



Report

Date: 15/03/23

To: Cabinet

Report Title: Onstreet Residential Electric Vehicle Charging

Relevant Cabinet Member(s)	Wards Affected	Key Decision?
Cllr Mark Houlbrook Cllr Joe Blackham	Adwick & Carcroft, Armthorpe, Bentley, Conisbrough, Hexthorpe & Balby North, Mexborough, Norton & Askern, Rossington & Bawtry, Town, Wheatley Hills & Intake	Yes

EXECUTIVE SUMMARY

1. For the majority of electric vehicle (EV) users, the preferred location for charging their EV is at home. Charging at home usually occurs off-street in garages and driveways, a convenient and efficient option. However, in many parts of Doncaster off-street parking is unavailable to residents.
2. Over 30,000 homes in Doncaster do not have access to off-street parking.
3. By installing chargepoints on-street or in public car parks, residents without off-street parking can enjoy the convenience and value of charging their electric vehicles close to home.
4. The government have asked Local Authorities to lead in this area of the EV charging market and have made some funds available to support the upfront cost, but this still requires the Council to provide upfront capital and the financial pressure of covering the full cost of operation, maintenance and chargepoint management services.
5. In order to trial onstreet charging while limiting the financial risk to the Council, it is proposed that a pilot scheme be undertaken with Ubitricity.
6. The pilot will see Ubitricity cover all upfront capital costs for installation as well as ongoing maintenance, servicing and operation for 100 new chargepoints across 11 locations in Doncaster, therefore limiting the risk and resource requirement of the Council.
7. As more residents use electric vehicles, communities will benefit from improved air quality, lower fuel costs and reduce their impact on the environment.

EXEMPT REPORT

8. N/A

RECOMMENDATIONS

9. The following recommendations are being made:
- a. To procure and enter into a concession contract for the provision of services by Ubitricity via Direct Award through the ESPO procurement framework.
 - b. To allocate £2k to Street lighting from the Councils contingency budget to fund the ongoing costs of chargepoint vandalism / destruction.

WHAT DOES THIS MEAN FOR THE CITIZENS OF DONCASTER?

10. As more residents move from petrol/diesel cars to EV there will continue to be an improvement in air quality.
11. The scheme improves accessibility for those currently unable to make the change to EV and starts to address inequalities.
12. More residents are able to reduce their carbon emissions and contribute to the borough's net zero targets.
13. More residents will be able to benefit from lower travel costs.

BACKGROUND

14. Transport is now the highest emitting sector of the UK economy, accounting for 22% of total emissions, but over 30% in Doncaster.
15. The full transition to zero emissions vehicles will be one of the most important actions to achieve the UK's Net Zero target. From 2030 all petrol and diesel car sales will be banned.
16. Earlier this year, the Department for Transport (DfT) released a statement where they set out their goals for 22% of manufacturers' new car sales to be zero emission vehicles (ZEVs) in 2024. These are legally binding targets, following consultation with industry leaders.
17. The aim for this is for sales to rise to more than 33% in 2026, 52% in 2028, and 80% in 2030 – an ambitious target.
18. This follows the Government's planned schedule for all new cars and vans be fully zero emission at the tailpipe from 2035.
19. To reach Net Zero, all vehicles – including heavy-goods vehicles (HGVs) – must be fossil fuel free by 2050.
20. For passenger vehicles and vans, this will mean accelerating the uptake of EVs and the appropriate charging infrastructure.
21. One of the main barriers for achieving the government's targets in transitioning to EV is charging infrastructure.
22. The Council installed its first public EV chargepoints in 2015, at which time there were very few early adopters of EV. This has changed significantly following the introduction of the net zero legislation and the growing popularity of EV.

23. During 2021, EV's accounted for 14% of all new car sales (327,000 EVs). The vast majority of marketing by manufacturers is focused on EV and the supply cannot keep up with demand.
24. For many Doncaster residents, the move to EV from their petrol/diesel cars is made more difficult due to their inability to charge their car overnight at home.
25. Like many organisations, private and public, the Council has focused on improving the offer of publicly available chargepoints in its car parks and transitioning its own transport fleet to EV as the business case for onstreet charging has been difficult to prove.
26. The Council has also considered the safety and practicalities of having on-street charging in residential areas, with concerns of trip hazards from cables, petrol/diesel cars blocking access to chargepoints and the ability to get an electricity connection agreed by the Distribution Network Operator (DNO).
27. Highways and Safety officers agree there will likely need to be a mix of options for onstreet charging, and that connecting to a chargepoint at the kerb side will need to be one of the solutions.
28. Councils in the UK are trialling kerb side charging, including covered ducting in the pavement to allow a cable to run from the home to the kerb side; and other solutions such as charging hubs. All are likely to feature in meeting the needs of residents without off-street parking, but all will need full consideration for their impact on the location.
29. While many on-street charging operators provide a charging solution to fit onto a street lighting column, the vast majority of Doncaster street lights are set back from the kerb edge. For any on-street chargepoints to work in Doncaster, they will need to be installed away from lighting columns ie. a separate charging bollard/unit.
30. The government have recently made available more funding for such infrastructure through the On-street Residential Chargepoint Scheme (ORCS) but this still comes with a need for upfront and ongoing investment from the Council.
31. As an example a 100 chargepoint scheme would:
 - a. Require around £170,000 capital for the supply and installation, of which the Council could apply for 75% of the cost, leaving £42,500 contribution from the Council.
 - b. The annual maintenance, servicing and chargepoint management service would cost around £300 per chargepoint, presenting ongoing costs of £30,000 per annum.
32. The Council has been approached by Ubitricity, a wholly owned subsidiary of Shell, who is the largest installer of public EV chargepoints.
33. Ubitricity have offered to work with the Council to deliver a pilot Onstreet Residential EV Charging scheme, by funding, installing and operating 100 chargepoints across Doncaster.
34. The terms of the offer are set out in Table 2.
35. The fully funded and managed offer from Ubitricity reduces risk and cost and only requires the Council pay for reactive maintenance ie. maintenance and repairs due to vandalism or damage.
36. While the experience of Ubitricity suggests the cost of reactive maintenance is low at only £320 per year for every 100 chargepoints owned, the Councils own experience of vandalism and damage to street furniture suggests a cost closer to £2,000, for which the Council will need to make available an annual budget.

37. The charging solutions offered by Ubitricity include a discrete 'in-post' chargepoint which can fit in a street lighting column, and a bollard which takes its electricity supply from a street lighting column, but is installed separately at the kerb edge. The bollards are approximately 1,030mm tall and 150mm wide and are not deemed to be intrusive or obstructive to the highway.
38. All of the proposed locations and the proposed number of chargepoints are listed in Table 3.
39. With the additional 100 chargepoints, Doncaster would be ranked only second to Leeds for the highest number of publicly available EV charging points in the region.
40. Notwithstanding the small cost risk to the Council to repair damaged chargepoints, the offer from Ubitricity would protect the Council from £42,500 of upfront costs and annual operational costs of £30,000, or £450,000 over the course of the 15 year agreement.
41. Although the electricity supply is spurred from the closet light column, the electricity supply is separated and billed to Ubitricity. The supply is completely separate from a billing account perspective. All transactions are between the customer and Ubitricity.
42. In addition to the 100 chargepoint trial, Ubitricity will seek to engage with residents who are wanting to buy / lease an EV and, subject to the level of interest, will extend the free installation and operation of chargepoints to residents. This is something Ubitricity can do independently to the Council and will not impact on the procurement value of the proposed pilot.
43. As Ubitricity give the Council the option to own the chargepoint hardware, ownership would give the Council the choice of who operates the charging service at the end of the 15 year term. Subject to market conditions, this could present a commercial opportunity for the Council or the Council could procure a further contract for the operation and service.
44. This offer has been deemed to meet the criteria of a 'Concession' contract, and while the values are commercially sensitive, and not for publication, they fall well below the threshold of £4,447,447.50 exc. VAT.
45. Ubitricity have provided an indication of predicted income generation throughout the 15 year contract, See Table 1 below which is based on take up on a similar scheme in Liverpool.
46. As displayed in Table 1, utilisation in early years is expected to be low. While Ubitricity are able and willing to accept the risk to their business case, this is not something the Council should accept and pursue as a project which presents a good return on investment.
47. Ubitricity would be the first company to install onstreet residential charging in Doncaster, but they are likely to be joined by competing companies in the future.
48. Although the council currently provide free charging in its own carparks, this is proposed to change from 1st April. 2023. The existing infrastructure is to be upgraded and added to, at which point a new 'charge' for charging will be proposed and introduced

Table 1 – Forecast utilisation and revenue for Ubitricity

Year	Utilisation %	Revenue per Chargepoint (£)	Total Revenue for 100 Chargepoints (£)
1	2	298	29,800
2	2	298	29,800
3	4	596	59,600
4	5	745	74,500
5	6	894	89,400
6	7	1,043	104,300
7	8	1,192	119,200
8	9	1,341	134,100
9	10	1,490	149,000
10	11	1,639	163,900
11	12	1,788	178,800
12	13	1,937	193,700
13	14	2,086	208,600
14	15	2,235	223,500
15	16	2,384	238,400
Total		£19,966.00	£1,996,600.00

49. As EV charging develops Ubitricity will upgrade the chargepoints at their cost. The Council will not be left with an out of date asset at year 16 that is not fit for purpose and requires upgrading.
50. Ubitricity do not require Traffic Regulation Orders (TROs) to be added to the streets receiving the chargepoints, but the Council does propose to install signage to help encourage proper use, and discourage petrol and diesel vehicles from blocking the chargepoints.
51. Ubitricity's charging tariff is the same across all of their chargepoints and locations. A cost of £0.32 per kw and a connection fee of £0.35 is quite reasonable. At present, households pay around £0.34 per kwh at home and would pay between £0.40 and £0.50 per kw at a public chargepoint.
52. Image 1 shows a chargepoint bollard in use. The alternatives that are not yet supported but require further investigation by Highways colleagues include ducting in the pavement, and others dismissed as being inappropriate or more obtrusive in residential areas.

Image 1



53. For clarity, the criteria used to assess the suitability of installation locations include:
- a. Location does not provide off street parking.
 - b. When installing a charging bollard, the minimum path widths are maintained.
 - c. The pathway has not recently received resurfacing investment.
 - d. It is a preferred location determined by Ubitricity, utilising their industry knowledge as an area likely to transition to EV ownership / lease within the next 5 years.
54. As per the terms of the offer, Ubitricity are to propose the locations of where the chargepoints are to be installed. Ubitricity have the final decision on the preferred locations. However, to help ensure appropriate locations and streets are chosen, the Council has worked with Ubitricity to combine local knowledge with specialist industry knowledge, Experian and mosaic data. Mosaic is a cross-channel consumer classification system which segments the population into 15 groups and 66 types that helps you to understand an individual's likely customer behaviour. The Council will ensure the conditions of the chosen locations are suitable. For example
- a. Highways professionals have worked with Ubitricity to ensure users of the public highway are not hindered and minimum path width is maintained.
 - b. The Council has helped select locations that have not recently received resurfacing works, and so avoid any further disruption to those locations or disturbance to the new surface.
 - c. Officers will consult local Councillors ahead of any installations to gain further local insight.
55. It is also the decision of Ubitricity to allocate the preferred number of chargepoints in each location. As an example, up to 10 chargepoints may be installed across 2 streets. This is to overcome issues such as chargepoints being blocked / used by other vehicles or in the event of technical failures, and is intended to improve consumer confidence in the availability and use of onstreet residential chargepoints.
56. It is accepted by Ubitricity that some chargepoints may go unused for the early stages of the pilot, but their preference is to provide sufficient investment and availability of the service rather than to restrict installations to one or two per location and find neighbours having to compete for their use.
57. This pilot will help inform both Ubitricity and other investors of the customer experience and the experience of the operator, which can hopefully lead to further inward investment in Doncaster to help with the transition to net zero carbon emissions.

Table 2 – Ubitricity Terms

Number of sockets	100 – bollard or integrated socket
Who will own the sockets	The council will own the sockets. Ubitricity will act as the CPO (Charge point operator)
Who will pay for the hardware and Installation?	100% covered by Shell/ubitricity
Who will pay for (and complete) routine maintenance?	Ubitricity will complete all routine maintenance. The cost will be covered by ubitricity (100%) throughout the term
Who will pay for (and complete) reactive maintenance?	<p>Either the Council or Ubitricity can attend the reactive maintenance.</p> <p>The Council will fund this element of the service.</p> <p>If Ubitricity are required to attend the site, a charge of £160 for first hour and £65 per hour thereafter is applied.</p>
Are there any other costs for the council?	Only if the Council ask Ubitricity to remove a charge point before the end of the initial term.
Term	An initial term of fifteen years. At the end of the term, the council will consider its procurement options.
Cost of the Service	<p>Ubitricity will set the cost of the service. Pricing will be reviewed on a quarterly basis. Ubitricity's national standard tariff will apply throughout the term. This is currently</p> <p>Connection Fee: 35p Price per kwh: 32p</p>
On what basis will the price change?	Any increases/decreases in price are directly linked to the wholesale cost of power. This will be clearly defined in the contract to ensure the tariff floats in line with the broader energy market.
Does the Council need to reserve parking spaces?	No
Who decides where the sockets are located?	Ubitricity will provide advice and guidance. The final decision is for the Council to make.

Will the sockets impact the councils power arrangements for street lighting?	No. The hardware is connected on an unmetered basis, creating a clear separation between power consumed by the council (street lighting) and power consumed by the charge point. The unmetered connection allows Ubitricity to bill the user of the service directly, meaning it would have zero impact on the council's energy supply arrangements. The presence of the sockets would not increase the council's energy bill, nor would Doncaster need to recoup from cost.
How quickly can you install?	Within weeks of the agreement being signed. Ubitricity can install the sockets within a few weeks.
Will the installation process force us to close roads or impose temporary traffic restrictions?	No.
What happens after the pilot?	<p>Ubitricity will offer Doncaster "Right to Charge" a programme that allows the council to develop EVCI infrastructure directly in line with resident demand. This is not mandatory.</p> <p>Under right to charge, resident requests are gathered at agreed intervals. Ubitricity will install against these requests if:</p> <ul style="list-style-type: none"> a. The council consents b. The location meets our minimum requirements

Table 3

Location	No. Chargepoints	Location	No. Chargepoints
Askern	10	Mexborough	10
Armthorpe	10	Rossington	5
Balby	10	Town	10
Bennethorpe	5	Wheatley	10
Bentley	10	Woodlands	10
Conisbrough	10		

OPTIONS CONSIDERED

58. Do nothing –

- a. Onstreet residential charging is the only type of EV charging the Council has not started to develop.
- b. Over 30,000 homes in Doncaster do not have access to off-street parking. Residents living in these homes are not given the same opportunities to transition to zero emissions transport as others.
- c. By installing chargepoints on-street or in public car parks, residents without off-street parking can enjoy the convenience and value of charging their electric vehicles close to home.
- d. The government have asked Local Authorities to lead in this area of the EV charging market and have made some funds available to support the upfront cost, but this still requires the Council to provide upfront capital and the burden of covering the full cost of operation, maintenance and chargepoint management services. The Council would open themselves to criticism from the public for not addressing the gap in provision of public charging for those without access to off-street parking.

59. Open Tender exercise

- a. Due to the wealth of the parent company of Ubitricity (Shell), they are able to make an offer which is unrivalled by others in the onstreet residential charging market.
- b. The offer from Ubitricity is time-bound and has been limited to the first South Yorkshire Council to accept the offer. An open process could result in Ubitricity moving their offer to another Council to allow them to meet their target installation dates.
- c. A true onstreet 'residential' charging scheme requires more discrete infrastructure and onstreet furniture. The alternatives available from other suppliers are bulkier and higher powered. This has an impact on pedestrian access as well as posing a risk of generating interest from EV users who are visiting or who live in neighbouring areas; whereas the purpose of residential charging is to allow someone to charge next to their home, mostly overnight, for greater convenience and certainty of charge.

REASONS FOR RECOMMENDED OPTION





60. The offer from Ubitricity is unrivalled.





61. The offer enables onstreet residential EV charging to be trialled in Doncaster with little financial impact and risk to the Council and represents the best offer on the market today.

62. The trial is intended to allow Ubitricity to build on its offer create further opportunity for inward investment in Doncaster, to improve the EV charging offer to residents.
63. The hardware used by Ubitricity is reliable and has a limited visual and physical impact on the public highway.
64. The pricing structure used by Ubitricity is one of the lowest public charging tariffs in the UK and is equal to the average cost of home charging.

IMPACT ON THE COUNCIL'S KEY OUTCOMES

65.

Great 8 Priority	Positive Overall	Mix of Positive & Negative	Trade-offs to consider – Negative overall	Neutral or No implications
 Tackling Climate Change	✓			
Supports the transition to zero emissions transport and supports behaviour change. This is an initial step in a very scalable transition to use zero emissions vehicles.				
 Developing the skills to thrive in life and in work				✓
No implications.				
 Making Doncaster the best place to do business and create good jobs	✓			
Will likely lead to increased inward investment in Doncaster, to further improve the EV charging facilities available across the City.				
 Building opportunities for healthier, happier and longer lives for all	✓			

The transition to EV and zero emissions at the tailpipe provides improved air quality.				
 Creating safer, stronger, greener and cleaner communities where everyone belongs	✓			
Many residents are unsure how they can help reduce their carbon impact. Some want to move to EV and are unable to due to the inability to charge their EV at home. This is an area more households will be able to explore as charging infrastructure improves.				
 Nurturing a child and family-friendly borough				✓
No implications				
 Building Transport and digital connections fit for the future	✓			
The technology being proposed is fit for the current market, but the terms of the offer include upgrades to follow technology develops and ensures the facilities are fit for purpose.				
 Promoting the borough and its cultural, sporting, and heritage opportunities	✓			
Promoting the borough in terms of supporting its residents and working with organisations to attract inward investment.				
Fair & Inclusive	✓			
Charepoints are proposed to be installed in some of the boroughs lowest income communities to provide equal opportunities for those wanting to transition to an electric car.				

Legal Implications [Officer Initials: NJD Date: _15th December 2022]

- 66. Section 1 of the Localism Act 2011 provides the Council with a general power of competence, allowing the Council to do anything that individuals generally may do. Section 111 of the Local Government Act 1972 gives the Council the power to purchase goods and services.
- 67. The appointment will be made via the ESPO framework “636 Vehicle Charging Infrastructure 2 – Lot 1 Purchase Of Electric Vehicle Chargepoints by entering into a concessions contract.
- 68. The Council must adhere to strict compliance with the rules of the framework if this procurement is to be compliant.

Financial Implications [Officer Initials: JC | Date: 08/02/23]

- 69. By entering into the agreement, The Council would not have to invest in the infrastructure and installation costs as these will be funded by Ubitricity. Ubitricity will then seek to recover the costs and potentially profit via income generation from recharging residents for the use of the charge points over the life of the contract.
- 70. Certain parts of the Councils infrastructure would be tied up for 15 years under the contract, no monetary benefits are received from the contract for this. The Council should consider the risks and benefits e.g. impact on the Council implementing their own EV charging policy to recover costs at other Council sites for example carparks, impact on highways maintenance, residents etc.
- 71. The Council would not be responsible for planned annual maintenance and upgrades, but would be responsible for the costs of reactive maintenance e.g. vandalism, accident damage. These costs are estimated at £2k per annum and could be funded from the Council's contingency budget. The additional budget should be allocated to Street lighting maintenance. Council engineers and Ubitricity have confirmed £2k per annum will be sufficient to cover charge point damage.
- 72. No penalties will be incurred by the Council should the charge points be out of operations as a result of damage, or if the charge points are blocked from use.
- 73. The Councils insurers should be notified to make them aware of the scheme and check insurance cover is appropriate. It is currently expected that the Council would not be responsible for any damage to cars, and the £2k budget allocated to street lighting will be sufficient to cover damage to the charge points. The Council would likely be responsible for public liability, any increase in the premium for this is expected to be negligible.

74. It is expected that the Charge points would still be operational at the end of the 15 year contract and the Council can take over the operation at that point. If the charge points needs removing at that point it is estimated it would cost the Council £25k to remove them.
75. There will be no link to the council's energy supply. Each charge point being connected on an unmetered basis, creating a clear separation between power consumed for street lighting vs EV charging. EV charging power consumption will be communicated to Ubitricity's back office system to allow billing via their App.
76. The cost of additional signage to encourage proper use of the charge point bays will be funded by Ubitricity.
77. The letter drop to residents will be funded by the Council, the cost of this will be minimal and will be funded from Sustainability unit revenue budgets.
78. Entering into the agreement with Ubitricity does not prevent the Council from entering into other concession agreements with other operators or at other locations.
79. The customer will use an App to access the charge point. Payments for charging and reporting of faults will be undertaken using the App. The App will inform Ubitricity of faults, the Council will be given the option to repair at that point. If the Council are unable to attend Ubitricity can repair and recharge the Council. The process for this is still being established. There will be standard repair times agreed with Streetlighting based on their own experience and that of Ubitricity to ensure the Council are not overcharged if Ubitricity undertake the repair.

Human Resources Implications [Officer Initials: KJ | Date: 14/12/2022]

80. There are no direct HR Imps in relation to this ODR, but if in future staff are affected or additional specialist resources are required then further consultation will need to take place with HR.

Technology Implications [Officer Initials: PW | Date: 14/12/22]

81. There are no technology implications in relation to this report.

Procurement Implications [Officer Initials: GS | Date: 13/12/22]

82. The requirement as set out in the body of this report is categorised as a concession contract, however as the anticipated value of the contract is

- approximately £2m over the 15year duration it falls below the threshold of £4,447,447 and not subject to the Concession Contracts Regulations 2016.
83. Under Contract Procedure Rules (17.4 Contracts valued £177,898 to £4,447,448), an approved third party framework agreement may be used to direct award works when the requesting officer has a written justification for the selection of the provider when above £250,000. The decision to execute the direct award has to be approved by the Monitoring Officer (or nominated deputy).
 84. For the reasons identified in the body of this report the requesting officer sought and gained approval by Direct Award Report on 18/11/2022 (Ref: CPR/22/10/004) to compliantly direct award the works to Ubitricity, (a wholly owned subsidiary of Shell) through the ESPO framework “636 Vehicle Charging Infrastructure 2 – Lot 1 Purchase Of Electric Vehicle Chargepoints”.
 85. The ESPO framework was procured in compliance with EU Procurement Regulations and was awarded via contract award notice 2021/S 000-029453 (See <https://www.find-tender.service.gov.uk/Notice/029453-2021>)
 86. The Strategic Procurement Team, report Author and Ubitricity worked together to confirm this Direct Award being the most suitable and compliant route to market. The Direct Award analysis was based upon a price and quality evaluation using the Lot 3 framework prices that were submitted by bidders as part of the framework submission process (All other costs deemed to be subject to competitive sub-contractor & sub-consultant quotes).
 87. Procurement therefore support the direct award of the works as outlined in the body of this report.

RISKS AND ASSUMPTIONS

88. The return on investment is not achieved for Ubitricity.
 - a. Ubitricity accept full responsibility for their investment and return. The contract is not performance related and poses no risk to the Council.
89. The chargepoints create tension amongst residents due to the chargepoints being blocked by other vehicle owners.
 - a. While the chargepoints will have signage they will not be protected by a TRO due to the Council’s inability to patrol additional areas of the borough where the chargepoints are installed.
 - b. The Council will work with Ubitricity to promote the proper use of the chargepoints and encourage discussion between residents to ensure the chargepoint is accessible.
 - c. Multiple chargepoints are installed in each location, sufficient to reduce the risk of unavailability.
90. The chargepoints attract users from out or area of neighbouring streets.
 - a. The chargepoints will have a charging capacity of 5kw. This level of power supply is suitable for long stay charging of 8-12 hours and more suitable for overnight charging. It is not the type of charger to attract visitors to the area.

- b. It is possible the chargepoints could attract a new user from a neighbouring street. In these cases, we would encourage users to talk to their neighbours to consider the impact of additional vehicles on the street.
 - c. Following this pilot, in future years, we are likely to see more of this development with further offers made by Ubitricity and their competitors. This combined with other suitable charging solutions being designed. No street can accommodate 'onstreet' chargepoints for every home.
- 91. The chargepoints attract attention and vandalism
 - a. The experience of Ubitricity, working in London and Liverpool, is that two incidents for every 100 chargepoints occur annually. Ubitricity estimate a cost of £320 for repairs. However, our own engineers have propose we budget for the electrical works and replacement post, which would be £2,000 per annum for the 100 chargepoints.
 - b. The posts are very strong and durable. Their design is the least intrusive both physically and visually.
- 92. The cost of the charge is increased to an unreasonable level.
 - a. Ubitricity are owned by Shell, who have their own energy company. This enables Ubitricity to set a tariff which is competitive with other providers as they are already making a profit on the energy supply as well as the additional cost on the kwh for the charging rate.
 - b. It is in the interest of Ubitricity to maintain a cost close to the rate paid by residents for their own energy supply. If they increase the cost, adopters of EV will be more inclined to move their custom to rapid charging at service stations of charging hubs.

CONSULTATION

- 93. Mayor – Ros Jones
- 94. Cllr Mark Houlbrook – Portfolio Holder for Sustainability & Waste
- 95. Cllr Joe Blackham – Portfolio Holder Highways, Infrastructure and Enforcement

BACKGROUND PAPERS

- 96. CPR Waiver – Ubitricity

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

- 97. EV – Electric Vehicle
- 98. ZEV – zero emission vehicle
- 99. DfT – Department for Transport
- 100. HGV – Heavy Goods Vehicle
- 101. DNO – Distribution Network Operator
- 102. ORCS – Onstreet Residential Chargepoint Scheme

103. TRO – Traffic Regulation Order

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