

## DISTRICT PLAN TEXT AMENDMENTS

Key:

For the purposes of this plan change, any unchanged text is shown as normal text or in **bold**, any text proposed to be added by the plan change is shown as **bold underlined** and text to be deleted as ~~**bold strikethrough**~~.

Text in **green** font identifies existing terms in Chapter 2 – Definitions. Where the proposed change contains a term defined in Chapter 2 – Definitions, the term is shown as **bold underlined text in green** and that to be deleted as ~~**bold strikethrough in green**~~. New definition in a proposed rule is **bold green text underlined in black**.

Text in **blue** font indicates links to other provisions in the district Plan and/or external documents. These will have pop-ups and links, respectively, in the on-line Christchurch District Plan.

## **6.12 Radiocommunication Pathway Protection Corridors**

### **6.12.1 Introduction**

- a. **This introduction is to assist the lay reader to understand how this sub-chapter works and what it applies to. It is not an aid to interpretation in a legal sense.**
- b. **Sub-chapter 6.12 Radio Pathways Protection relates to the management of adverse effects on **radiocommunication** pathways, recognising the effects on **strategic infrastructure** (including its role and function) of **buildings**, structures, and utilities intruding into the pathways.**
- c. **In **radiocommunication** networks, information is carried across space using radio waves that travel through the air in a straight line. There is a certain volume of airspace around the straight line through which the radio waves need to pass, and the straight line and the surrounding airspace comprise a **radiocommunication** pathway. The more intrusions into this pathway, the less resilient the pathway becomes (because signals are reduced and become unreliable) and a pathway may even be blocked.**
- d. **A **radiocommunication** facility is installed on the roof of the Christchurch Justice and Emergency Services Precinct (CJESP), which provides fixed radiocommunication pathways to key **radiocommunication** sites (such as Mt Pleasant, Cashmere/Victoria Park and Sugarloaf).**
- e. **These pathways provide emergency and day-to-day coverage for Police, Fire and Emergency New Zealand (FENZ) and St John operational vehicles, communication services and Civil Defence services. Disruption of the network can have serious implications for life, property and the environment.**
- f. **Effects on **radiocommunication** pathways are managed by defining a **radiocommunication** pathway protection corridor for each **radiocommunication** link (for example, the pathway between the CJESP and Mt Pleasant) and restricting activities that protrude above certain **heights** and into the pathways (see **Appendices 6.12.17.1 – 6.12.17.3**) are restricted to ensure that vital **radiocommunication** links are not disrupted.**
- g. **These protection pathways are designed in accordance with the International Telecommunications Union (ITU) recommendations. The ITU is an international treaty organisation that coordinates radio spectrum internationally and also issues recommendations which form international benchmarks for the design and implementation of radio links. ITU recommendation P.530 is the international benchmark for the design of terrestrial radio links.**

h. The provisions in this sub-chapter give effect to the Chapter 3 Strategic Directions Objectives.

## **6.12.2 Objective and policies**

### **6.12.2.1 Objective — Protection of radiocommunication pathway corridors**

a. **Radiocommunication** pathway protection corridors are protected from activities that would disrupt or block the **radiocommunications** network associated with the Christchurch Justice and Emergency Precinct.

#### **6.12.2.1.1 Policy - Avoidance of physical obstructions - Cashmere/Victoria Park, Sugarloaf and Mt Pleasant**

a. **Avoid physical obstructions by any **building**, structure (including cranes) or **utility** associated with any activity, including construction or temporary activity, in the radiocommunication pathway protection corridors for Cashmere/Victoria Park, Sugarloaf and Mt Pleasant to maintain radio communication for emergency and day-to-day operations of emergency services.**

Advice note:

Refer to [6.12.4.2 Radiocommunication pathway protection corridors](#) and [Appendices 6.12.17.1 – 6.12.17.3](#) for a description of the radiocommunication pathway protection corridors.

## **6.12.3 How to interpret and apply the rules**

- a. The rules that apply to activities within the **radiocommunication** pathway protection corridors are contained in the activity status tables (including activity specific standards) in [Rules 6.12.4.1](#).
- b. Activities within the **radiocommunication** pathway protection corridors are also subject to the rules in the relevant zone chapters.
- c. The activity status tables, rules and standards in the following chapters also apply to activities within the areas covered by the **radiocommunication** pathway protection corridors (where relevant):

[4 Hazardous Substances and Contaminated Land;](#)

[5 Natural Hazards;](#)

[6 The other sub-chapters of General Rules and Procedures;](#)

[7 Transport;](#)

[8 Subdivision, Development and Earthworks;](#)

[9 Natural and Cultural Heritage;](#) and

[11 Utilities and Energy.](#)

- d. The maximum height of buildings, structures and utilities permitted in the radiocommunication pathway protection corridors are set out in Tables 6.12.4.2.1 – 6.12.4.2.3. The maximum height of buildings, structures and utilities depends on the distance of the activity from the CJESP, measured in 20m intervals. If an activity falls between two measurements, the most restrictive maximum height will apply.
- e. Tables 6.12.4.2.1 – 6.12.4.2.3 set out the absolute maximum height in metres of any obstruction referenced to “A.M.S.L”. This refers to metres above mean sea level (A.M.S.L) at the Lyttelton Datum. A correction will need to be made to calculate the available height above existing ground level at each site.

## **6.12.4 Rules - Radiocommunication Pathway Protection Corridors**

### **6.12.4.1 Activity status tables - Radiocommunication Pathway Protection Corridors**

#### **6.12.4.1.1 Permitted activities**

- a. Within the radiocommunication pathway protection corridors as specified in Rule 6.12.4.2 and shown on the diagrams in Appendices 6.12.17.1 – 6.12.17.3, the activities listed below are permitted activities.
- b. Activities may be controlled, restricted discretionary, discretionary, non-complying or prohibited as specified in Rules 6.12.4.1.2, 6.12.4.1.3, 6.12.4.1.4, 6.12.4.1.5 and 6.12.4.1.6.

<b><u>Activity</u></b>		<b><u>Activity specific standards</u></b>
<b><u>P1</u></b>	<b><u>Any part of a building, structure (including a crane) or utility that is lower than the maximum height limits specified in Rule 6.12.4.2, Table 1 Cashmere/Victoria Park, Table 2 Sugarloaf and Table 3 Mt Pleasant.</u></b>	<b><u>Nil</u></b>

#### **6.12.4.1.2 Controlled activities**

There are no controlled activities.

#### **6.12.4.1.3 Restricted discretionary activities**

There are no restricted discretionary activities.

#### 6.12.4.1.4 Discretionary activities

There are no discretionary activities.

#### 6.12.4.1.5 Non-complying activities

- a. Within the **radiocommunication** pathway protection corridors as specified in [Rule 6.12.4.1 P1](#) and shown on the diagrams in [Appendices 6.12.17.1 – 6.12.17.3](#), the activities listed below are non-complying activities.

<u>Activity</u>	
<u>NC1</u>	<u>Any part of a <b>building</b>, structure (including a crane) or <b>utility</b> that does not comply with <a href="#">Rule 6.12.4.1.1 P1</a>.</u>

#### 6.12.4.1.6 Prohibited activities

There are no prohibited activities.

#### Advice Note:

Assessment of the effects of the exceedance of the maximum **height** limit should be undertaken in accordance with ITU-R P.530 (latest revision) by a suitably qualified and experienced radio engineer.

### 6.12.4.2 **Radiocommunication** pathway protection corridors

#### 6.12.4.2.1 Cashmere/Victoria Park

- a. Table 1 specifies the **radiocommunication** pathway protection corridor (horizontal width of clearance zone centred on radio link axis - see [Appendix 6.12.17.1](#) for map of corridor) and the maximum **height** limit for any part of a **building**, structure or **utility** within the Cashmere/Victoria Park **radiocommunication** pathway protection corridor.

Table 1

<u>Radio Path</u>	<u>CJESP - Cashmere/Victoria Park</u>	
<u>Path Length (km)</u>	<u>5.5</u>	
<u>Azimuth from CJESP (deg TN)<sup>1</sup></u>	<u>176</u>	
<u>Distance from CJESP</u>	<u>Horizontal width of Clearance Zone centred on Radio Link axis</u>	<u>Maximum Height Limit</u>
<u>(km)</u>	<u>(m)</u>	<u>(m A.M.S.L)</u>
<u>0</u>	<u>0.0</u>	<u>40.5</u>
<u>0.02</u>	<u>0.7</u>	<u>40.5</u>

<sup>1</sup> Degrees True North

<u>0.04</u>	<u>1.0</u>	<u>41.1</u>
<u>0.06</u>	<u>1.3</u>	<u>41.7</u>
<u>0.08</u>	<u>1.5</u>	<u>42.3</u>
<u>0.1</u>	<u>1.6</u>	<u>43.0</u>
<u>0.12</u>	<u>1.8</u>	<u>43.7</u>
<u>0.14</u>	<u>1.9</u>	<u>44.4</u>
<u>0.16</u>	<u>2.1</u>	<u>45.1</u>
<u>0.18</u>	<u>2.2</u>	<u>45.8</u>
<u>0.2</u>	<u>2.3</u>	<u>46.5</u>
<u>0.22</u>	<u>2.4</u>	<u>47.2</u>
<u>0.24</u>	<u>2.5</u>	<u>48.0</u>
<u>0.26</u>	<u>2.6</u>	<u>48.7</u>
<u>0.28</u>	<u>2.7</u>	<u>49.5</u>
<u>0.3</u>	<u>2.8</u>	<u>50.2</u>
<u>0.32</u>	<u>2.9</u>	<u>50.9</u>
<u>0.34</u>	<u>3.0</u>	<u>51.7</u>
<u>0.36</u>	<u>3.0</u>	<u>52.5</u>
<u>0.38</u>	<u>3.1</u>	<u>53.2</u>
<u>0.4</u>	<u>3.2</u>	<u>54.0</u>
<u>0.42</u>	<u>3.3</u>	<u>54.7</u>
<u>0.44</u>	<u>3.3</u>	<u>55.5</u>
<u>0.46</u>	<u>3.4</u>	<u>56.3</u>
<u>0.48</u>	<u>3.5</u>	<u>57.0</u>
<u>0.5</u>	<u>3.5</u>	<u>57.8</u>
<u>0.52</u>	<u>3.6</u>	<u>58.6</u>
<u>0.54</u> (Moorhouse Ave)	<u>3.6</u>	<u>59.4</u>

#### 6.12.4.2.2 Sugarloaf

- a. Table 2 specifies the **radiocommunication** pathway protection corridor (horizontal width of clearance zone centred on radio link axis - see [Appendix 6.12.17.2](#) for map of corridor) and the maximum **height** limit for any part of a **building**, structure or **utility** within the Sugarloaf **radiocommunication** pathway protection corridor.

Table 2

<b>Radio Path</b>	<b>CJESP - Sugarloaf</b>	
<b>Path Length (km)</b>	<b><u>7.7</u></b>	
<b>Azimuth from CJESP (deg TN<sup>2</sup>)</b>	<b><u>171.3</u></b>	
<b>Distance from CJESP</b>	<b><u>Horizontal width of Clearance Zone centred on Radio Link axis</u></b>	<b><u>Maximum Height Limit</u></b>
<b><u>(km)</u></b>	<b><u>(m)</u></b>	<b><u>(m A.M.S.L)</u></b>
<b><u>0</u></b>	<b><u>0.00</u></b>	<b><u>40.8</u></b>
<b><u>0.02</u></b>	<b><u>0.74</u></b>	<b><u>41.2</u></b>
<b><u>0.04</u></b>	<b><u>1.04</u></b>	<b><u>42.1</u></b>
<b><u>0.06</u></b>	<b><u>1.27</u></b>	<b><u>43.0</u></b>
<b><u>0.08</u></b>	<b><u>1.47</u></b>	<b><u>44.0</u></b>
<b><u>0.1</u></b>	<b><u>1.64</u></b>	<b><u>45.0</u></b>
<b><u>0.12</u></b>	<b><u>1.79</u></b>	<b><u>46.0</u></b>
<b><u>0.14</u></b>	<b><u>1.94</u></b>	<b><u>47.1</u></b>
<b><u>0.16</u></b>	<b><u>2.07</u></b>	<b><u>48.1</u></b>
<b><u>0.18</u></b>	<b><u>2.19</u></b>	<b><u>49.2</u></b>
<b><u>0.2</u></b>	<b><u>2.30</u></b>	<b><u>50.2</u></b>
<b><u>0.22</u></b>	<b><u>2.41</u></b>	<b><u>51.3</u></b>
<b><u>0.24</u></b>	<b><u>2.52</u></b>	<b><u>52.4</u></b>
<b><u>0.26</u></b>	<b><u>2.62</u></b>	<b><u>53.4</u></b>
<b><u>0.28</u></b>	<b><u>2.71</u></b>	<b><u>54.5</u></b>
<b><u>0.3</u></b>	<b><u>2.80</u></b>	<b><u>55.6</u></b>
<b><u>0.32</u></b>	<b><u>2.89</u></b>	<b><u>56.7</u></b>
<b><u>0.34</u></b>	<b><u>2.98</u></b>	<b><u>57.8</u></b>
<b><u>0.36</u></b>	<b><u>3.06</u></b>	<b><u>58.9</u></b>
<b><u>0.38</u></b>	<b><u>3.14</u></b>	<b><u>60.0</u></b>
<b><u>0.4</u></b>	<b><u>3.22</u></b>	<b><u>61.1</u></b>
<b><u>0.42</u></b>	<b><u>3.29</u></b>	<b><u>62.2</u></b>
<b><u>0.44</u></b>	<b><u>3.36</u></b>	<b><u>63.3</u></b>
<b><u>0.46</u></b>	<b><u>3.43</u></b>	<b><u>64.4</u></b>
<b><u>0.48</u></b>	<b><u>3.50</u></b>	<b><u>65.5</u></b>
<b><u>0.5</u></b>	<b><u>3.57</u></b>	<b><u>66.6</u></b>

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<sup>2</sup> Degrees True North

<u>0.52</u>	<u>3.64</u>	<u>67.7</u>
<u>0.54</u> (Moorhouse Ave)	<u>3.70</u>	<u>68.8</u>

#### 6.12.4.2.3 Mt Pleasant

- a. Table 3 specifies the **radiocommunication** pathway protection corridor (horizontal width of clearance zone centred on radio link axis - see [Appendix 6.12.17.3](#) for map of corridor) and the maximum **height** limit for any part of a **building**, structure or **utility** within the Mt Pleasant **radiocommunication** pathway protection corridor.

Table 3

Radio Path	CJESP - Mt Pleasant	
<u>Path Length (km)</u>	<u>9.5</u>	
<u>Azimuth from CJESP (deg TN<sup>3</sup>)</u>	<u>128.7</u>	
<u>Distance from CJESP</u>	<u>Horizontal width of Clearance Zone centred on Radio Link axis</u>	<u>Maximum Height Limit</u>
<u>(km)</u>	<u>(m)</u>	<u>(m A.M.S.L)</u>
<u>0</u>	<u>0.0</u>	<u>40.4</u>
<u>0.02</u>	<u>0.7</u>	<u>40.6</u>
<u>0.04</u>	<u>1.0</u>	<u>41.2</u>
<u>0.06</u>	<u>1.3</u>	<u>41.9</u>
<u>0.08</u>	<u>1.5</u>	<u>42.7</u>
<u>0.1</u>	<u>1.6</u>	<u>43.5</u>
<u>0.12</u>	<u>1.8</u>	<u>44.3</u>
<u>0.14</u>	<u>1.9</u>	<u>45.1</u>
<u>0.16</u>	<u>2.1</u>	<u>45.9</u>
<u>0.18</u>	<u>2.2</u>	<u>46.8</u>
<u>0.2</u>	<u>2.3</u>	<u>47.6</u>
<u>0.22</u>	<u>2.4</u>	<u>48.5</u>
<u>0.24</u>	<u>2.5</u>	<u>49.3</u>
<u>0.26</u>	<u>2.6</u>	<u>50.2</u>
<u>0.28</u>	<u>2.7</u>	<u>51.0</u>

<sup>3</sup> Degrees True North

<u>0.3</u>	<u>2.8</u>	<u>51.9</u>
<u>0.32</u>	<u>2.9</u>	<u>52.8</u>
<u>0.34</u>	<u>3.0</u>	<u>53.6</u>
<u>0.36</u>	<u>3.1</u>	<u>54.5</u>
<u>0.38</u>	<u>3.2</u>	<u>55.4</u>
<u>0.4</u>	<u>3.2</u>	<u>56.3</u>
<u>0.42</u>	<u>3.3</u>	<u>57.1</u>
<u>0.44</u>	<u>3.4</u>	<u>58.0</u>
<u>0.46</u>	<u>3.5</u>	<u>58.9</u>
<u>0.48</u>	<u>3.5</u>	<u>59.8</u>
<u>0.5</u>	<u>3.6</u>	<u>60.7</u>
<u>0.52</u>	<u>3.7</u>	<u>61.6</u>
<u>0.54</u>	<u>3.7</u>	<u>62.4</u>
<u>0.56</u>	<u>3.8</u>	<u>63.3</u>
<u>0.58</u>	<u>3.9</u>	<u>64.2</u>
<u>0.6</u>	<u>3.9</u>	<u>65.1</u>
<u>0.62</u>	<u>4.0</u>	<u>66.0</u>
<u>0.64</u>	<u>4.0</u>	<u>66.9</u>
<u>0.66</u>	<u>4.1</u>	<u>67.8</u>
<u>0.68</u>	<u>4.2</u>	<u>68.7</u>
<u>0.7</u>	<u>4.2</u>	<u>69.6</u>
<u>0.72</u>	<u>4.3</u>	<u>70.5</u>
<u>0.74</u>	<u>4.3</u>	<u>71.4</u>
<u>0.76</u>	<u>4.4</u>	<u>72.3</u>
<u>0.78</u>	<u>4.4</u>	<u>73.2</u>
<u>0.8</u>	<u>4.5</u>	<u>74.2</u>
<u>0.82</u>	<u>4.5</u>	<u>75.1</u>
<u>0.84</u>	<u>4.6</u>	<u>76.0</u>
<u>0.86</u>	<u>4.6</u>	<u>76.9</u>
<u>0.88</u>	<u>4.7</u>	<u>77.8</u>
<u>0.9</u>	<u>4.7</u>	<u>78.7</u>
<u>0.92</u> <u>(Moorhouse Ave)</u>	<u>4.8</u>	<u>79.6</u>