

Before an Independent Hearings Panel  
appointed by Christchurch City Council

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*under:* the Resource Management Act 1991

*in the matter of:* the hearing of submissions on Plan Change 14 (Housing  
and Business Choice) to the Christchurch District Plan

*and:* **Orion New Zealand Limited**  
Submitter 854

Legal Submissions on behalf of Orion New Zealand Limited

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Dated: 11 April 2024

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## MAY IT PLEASE THE INDEPENDENT HEARINGS PANEL

### INTRODUCTION

- 1 These legal submissions are presented on behalf of Orion New Zealand Limited (*Orion*). Orion is a submitter and further submitter on Plan Change 14 (Housing and Business Choice) to the Christchurch District Plan (*PC14*) (submitter 854).
- 2 These legal submissions relate to the Qualifying Matter topic (*QM topic*). We have previously filed opening legal submissions on behalf of Christchurch International Airport Limited, Lyttelton Port Company Limited and Orion New Zealand Limited (together the *Infrastructure Submitters*) for the Strategic Overview topic.<sup>1</sup> Those submissions are also relevant to Orion's position on the QM topic.
- 3 Orion is calling evidence from:
  - 3.1 **Mr Anthony O'Donnell** – in relation to Orion operations; and
  - 3.2 **Ms Melanie Foote** – in relation to planning.
- 4 The development enabled by the medium density residential standards (*MDRS*) is likely to result in a significant increase for electricity demand, while simultaneously limiting the area of land available for electricity distribution equipment and infrastructure. It is critical that intensification occurs with electricity infrastructure provision in mind.
- 5 Orion's overall position on PC14 is accordingly that:
  - 5.1 electricity distribution infrastructure, both the Significant Electricity Distribution Lines (*SEDLS*) and lower voltage lines, must be protected from hazards and risks associated with inappropriate residential intensification; and
  - 5.2 sufficient land must be reserved for new infrastructure to service increased development.

### PLANNING FRAMEWORK

#### National Policy Statement on Urban Development

- 6 The National Policy Statement on Urban Development 2020 (*NPS UD*) directs that local authority decisions on urban development are to be integrated with infrastructure planning decisions,<sup>2</sup> and that

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<sup>1</sup> *Opening Legal Submissions for the Infrastructure Submitters*, dated 11 October 2023.

<sup>2</sup> NPS UD Objective 6.

planning decisions contribute to well-functioning urban environments.<sup>3</sup>

- 7 It is submitted that a well-functioning urban environment is one in which:
- 7.1 infrastructure – particularly infrastructure such as the electricity distribution network which provides critical support to communities – is not adversely affected by incompatible activities;
  - 7.2 urban growth is planned with infrastructure provision in mind, recognising that the two run hand in hand; and
  - 7.3 infrastructure provision is enabled in order to support urban growth.
- 8 While NPS UD Policy 3 directs councils to increase density and realise as much development capacity as possible in urban environments, Policy 4 allows district plans applying to tier 1 urban environments to modify the relevant building height or density requirements to the extent necessary to accommodate a qualifying matter (QM).

**Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2011**

- 9 The legal submissions filed for the Infrastructure Submitters at the Strategic Overview hearing briefly address the legislative framework established by the Resource Management (Enabling Housing Supply and Other Matters) Amendment Act 2021 (*Amendment Act*).<sup>4</sup>
- 10 The electricity distribution network does not fit neatly within one of the QMs described in Section 77I(a) to (i) of the Amendment Act; it is not listed in the NPS UD as “nationally significant infrastructure”. Therefore, the relevant QM(s) required to protect the electricity distribution network is found in Section 77I(j):

...

*(j) any other matter that makes higher density, as provided for by the MDRS or policy 3, inappropriate in an area, but only if section 77L is satisfied.*

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<sup>3</sup> NPS UD Policy 1.

<sup>4</sup> *Opening Legal Submissions for the Infrastructure Submitters*, dated 11 October 2023 from [24] to [28].

### Existing planning framework

- 11 To summarise **Ms Foote's** evidence, which outlines the existing planning framework as it relates to the electricity distribution network:
- 11.1 The Canterbury Regional Policy Statement (*CRPS*) defines the electricity distribution network as "Regionally Significant Infrastructure" and "Strategic Infrastructure". The electricity network is also defined as "Critical Infrastructure".<sup>5</sup> The *CRPS* directs that the electricity distribution network should be able to operate, be protected and be developed in a safe and efficient matter.
- 11.2 The efficient use and development of the electricity distribution network is provided for in both Chapter 5 (Land use and Infrastructure) and Chapter 6 (Recovery and Rebuilding of Greater Christchurch) of the *CRPS*, specifically:
- (a) Objective 5.2.1(f) (Entire Region) requires that "*development is located so that it functions in a way that...is compatible with, and will result in continued safe, efficient and effective use of regionally significant infrastructure*". The explanation to this objective notes that regionally significant infrastructure provides considerable economic and social benefits to the region.
- (b) The *CRPS* directs territorial authorities to avoid reverse sensitivity effects and incompatible land uses in proximity to regionally significant infrastructure through Objective 5.2.2 (Wider Region), Policy 5.3.2 (Wider Region), Policy 5.3.9 (Wider Region), and Objective 6.2.1 (Greater Christchurch).
- 11.3 What is clear from the *CRPS* framework is that PC14 must provide for and recognise the electricity distribution network, ensure integration of development with infrastructure and avoid reverse sensitivity effects.
- 11.4 In accordance with the *CRPS* direction, the Christchurch District Plan (*District Plan*) contains provisions that recognise the benefits of strategic infrastructure and the need to protect it from incompatible activities and development, including reverse sensitivity effects. There are already specific controls

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<sup>5</sup> Orion is designated as a lifeline utility and provides an essential service. It must be able to fulfil its function to the fullest extent possible during and after an emergency.

to protect Orion's assets in the District Plan. Importantly, the District Plan contains corridor protection buffers for SEDLs. In Orion's experience, the existing provisions have improved safety around the network and have ensured that a number of buildings were constructed in accordance with safety requirements.

### **SEDL QM**

- 12 PC14, as notified, included a QM to protect Orion's SEDLs based on the existing corridor protection provisions and setback requirements in the District Plan. Orion supported PC14 as notified in this regard, as it is critical that the SEDLs are protected as a matter of health and safety as well as cost effectiveness and efficiency for Christchurch residents.
- 13 Council's Section 42A Officer supports the SEDL QM as notified and Orion is not aware of any submitters in opposition.
- 14 Given the SEDL QM is agreed, these legal submissions do not step through the statutory test in detail. In summary:
  - 14.1 The MDRS enables residential development that is incompatible with Orion's existing overhead infrastructure and electricity safety clearances from support structures and the centre lines of conductors.
  - 14.2 The SEDL QM operates to ensure District Plan users are made aware of setback requirements contained in the New Zealand Electrical Code of Practice for Electrical Safe Distances (*NZCEP 34:2001*). The SEDL QM applies to the same land area covered by the SEDL corridor protection in the District Plan.
  - 14.3 The costs of including the SEDL QM in the District Plan are negligible in light of existing standards and District Plan requirements. On the other hand, the costs of not including the SEDL QM could be considerable. It is clearly appropriate to recognise safe clearance distances as a QM in PC14 to ensure they are applied and are not overlooked by Council planning staff and developers.

### **QM FOR LOWER VOLTAGE LINES**

- 15 Orion also seeks that PC14 addresses the smaller clearance requirements associated with its existing 11kV, 400V and 230V network (*lower voltage lines*) as well as provisions relating to conductive fencing.

- 16 Because the imposition of clearance distances associated with the lower voltage lines would make the MDRS and the relevant building height or density requirements less enabling of development, it is submitted that the most appropriate mechanism to protect Orion's lower voltage lines is by way of (as for the SEDLs) a QM under section 77I(j) of the Amendment Act.
- 17 Orion considers that a QM for its lower voltage lines is necessary to ensure safe and appropriate clearance distances are applied, as is the case for the SEDLs. The intent is that where a proposed development does not meet the necessary clearances, a consent requirement arises. Once that trigger occurs, there will need to be engagement between Orion and the developer to determine an appropriate outcome in the circumstances. Without this mechanism in place, development with significant impacts on the safety and operation of the lower voltage lines will likely occur, putting Orion in the difficult position of having to address safety issues retrospectively, if that can be done at all.
- 18 Council's Section 42A Officer has rejected Orion's submission on the basis that this additional level of detail for lower voltage lines is not appropriate nor necessary in light of Orion's submission.<sup>6</sup>
- 19 It is submitted that PC14 should appropriately include provisions that protect Orion's lower voltage lines. Below we outline the reasons why the QM proposed is both appropriate and necessary, in accordance with the evaluation requirements under the relevant parts of Sections 77J and 77L of the Amendment Act. Mr O'Donnell and Ms Foote have addressed the proposed QM in their evidence, including in response to the Section 42A Officer's position. In addition, Ms Foote has prepared a Section 32AA analysis in support of Orion's position which will accompany her summary statement at the hearing.

**Section 77J(3)(a) – Demonstrate why the area is subject to a qualifying matter and why the qualifying matter is incompatible with the level of development permitted by the MDRS**

- 20 As explained by Mr O'Donnell the lower voltage lines are generally the most common on any electricity distribution network and, broadly speaking, are the vast majority of lines that are seen in any given residential street.<sup>7</sup> The same issues that arise for SEDLs can also occur for Orion's lower voltage lines.

<sup>6</sup> *Planning Officer's Report of Sarah-Jane Oliver under Section 42A of the Resource Management Act 1991 - Strategic Overview, Strategic Directions Chapter 3, Qualifying Matters relating to Strategic and City Infrastructure and Coastal Hazards* dated 11 August 2023 at paragraph 9.59.

<sup>7</sup> Orion's network in Christchurch City includes 698.3km of 11kV lines and approximately 1,323.1km of 400kV overhead lines.

- 21 Electricity distribution companies across New Zealand are increasingly experiencing issues with development in close proximity to lower voltage lines. Many of those companies are seeking a similar planning response in their respective intensification plan changes.
- 22 Mr O'Donnell will speak to examples in other parts of New Zealand, particularly Auckland, whereby intensified development has caused issues with clearances from lower voltage lines. Orion seeks to ensure we get ahead of those issues in Christchurch.
- 23 PC14 presents a valuable opportunity to proactively implement planning measures that will protect Orion's lower voltage network. Failure to do so creates a risk of incompatible development (intensification associated with the MDRS) proceeding before the next opportunity arises.
- 24 We observe that the draft National Planning Framework contained a rule requiring setbacks from lower voltage lines. This demonstrates clear intent, at a national level, to implement safe clearance requirements in the resource management context. While the National Planning Framework has not progressed further, the electricity network working group continue to explore the potential for national direction, including in relation to lower voltage lines.

**Mapping**

- 25 It is not reasonably practicable to map Orion's lower voltage lines at this time. However, mapping of lower voltage networks is possible; for example it is currently used in Auckland. Accurate mapping of the lower voltage network is one of Orion's current workstreams and will be available in the near future. The absence of adequately certain maps does not preclude recognition of the lower voltage lines as a QM in PC14. Ms Foote has suggested a new clause to provide for the clearance requirements from Orion's lower voltage lines.<sup>8</sup>
- 26 Until accurate planning maps are available, there are visual triggers of lower voltage lines on site. Orion considers that, if a proposed development is within approximately four metres of a pole, then a developer ought to get the site formally surveyed. As explained above, the rule framework proposed by Ms Foote is intended to ensure there is engagement between Orion and the developer in these instances.

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<sup>8</sup> Statement of evidence of Ms Melanie Foote dated 20 September 2023 at paragraphs 33 and 35.

***Orion's relief is the most appropriate and gives effect to the higher order planning framework***

- 27 **Mr Joll's** evidence for Kāinga Ora Homes and Communities observes that the existing District Plan provisions are deemed to give effect to the CRPS and that the SEDL QM as notified reflects those provisions. He does not agree that the relief sought by Orion for lower voltage lines is necessary to give effect to the CRPS.
- 28 As explained by Ms Foote, Orion's electricity distribution network is defined in the CRPS as "regionally significant infrastructure", and "critical infrastructure". The CRPS definitions do not distinguish between SEDLs and the remainder of the electricity distribution network, including Orion's lower voltage lines. The CRPS directs avoidance of reverse sensitivity effects and incompatible land uses in proximity to regionally significant infrastructure. This must mean that Orion's electricity distribution network, as a whole, should be able to operate, be protected and be developed in an efficient manner.
- 29 Further, and critically, Orion's position in relation to the lower voltage lines is specifically in the context of the intensification enabled under PC14. Put simply, the level of development enabled by the MDRS and the relevant building height and density requirements is much greater than the status quo level of development currently enabled under the District Plan. It is a step-change in approach and one that has the potential to result in substantially greater hazards and risks to the overall electricity distribution network.
- 30 It is for these key reasons that Orion considers the most appropriate way to give effect to the CRPS, in the context of PC14, is to clearly recognise safe clearance distance requirements in relation to all of its lines that make up the electricity distribution network. It is submitted that it is a necessary change to the current District Plan approach in light of the amount and type of development enabled by the MDRS.
- 31 As explained by Mr O'Donnell, one of the key challenges driving Orion's investment decisions is housing intensification and population growth. It is an important corollary that there is appropriate protection for Orion's assets in the planning framework, and that this protection shifts or expands where necessary to keep up with current circumstances.
- 32 The evidence of Ms Foote, including her more recent Section 32AA analysis (which will be provided with her summary statement), and Mr O'Donnell demonstrates why the additional protection sought by Orion for its lower voltage lines is necessary from their planning and operational perspectives.



***Compliance with the New Zealand Electrical Code of Practice for Electrical Safe Distances***

- 33 The NZECP 34:2001 is an industry standard which sets minimum safe distances (from both SEDLs and lower voltage lines) to protect persons, property, vehicles and mobile plant from harm or damage from electrical hazards.
- 34 The MDRS enable development that may be incompatible with the minimum safe electrical clearance requirements in the NZECP 34:2001. Higher buildings and/or smaller setbacks have the potential to fall well short of the clearance distances set out in NZECP 34:2001. **Mr O'Donnell** explains what can happen where clearance distances are not met, including increased risk to people and property and complicating works to the electricity distribution network and potentially impacting the reliability of supply.
- 35 Health and safety is at the core of Orion's concerns with new or intensified development and it is vital that NZECP 34:2001 is complied with. In relation to PC14, Orion considers that the most effective way to ensure compliance in relation to both the SEDLs and its lower voltage lines is by way of a QM which imposes the minimal safe electrical clearances as contained in the NZECP 34:2001.
- 36 We address concerns raised as to the "duplication" of the NZECP 34:2001 in the District Plan from paragraph 44 below.

**Section 77J(3)(b) – Assess the impact that limiting development capacity, building height, or density (as relevant) will have on the provision of development**

- 37 As explained above, the electricity clearance distances associated with Orion's lower voltage lines are already required in NZECP 34:2001. It is therefore somewhat artificial to view inclusion or accommodation of corridor protection rules as "preventing" a level of development that would otherwise be enabled by the MDRS.
- 38 The relationship between a development proposal site and the corridor protection provisions proposed by Orion is highly site-specific. As explained by Mr O'Donnell, Orion does not wish to restrict development, but rather to ensure that matters of safety and reliability of electricity supply are considered at the outset of projects, rather than when development is underway or complete, at which point it is too late.
- 39 In addition, it is not realistic to assume that every residentially zoned site will take up the opportunity to, or be able to if other QMs apply, develop to the extent enabled through the MDRS. In this sense, the corridor protection rules will not have a blanket impact to the greatest extent possible across Christchurch.

**Section 77J(3)(c) – Assess the costs and broader impacts of imposing those limits**

- 40 The costs on development capacity of including corridor protection setbacks in relation to Orion’s lower voltage lines are negligible in light of NZECP 34:2001. There will be a small administrative cost for applicants in circumstances where they are required to engage with Orion. It is submitted that this cost is minor in the context of a development proposal overall, which may have other consenting requirements, and when compared to the considerable cost of underground cabling.
- 41 On the other hand, the costs of not including the QM for Orion’s lower voltage lines could be considerable:
- 41.1 There is a risk that electricity clearance distances are compromised, requiring immediate remediation.
- 41.2 The cost to remedy clearance breaches is considerable and is ultimately borne by the landowner.
- 41.3 The remedial options are controlled by District Plan rules. For example, road reserves often support an array of infrastructure and there can be few options for new pole locations or additional underground electrical infrastructure.
- 42 The benefit of including protection of Orion’s lower voltage lines as a QM is that it presents a clear signal to plan users that clearance distances are a critical matter to consider for any new development.
- 43 In Orion’s experience, including the corridor protection rules explicitly in district plans assists in ensuring electrical safety clearances are actually considered and complied with in practice. The requirements of NZECP 34:2001 can be, and often are, missed in practice. Highlighting and specifically incorporating the requirements of NZECP 34:2001 for residential intensification that impacts the lower voltage lines into the District Plan through PC14 will improve safety to the public, remove cost associated with remediation and promote good electricity network outcomes.
- Duplication of the requirements in NZECP 34:2001**
- 44 Council’s Section 42A Officer and Mr Joll consider that evidence is required to show that NZECP 34:2001 is insufficient to provide protection for Orion’s lower voltage lines.<sup>9</sup>

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<sup>9</sup> *Planning Officer’s Report of Sarah-Jane Oliver under Section 42A of the Resource Management Act 1991 - Strategic Overview, Strategic Directions Chapter 3, Qualifying Matters relating to Strategic and City Infrastructure and Coastal Hazards* dated 11 August 2023 at paragraph 12.77.

*Statement of rebuttal evidence of Tim Joll on behalf of Kāinga Ora – Homes and Communities*, dated 9 October 2023 at paragraph 3.3.

- 45 Orion's position is that provisions in district plans provide important complementary and practical protection for its strategic assets. There are a number of statutory / non-statutory instruments<sup>10</sup> that are relevant to Orion's electricity sub-transmission lines and provide some governance for incompatible activities in close proximity to overhead electricity lines and support structures. However, as Mr O'Donnell explains, this degree of regulation is often not sufficient and Orion frequently encounters breaches or potential breaches of these instruments.
- 46 For example, NZECP 34:2001 specifies safe distances between buildings and other structures (both permanent and associated temporary works such as scaffolding), excavation works and electricity lines. It also covers minimum safety requirements for persons working near exposed live parts of the line. However:
- 46.1 many developers, landowners and contractors (as well as Council planning staff) are unaware of NZECP 34:2001;
  - 46.2 NZECP 34:2001 does not provide specific detail for safety issues regarding sensitive activities in proximity lines;
  - 46.3 NZECP 34:2001 is written in complex and technical language, making it challenging to read and follow; and
  - 46.4 there is no requirement in NZECP 34:2001 to engage with or notify electricity distributors of a proposed development.
- 47 The consequence of this is that Orion often becomes aware of incompatible development after it has been designed and an electricity capacity inquiry / connection is submitted. Or worse still, at the point where the incompatible development is already underway or built, or where upgrades, repairs or maintenance works to lines are required.
- Health and Safety under the RMA*
- 48 Section 5 of the Resource Management Act 1991 (*RMA*) requires decision makers to consider safety matters – this is inherent and explicit in the definition of "sustainable management". These issues cannot simply be left to other legislative or regulatory schemes; a decision maker must give careful consideration to the matter and has an overarching responsibility to satisfy itself that safety is assured. There is nothing improper about relying on external rules or standards, but the decision maker must satisfy itself that this reliance will achieve an appropriate level of safety.

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<sup>10</sup> For example the Electricity Act 1992, Electricity (Safety) Regulations 2010, Electricity (Hazards from Trees) Regulations 2003, NZECP 34:2001.

- 49 It is submitted that the statutory / non-statutory instruments mentioned earlier do not create a complete code, and there is room for an integrated approach to provide complementary support and management of this issue.
- 50 Protection of Orion's lower voltage lines through PC14 will:
- 50.1 assist with public and regulator awareness;
  - 50.2 assist with the maintenance of public safety; and
  - 50.3 assist with the protection of strategic and regionally important infrastructure.
- 51 It is not as straightforward as saying that Orion's approach duplicates NZECP:34 2001. The relief proposed goes further and provides a clearer and simplified point of reference for landowners. The intent is to assist understanding of the applicable regulations where activities interact with electricity lines and support structures.
- Costs to Council and alternative planning responses***
- 52 Council's Section 42A Officer considers that Orion's relief would needlessly duplicate NZECP 34:2001 and result in administrative cost for CCC.<sup>11</sup>
- 53 It is acknowledged that the District Plan provisions do not currently provide specific protection for Orion's lower voltage lines, and so the Council does not have to consider nor implement safe clearance distances associated with the lower voltage lines when administering the district provisions in isolation (notwithstanding that they are required by NZECP 34:2001).
- 54 Nevertheless, it is submitted that PC14, which provides for significant intensification, is the appropriate time and place to include the protection sought in Orion's submission. Existing development already presents challenges for Orion in terms of protecting lines clearance distances. The intensification associated with the MDRS is expected to exacerbate these challenges, both in terms of prevalence and severity.
- 55 The planning provisions proposed by Orion in relation to its lower voltage lines are not intended to create a burden on Council. Rather they are intended to be a trigger point for plan users to consider safe clearance distances and to discuss compliance with Orion directly.

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<sup>11</sup> *Planning Officer's Report of Sarah-Jane Oliver under Section 42A of the Resource Management Act 1991 - Strategic Overview, Strategic Directions Chapter 3, Qualifying Matters relating to Strategic and City Infrastructure and Coastal Hazards* dated 11 August 2023 at paragraph 12.78.

- 56 Mr O'Donnell explains that the increase in townhouses and infill development in recent years has resulted in an increase in potential clearance violations. Orion's experience in the Christchurch context has shown that intensified development in existing areas has the potential to interact adversely with Orion's infrastructure. Recognition of the lower voltage lines as part of PC14 would significantly reduce the likelihood of clearances being overlooked and ultimately compromised by residential development.
- 57 Mr Joll considers that a more appropriate mechanism would be to include an advice note that is located at the beginning of the relevant 'built form' provision.<sup>12</sup> Mr Joll considers that approach would be a more effective and efficient means of achieving the objectives of PC14 and the District Plan, than duplicative and potentially confusing consenting requirements. Ms Foote has considered Mr Joll's proposed approach and will speak to her response at the hearing.

**Section 77J(4)(b) – how modifications to the MDRS as applied to relevant residential zones are limited to only those modifications necessary to accommodate qualifying matters and, in particular, how they apply to any spatial layers relating to overlays, precincts, specific controls, and development areas**

- 58 As explained above, residential development is incompatible with protection corridors associated with Orion's lower voltage lines from a health and safety perspective. The modifications proposed by **Ms Foote** are only those necessary to accommodate the QM for Orion's lower voltage lines; they are consistent with the requirements in NZECP 34:2001 and go no further in terms of preventing or restricting development.

**Section 77L(a) – Identify the specific characteristic that makes the level of development provided by the MDRS (as specified in Schedule 3A or as provided for by policy 3) inappropriate in the area**

- 59 Virtually any new or expanded residential development that is within an electricity distribution corridor has the potential to be inappropriate. The MDRS provide a framework whereby residential development is permitted, provided certain standards are met.<sup>13</sup> The starting point of the MDRS is contrary to the starting point that is required around electricity distribution infrastructure.
- 60 It is the enablement of residential development per se that is inappropriate within electricity distribution corridors; any dwelling

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<sup>12</sup> *Statement of rebuttal evidence of Tim Joll on behalf of Kāinga Ora – Homes and Communities*, dated 9 October 2023 at paragraph 3.6.

<sup>13</sup> Amendment Act, Schedule 3A Cl 2(1).

risks compromising safe clearance distances and can prevent or hinder access to lines.

**Section 77L(b) – Justify why that characteristic makes that level of development inappropriate in light of the significance of urban development and the objectives of the NPS-UD**

- 61 Objective 1 of the NPS UD is focused on "... *well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.*" As explained in paragraph 7 of these legal submissions, a well-functioning urban environment is one in which infrastructure is not adversely affected by incompatible activities and urban growth is planned with infrastructure provision in mind.
- 62 Accommodating the safe clearance distances associated with Orion's lower voltage lines is entirely consistent with this objective. In particular:
- 62.1 they enable and facilitate the distribution of electricity, which is critical for social economic wellbeing; and
  - 62.2 they are specifically designed to keep persons, property, vehicles and mobile plant safe from electrical hazards.
- 63 Objective 6 is also particularly relevant. Orion's electricity network planning and development investment decisions are made based on scenarios that span a considerable length of time; individual network assets often have a service life that exceeds 40 or 50 years. Ensuring compliance with safe clearance distances via the QM for Orion's lower voltage lines more efficiently integrates local authority decision making with infrastructure planning and funding decisions as it gives more certainty for proponents of residential development adjacent to electricity distribution infrastructure.

**Section 77L(c) – Site-specific analysis**

- 64 The QM proposed for Orion's lower voltage lines relates to all sites that are within the corridor protection buffers for all existing lower voltage lines. As outlined above, it is not realistic at this time to map the lower voltage lines, nor to evaluate each site that is impacted by the corridor protection buffers to determine whether some development beneath the lines may be possible. However, the same analysis of impacts on the electricity distribution network, outlined above, will apply in every case. That is, there is potential for significant compromises to the safety and effectiveness of the electricity distribution if development is enabled "unchecked" within the necessary clearances of the lower voltage lines. This is the basis for Orion's requested QM.

## **RELATED PROVISIONS FOR ELECTRICITY EQUIPMENT AND LINES PROTECTION**

- 65 Orion is also concerned to ensure that PC14 takes into account the need to integrate network servicing infrastructure alongside new medium and high-density residential development. While this is not a matter that falls into the QM category, it is submitted that it is vital to the successful uptake and delivery of the MDRS in Christchurch.
- 66 As explained in Orion's submission, servicing capacity is a matter which should be included as a "related provision"<sup>14</sup> under Section 80E(1)(b)(iii) of the Amendment Act that supports or is consequential on the MDRS.
- 67 Orion is already projecting a significant increase in electricity demand without intensification considerations. This is due to factors such as electrical vehicle uptake and the proportion of people working from home in our modern workforce.
- 68 Intensification adds to the projected increase. Mr O'Donnell explains that, as a natural consequence, additional infrastructure will be required in those areas where intensification occurs. We understand that Orion anticipates that up to 12,000 new kiosks could be required to service the capacity enabled under MDRS.<sup>15</sup>
- 69 When sites are developed (or redeveloped) it is critical that the electricity network is considered, and that sufficient land is reserved for electricity distribution infrastructure. Mr O'Donnell outlines the types of infrastructure that might be required as a result of an increase in demand associated with residential development. Where sufficient space is not reserved for the provision of infrastructure, providing a secure and reliable electricity supply to new developments can become problematic. This is because:
- 69.1 There is often very little opportunity to compromise on the land area that is required for electricity distribution infrastructure.<sup>16</sup>
- 69.2 There is a functional need for electricity distribution infrastructure to be located on, or immediately adjacent to, sites that the infrastructure services.

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<sup>14</sup> Among other things, "related provisions" may relate to infrastructure under Section 80E(2)(d) of the Amendment Act.

<sup>15</sup> Mr O'Donnell can speak to this further at the hearing.

<sup>16</sup> The size and footprint requirements are often fixed and inflexible, and various safety and electrical standards set clearances around ground mounted equipment.

### 69.3 Sourcing alternative locations is problematic.<sup>17</sup>

- 70 In Orion's experience, developers often fail to include (or set aside) sufficient space on site for the necessary infrastructure. Furthermore they generally do not approach Orion to discuss servicing matters until after plans for a development are fixed and often after resource consent has been granted.
- 71 Infill housing and intensification is already presenting significant challenges for the location, operation, maintenance and upgrading of electricity distribution equipment and infrastructure. Development enabled by the MDRS is likely to exacerbate existing issues unless appropriately managed by provisions through PC14.
- 72 Orion has proposed that a land area of 5.5m<sup>2</sup> be set aside for onsite electricity servicing in order to ensure there is engagement with developers at the early stages of a proposed development. Orion's relief is intended to create meaningful engagement in the initial planning stages, as this will reduce the risk of site design needing to be amended (if that is possible) and the risk of poor infrastructure outcomes.
- 73 Ms Foote's evidence provides a suggested planning mechanism to implement Orion's relief in PC14. Ms Foote considers a new rule is appropriate from both a technical and operational perspective, and that it is justified in order to safeguard Orion's operations and the provision of electricity to Christchurch. It is submitted that this approach is the best way to give effect to the higher order planning framework.
- 74 Council's Section 42A Officer does not appear to have addressed the servicing standard proposed by Orion. Mr Joll considers that a more appropriate mechanism would be to include an additional advice note at the beginning of the relevant built form provisions. In his view this approach would minimise transaction costs, reliance on the resource consent process and help to reduce the extent of development controls, whilst enabling Orion to operate the electricity distribution network in a safe and effective manner. Ms Foote has considered Mr Joll's position and remains of the view that Orion's proposed servicing standard is appropriate. She will address this point further in her summary statement.

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<sup>17</sup> For example locating infrastructure in berms or road corridors expose the equipment to vehicular traffic, clashes with underground infrastructure, can have adverse visual impacts on street scape and is generally resisted by corridor managers (e.g. Council or Waka Kotahi).



## CONCLUSION

- 75 Through its submission on PC14 Orion seeks:
- 75.1 to implement QMs to protect SEDLs and lower voltage lines to ensure the safe and efficient distribution of electricity to Christchurch residents and businesses; and
  - 75.2 a related provision to ensure sufficient space is set aside (where relevant) for infrastructure that will be required to service increased development.
- 76 Orion's relief is intended to trigger meaningful engagement with landowners in the early stages of development proposals to ensure setback requirements and servicing infrastructure is not overlooked.

Dated 11 April 2024



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J Appleyard / A Lee  
Counsel for Orion New Zealand Limited