car charging point installed at their car parking space, they will need to coordinated with the Management Company for the development and apply for the SEAI grant (if still available). The grant is associated with the apartment MPRN rather than the applicant or their EV. The grant will then be passed onto the management company who will then carry out the final installation works to install the charging point. If the apartment already has a charging point fitted, the new tenant simply needs to register with the management company and use the app to start availing of the charging point. CELLIGOTT

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### 4. **C**AR CHARGING INFRASTRUCTURE LAYOUT:



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#### 5. MANAGEMENT OF CAR CHARGING SYSTEM:

The Management company will solely be responsible for accounting for all EV car charging power consumed. The software system such as "Prepago" will be the management software which will enable payments to be made for all car charging customers. The software management company will need to pay the management company for all power consumed, the value of money will be accounted for through the software system, and the landlord check meter system. Accounting for the power consumed in this way will ensure that residents who are not availing of the car charging points will not be penalised in their services charge.