

**BIRMINGHAM CITY COUNCIL
PUBLIC REPORT**

Report to: CABINET
Report of: CORPORATE DIRECTOR, ECONOMY
Date of Decision: 24th January 2018
SUBJECT: ELECTRIC VEHICLE (EV) CHARGE POINT NETWORK
DEVELOPMENT PROGRAMME– FULL BUSINESS CASE
Key Decision: Yes Relevant Forward Plan Ref: 003724/2017
If not in the Forward Plan: Chief Executive approved ☐
(please "X" box) O&S Chair approved ☐
Relevant Cabinet Councillor Stewart Stacey –Transport and Roads,
Members: Councillor Lisa Trickett –Clean Streets, Recycling and the
Environment, Councillor Majid Mahmood-
Commercialism, Commissioning and Contract
Management.
Relevant O&S Chair: Councillor Zafar Iqbal – Economy, Skills and Transport
Councillor Mohammed Aikhlaq – Corporate Resources
and Governance, Councillor John Cotton - Health and
Social Care
Wards affected: ALL

1. Purpose of report:

- 1.1 To seek approval to the Full Business Case (FBC) for the proposal to procure an Electric Vehicle (EV) Network Development Partner to install and operationally manage a Taxi EV charge point network and develop a publicly accessible EV charge point network. This proposal supports the 'Addressing Air Quality in Birmingham - Draft Air Quality Strategy for Clean Air Zone (CAZ) Issues and Options Consultation' report which is subject to approval and also timetabled under this Cabinet agenda.
- 1.2 To seek approval to accept funding from the Office of Low Emission Vehicles (OLEV) of £2.929m, awarded to the City Council for the deployment of a 197 EV taxi charge point network within Birmingham city centre and wider Birmingham local areas.
- 1.3 To seek approval to the procurement strategy for the appointment of an EV Network Development Partner who will be responsible for production and implementation of a city wide EV charge point development plan to deliver 197 OLEV funded taxi charge points and the commercial opportunity to develop a public EV charge point network.

2. Decision(s) recommended:

That Cabinet:

- 2.1 Approves the Full Business Case (Appendix A) for the proposed development, implementation and management of an EV charge point network, through a procured EV Development Partner.
- 2.2 Accepts the grant funding of £2.929m from OLEV that enables the installation and operational management of 197 Taxi EV charge points within Birmingham city centre and the wider Birmingham local areas and levers in additional external investment through the opportunity for the commercial development of a publicly accessible EV charge point network.
- 2.3 Approves the procurement process for an EV Network Development Partner for the provision of an EV charge point network, in accordance with the strategy and approach set out in the FBC (Appendix A).
- 2.4 Delegates authority to approve the award of the contract for an EV Network Development Partner for the provision of an EV charge point network to the Cabinet Members for Commercialism, Commissioning and Contract Management, and Transport and Roads jointly with the Corporate

Director, Economy.

- 2.5 Notes that the outcome of each stage of the procurement process; namely the Standard Selection Questionnaire (SQ) and the Invitation to Negotiate (ITN); Invitation to Submit Revised Tenders (ITSRT), and Invitation to Submit Final Tender (ISFT)) will be reported to the Interim Assistant Director Transportation and Connectivity and the Director of Commissioning and Procurement before proceeding to the next stage.
- 2.6 Authorise the City Solicitor to negotiate, execute, seal and complete all necessary documentation to give effect to the above recommendations.

Lead Contact Officer(s): Sylvia Broadley – Air Quality Manager, Transportation and Connectivity

Telephone No: 07730 282091

E-mail address: sylvia.broadley@birmingham.gov.uk

3. Consultation

Internal

- 3.1 Consultation has been undertaken with the Air Quality Members Steering Group (AQMSG) which includes the Cabinet Member for Clean Streets, Recycling and the Environment, Cabinet Member for Transport and Roads, Cabinet Member for Health and Social Care, Chair of Licensing and Public Protection Committee and Chair of Planning Committee, who support the proposals contained within this report.
- 3.2 Officers from City Finance, Procurement, Legal and Governance have been involved in the preparation of this report.
- 3.3 As part of the City Council's obligations under the Highway Maintenance and Management Private Finance Initiative (HMMPFI) contract, Highways and the Street Services Division have been consulted on proposed changes to the highway inventory arising from this scheme and support the proposal.
- 3.4 The Assistant Director Transportation and Connectivity, Director for Public Health, the Head of Licensing and the Operational Manager for Air Quality and Environmental Services have been consulted and support the proposal.

External

- 3.5 City Council officers undertook consultation with stakeholders within the taxi trade including taxi owners, drivers, associations, operators and the RMT union. All were supportive of the proposed taxi charge point network to assist take up of electric taxis by providing rapid and fast charging at convenient points to support both hackney carriage vehicles (HCV) and private hire vehicles (PHV) daily operational needs within the city centre radius and longer journeys to Birmingham Airport and the NEC.
- 3.6 Tyseley Energy Park (TEP) and Network Rail (regarding New Street Station/Ellis Street) have been consulted and support the proposed EV charge point development. Both locations are identified as key hubs for electric charging.

4. Compliance Issues:

4.1 Are the recommended decisions consistent with the Council's policies, plans and strategies?

4.1.1 This report is consistent with the City Council's Vision and Forward Plan 2017 and supports the following priorities:

- Job & Skills - Build upon our assets, talents and capacity for enterprise and innovation to shape the market and harness opportunity.
- Health - Help people become healthier and more independent with measurable

improvement in physical activity and mental wellbeing.

- 4.1.2 This project also links into the Birmingham Development Plan, Birmingham Connected, West Midlands Combined Authority Strategic Economic Plan and Movement for Growth by supporting improvements to air quality and reducing carbon dioxide (CO₂) emissions and improving the local environment.

Birmingham Business Charter for Social Responsibility (BBC4SR)

- 4.1.3 Compliance with the BBC4SR is a mandatory requirement that will form part of the conditions of this contract. Tenderers will submit an action plan with their tender that will be evaluated in accordance with the Evaluation and Selection criteria in the FBC, and the action plan of the successful tenderer will be implemented and monitored by the Council through the EV Project Manager, during the contract period.

4.2 Financial Implications

4.2.1 Capital

The capital cost of the taxi EV charge point equipment is £2.929m. This will be funded from capital grant approved by OLEV on 22nd March 2017, subject to acceptance being approved. These resources are allocated specifically to fund the 197 charge points for the taxi EV charging network within Birmingham city centre and wider Birmingham local areas.

The EV Network Development Partner will be required to install the 197 taxi charge points in total, which will incorporate two key taxi charge point hub locations (with a minimum of six rapid charge points each), one at Tyseley Energy Park and the other at Birmingham New Street, along with other key city centre taxi charging locations which will provide a minimum of two charge points per location. This will be supported by an out-of-city taxi EV charging network. The capital costs that are covered through the OLEV grant, are outlined below.

Charge Point Infrastructure	No. of Charge Points Required	Cost per Charge Point	Total Infrastructure Cost
Fast charge points	97	£7,000	£679,000
Rapid charge points	100	£22,500	£2,250,000
TOTAL	197		£2,929,000

The number and type of taxi charge points funded through the OLEV scheme was identified as a result of an Energy Saving Trust feasibility study (see paragraph 5.4). The cost of charge point equipment, outlined above, is as per the public OLEV fund guidance which sets out the price per charge point. The EV Network Development Partner will cover the additional cost of installation and connection to the electric grid.

In addition the grant funding will be used to lever in external investment from the appointed EV Network Development Partner through the commercial opportunity to develop, install and operate a publically accessible EV charge point network across the city alongside the EV taxi charge point network. Levels of investment and deliverables will be explored and negotiated as part of the procurement process for the EV Network Development Partner with the minimum investment value set at £1m.

This anticipated investment is expected to include the innovative use of smart technology such as: grid balancing to draw cheaper off-peak electric from the grid and store for daytime local community EV charging use; development of innovative ways of delivering local community EV charge point facilities, particularly in locations that present challenges such as terraced housing, blocks of flats; new ways to widen take-up of electric vehicles by deploying multiple charge points

at key locations to enable potential future EV Car Club provision and commercial vehicle EV charging requirements, (e.g. for electric vans), to support last mile deliveries into the city.

4.2.2 Revenue

As substantial investment will be required from the EV Network Development Partner, it is not thought viable for Birmingham City Council to generate income from this contract in the early years. However, the contract will allow for arrangements to be reviewed through an open book policy with the EV Network Development Partner. The tenders will be evaluated on both the level of investment proposed by the EV Network Development Partner (set at a minimum of £1m) and the percentage and timing of gross income to be shared. The EV Network Development Plan will set out the detail of the publicly accessible EV Network, the associated investment and potential income. No decisions relating to the use of any potential income generated for the Council will be made until the likely values and timing are more certain however, possible uses could include reinvestment into development of the EV Network or other projects supporting improvements to air quality, reducing carbon dioxide (CO₂) emissions and improving the local environment.

The current limited network of charging points operated by the Council will also transfer to the selected provider for decommissioning/replacement in line with the EV Development Plan. The Council currently covers the costs associated with this 'legacy' provision, circa £19,400 per annum. These costs will cease to be incurred by the Council once the assets transfer to the new provider and so represent a saving. Please refer to paragraph 5.8 for further information.

The costs associated with the development, legal, procurement, implementation and management of the programme will be contained within current resources, as outlined in section 3 of the FBC at Appendix A.

There are expected to be no other revenue cost implications for the Council arising from this proposal, although the detail of how the Council will recover its parking income from charging point bays will be determined during contract negotiations. As part of the contractual arrangement the EV Development Partner will incur all revenue costs as they will own, operate and maintain the taxi and publicly accessible charge point network. They will cover their costs through EV charge point customers' use of the EV network, where the customers will pay for their electric charge use in re-charging their vehicles.

4.3 Legal Implications

- 4.3.1 Where public land is used to locate the EV charge point network, the relevant primary legislation required to enable this project to install a charge point network in regard to where it is located and to support specification requirements for civil works on the public highway, includes the Highways Act 1980; Road Traffic Act 1974; Traffic Management Act 2004 and the Road Traffic Regulation Act 1984 including the use of Traffic Regulation Orders (TROs).
- 4.3.2 Under the general power of competence per Section 1 of the Localism Act 2011, the Council has the power to enter into the arrangements set out in this report and are within the boundaries and limits of the general power of competence Section 2 and 4 of the Localism Act 2011.
- 4.3.3 The Government is set to mandate Birmingham to introduce a Clean Air Zone (CAZ) under the Environment Act 1995 (Birmingham City Council) Air Quality Direction 2017 by December 2019 to enable compliance with EU Air Quality targets by 2020. The minimum vehicle standards will be Euro 6 level for diesel vehicles and Euro 4 for petrol vehicles. Increased use of electric vehicles will support the City in achieving compliance and this project in turn supports this transition.

4.4 Public Sector Equality Duty

- 4.4.1 An Equality Analysis has been carried out (ref EA002592) and is attached to this report (Appendix B). No adverse effects have been identified from the actions recommended in this report.

5. Relevant background/chronology of EV Taxi charge point network development

- 5.1 In 2015 the Council commissioned Element Energy to produce the Birmingham Blueprint study that assessed the level of environmental and air quality improvements that could be achieved through the reduction of carbon and other harmful emissions from public and private sector transport vehicles. The key recommendation outlined in the study, which was published in February 2015, was the need for a Birmingham low/zero emission re-fuelling infrastructure to include electric charging, hydrogen, compressed natural gas and bio-fuels to enable the take up of low and zero emission vehicles to include fleet re-fuelling requirements particularly of taxis (but also buses), as older fleet vehicles are concentrated within the city centre contributing towards harmful emissions.
- 5.2 Birmingham's licensed taxi fleet, comprises of 1,262 Hackney Carriage Vehicles (HCVs) and 4,098 Private Hire Vehicles (PHVs). They undertake approximately 27.87 million journeys per annum. However, none of the current HCV fleet meet the latest Euro 6 emission standards and there are no zero emission electric vehicles across the fleet of HCVs or PHVs. The Council has worked with the Taxi industry to explore a number of options. These include a pilot scheme for LPG retrofit of 65 taxi engines resulting in CAZ compliance under Petrol Euro 4+, and exploring the transition requirements to ultra-low/zero emission electric vehicles through leasing or purchasing, supported by a robust taxi-only EV charge point network.
- 5.3 As a result of the above and the need to plan for the forthcoming CAZ implementation there is urgent need to ensure that an EV charge point network is 'fit for purpose' with the required level of investment made. This needs to be appropriately managed to provide an integrated city level EV Taxi network and public accessible EV charge point network, that should also meet the challenges of different residential locations and provide fast and rapid 'charge and go' facilities. As pre-existing arrangements have come to an end, the future of a city level EV charging network has to be considered in the context of the following constraints:
- A requirement for taxi and publicly accessible EV network to be cost neutral to the Council; The Council does not have the resources, expertise or capacity to deploy or manage a taxi-only or publicly accessible EV network.
- 5.4 The Council has worked with Energy Savings Trust (EST) to undertake a feasibility study with the Birmingham taxi industry to assess the potential taxi EV charge point network and location requirements for both HCVs and PHVs. Analysis of Licensing Authority data also showed that a large proportion of drivers live on the east side of the city around Tyseley, Nechells, Bordesley, Small Heath and South Yardley areas. Two main charge point hub locations were identified to enable multiple charge point use. These would be Birmingham New Street Station/Ellis Street Car Park as the main rank, pick up and drop off point in the city centre, and Tyseley Energy Park off the A45, as the main route to Birmingham Airport and the NEC. This site is just 2 miles from the city centre, is on the east side of the city and is in close proximity to where a large proportion of taxi drivers live. Both of these hubs will provide renewable electricity to ensure the maximum environmental impact of ultra-low emission taxis. Tyseley Energy Park benefits from renewable energy produced from the wood bio-mass plant, and Birmingham New St/Ellis Street car park benefits from renewable energy produced from solar as well as renewable energy from their connection to a combined power and heat network. As part of the project bidders will be expected to liaise with these energy suppliers (already engaged through the development of this project) in formulating the EV Network Development Plan.
- 5.5 The proposed two main charge point hubs will provide a minimum of six charge points each, with the city centre being further supported through seven other charge point sites (Map in Annex A of the FBC). Out-of-city locations, where arterial roads join the A4040 ring road were also recognised as key EV charging opportunities to specifically address PHV drivers' requirements that operate outside of the city centre. In total, 197 fast/rapid charge point facilities for taxis were recommended in the Energy Savings Trust feasibility study to meet an initial transition of at least 526 electric taxis by 2020.
- 5.6 In March 2017, the Council successfully bid for £2.929m OLEV Taxi Electric Vehicle (EV) charge point funding from the Department for Transport (DfT) to implement the proposed 197 Taxi EV

charge point network across the city. With the Council's Licensing Committee approval (23rd October 2017) for a revised Taxi licensing policy that now prioritises emission standards and the transition of the taxi fleet towards clean air compliant vehicles by 2020, zero emission electric HCVs and PHVs will provide a real impact in contributing towards the Council achieving air quality compliance by 2020.

- 5.7 Whilst the conditions of the OLEV funding require the grant to be spent on a 197 Taxi EV charge point network for the sole use of taxi drivers, the capital grant resource will be used as a lever to attract further investment, (set at a minimum of £1m), and potential income from the procured EV Network Development Partner to develop a publically accessible EV charge point network. Using the Competitive Process with Negotiation Procedure, details including the level of investment, the range and extent of EV charge point coverage, type of infrastructure and potential income will be negotiated and agreed.
- 5.8 The proposed development will replace the current 'legacy' public EV charge point network located at 18 EV charging points locations operated by the Council. This current network of 36 standard 7 -10 hour charge points (map at Appendix 1 of FBC) installed in 2012 as part of the 'Plugged in Midlands' project, consists of a mix of on-street charging facilities (free parking and EV charging for a maximum of 3 hours) and off-street charging facilities in council owned car-parks (free EV charging but parking must be paid as per car park conditions). This charge point network sits outside of the Amey/PFI contract arrangements, where the Council covers the costs associated with this provision at £19,400 per annum. These costs will not be incurred by the Council when the assets have transferred to the new provider.
- 5.9 The project will be managed by the Air Quality Manager, Transportation and Connectivity with support from the Category Manager, Procurement Services following contract commencement in July 2018. Project management will also align with the Council's obligations under the Highway Maintenance and Management Private Finance Initiative (HMMPFI) contract. Highways and the Street Services Division have been formally notified of proposed changes to the highway inventory arising from the proposed EV Taxi charge point scheme. Additionally, an EV Network Project Board will be set up with representation from the EV Development Partner, Highways Maintenance and Management Private Finance Initiative (HMMPFI) contract personnel, Street Services Division, the Transportation and Connectivity EV Network Project Manager and Procurement Services, to oversee proposed works as an 'inclusive package' outside of the PFI. The EV Development Partner will own, operate, maintain and manage the EV Network, but overall programme co-ordination will be through an EV Network Development Project Board in line with other programmed activities on the highway network and public car parks.

Procurement

- 5.10 The procurement strategy will set out the selection criteria to include the innovative use of smart technology in developing the taxi and publicly accessible EV charge point network, particularly in locations that present challenges such as terraced housing and blocks of flats, as well as innovative ways to widen take up of electric vehicles by deploying multiple charge points at key locations to enable potential future EV Car Club provision and commercial vehicle EV charging requirements.
- 5.11 To enable the successful delivery of the project, it is proposed that a procurement exercise will be undertaken, using the Competitive Process with Negotiation Procedure, the details of which are contained within the FBC accompanying this report.
- 5.12 The proposed duration of the contract will be for a period of 7 years with the option to extend for a further 3 years subject to satisfactory performance, EV take-up by citizens and Council priorities. This period has been chosen in consultation with the market as it represents a reasonable period for a return on investment taking into account the high level of investment required by operators.
- 5.13 Following approval of this report it is proposed that the required OJEU notice will be issued on the 1st February 2018. Dependent upon the length of negotiations it is anticipated that the contract will commence in July 2018. A more detailed timetable is included in the FBC.

6. Evaluation of alternative option(s)

6.1 The options that have been considered in the full business case are as follows:

Do Nothing - This option was discounted as it would not demonstrate value for money and would result in the City Council having to maintain the existing network, at a current annual cost of £19,400, which is limited by the number of available working charge points and the low charging level up to 7 kw which is only suitable for a 7-10 hour charge, significantly reducing the amount of users who can benefit from the charge point network. This conflicts with the priorities set within the Birmingham Connected Transport Strategy to encourage Green Travel Districts and the emissions reduction targets set through the Government's air quality compliance targets. The £2.929m grant for the taxi-only EV charging network would be returned to OLEV.

Decommission the existing PiM EV charging network (at both on-street and car park locations), and not seek to develop a publicly accessible EV charging network, only taking up the OLEV funded taxi EV charge point network – This option would limit the level of investment made in the city, where EV network demand has already been demonstrated by the level of information requests and complaints by members of the public who want to either purchase an electric vehicle or have experienced problems in using the current 'legacy' EV charge points. Additionally, the City Council is under pressure to meet compliance with air quality targets (the Air Quality Direction 2017), where any transition to electric car use would provide an immediate impact of reducing emissions. This requires a city wide publicly accessible EV charging network to be available.

6.2 The following procurement options were considered:

Use of the Amey PFI Contract - This option was considered and discounted as the scope of this project falls outside the existing contractual agreement with Amey under the PFI.

Use a collaborative framework agreement - There is a collaborative framework agreement in place that cover EV charging points awarded by Crown Commercial Services - Traffic Management Technology 2 (TMT2). The framework call-off process restricts bidders to submitting a single tender and does not allow for dialogue meetings or revisions to be made to the Council's requirements. The complexity of this project, (e.g. the charging technology, the taxi/public infrastructure implementation and operation, hubs, pricing, level of private investment and potential income), is likely to result in a variety of possible solutions. Without the ability to enter into competitive dialogue it was not felt possible to deliver the best outcome for the Council. For this reason the TMT2 framework was discounted.

Tendering a Birmingham Only Contract - This route will provide the most flexibility in specifying the Council's requirements. Working with suppliers through a competitive dialogue process will enable the Council to consider a variety of options in working towards a tailored solution, whilst also allowing for negotiation on the level of investment and pricing for the network, resulting in best value for the Council. This is the recommended option.

7. Reasons for Decision(s):

7.1 Enabling the development of an EV infrastructure to support the early transition of EV take-up through the proposed Taxi EV charge point network and development of a publicly accessible charge point network.

7.2 Supporting the Council in achieving clean air compliance in the shortest possible time before 2020.

Signatures

Date

Councillor Stewart Stacey,
Cabinet Member for Transport
and Roads

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Councillor Lisa Trickett,
Cabinet Member for Clean Streets,
Recycling and the Environment

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Councillor Majid Mahmood,
Cabinet Member for
Commercialism, Commissioning
and Contract Management

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Waheed Nazir,
Corporate Director, Economy

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List of Background Documents used to compile this Report:

Energy Saving Trust ULEV Taxi Scheme Feasibility Report- Energy Savings Trust March 2016
Birmingham Blue Print for Low and Zero Emission re-fuelling infrastructure-Element Energy February 2015
Birmingham Development Plan- Birmingham City Council 2017
Birmingham Connected- Birmingham City Council 2014

List of Appendices accompanying this Report (if any):

Appendix A - Full Business Case-January 2018
Appendix B - Equality Analysis- January 2018

PROTOCOL
PUBLIC SECTOR EQUALITY DUTY

- 1 The public sector equality duty drives the need for equality assessments (Initial and Full). An initial assessment should, be prepared from the outset based upon available knowledge and information.
- 2 If there is no adverse impact then that fact should be stated within the Report section 4.4 and the initial assessment document appended to the Report duly signed and dated. A summary of the statutory duty is annexed to this Protocol and should be referred to in section 4.4 of executive reports for decision and then attached in an appendix; the term 'adverse impact' refers to any decision-making by the Council which can be judged as likely to be contrary in whole or in part to the equality duty.
- 3 A full assessment should be prepared where necessary and consultation should then take place.
- 4 Consultation should address any possible adverse impact upon service users, providers and those within the scope of the report; questions need to assist to identify adverse impact which might be contrary to the equality duty and engage all such persons in a dialogue which might identify ways in which any adverse impact might be avoided or, if avoidance is not possible, reduced.
- 5 Responses to the consultation should be analysed in order to identify:
 - (a) whether there is adverse impact upon persons within the protected categories
 - (b) what is the nature of this adverse impact
 - (c) whether the adverse impact can be avoided and at what cost – and if not –
 - (d) what mitigating actions can be taken and at what cost
- 6 The impact assessment carried out at the outset will need to be amended to have due regard to the matters in (4) above.
- 7 Where there is adverse impact the final Report should contain:
 - a summary of the adverse impact and any possible mitigating actions
(in section 4.4 or an appendix if necessary)
 - the full equality impact assessment (as an appendix)
 - the equality duty (as an appendix).

Equality Act 2010

The Executive must have due regard to the public sector equality duty when considering Council reports for decision.

The public sector equality duty is as follows:

- 1 The Council must, in the exercise of its functions, have due regard to the need to:
 - (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by the Equality Act;
 - (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
 - (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
- 2 Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:
 - (a) remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic;
 - (b) take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it;
 - (c) encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.
- 3 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.
- 4 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:
 - (a) tackle prejudice, and
 - (b) promote understanding.
- 5 The relevant protected characteristics are:
 - (a) marriage & civil partnership
 - (b) age
 - (c) disability
 - (d) gender reassignment
 - (e) pregnancy and maternity
 - (f) race
 - (g) religion or belief
 - (h) sex
 - (i) sexual orientation