Appendix S20 – Bardowie Industrial Precinct Structure Plan and Urban Design and Landscape Guidelines

S20.1 Introduction

S20.1.1 The Bardowie Industrial Precinct Structure Plan and accompanying urban design and landscape guidelines provide the management framework for industrial development within this area.

S20.1.2 The Bardowie Industrial Precinct forms a component of the identified Hautapu Strategic Industrial Node.

S20.1.3 The purpose of this structure plan is to enable the development of new specialised industry into the Cambridge area, and to enable the Waipa District Council to plan and fund required infrastructure to appropriately service this industrial area. Consequently, the Structure Plan also provides a framework for development proposals and to ensure contemporary urban design outcomes are achieved in line with the vision for the Precinct.

S20.1.4 The Structure Plan area is approximately 56.7 hectares in size. Existing activities in the Structure Plan area includes agricultural and light industrial activities. The majority of the land in the Structure Plan area is currently undeveloped greenfield land.

S20.1.5 The philosophy behind the Structure Plan is to enable light to medium industry to develop in the Bardowie Industrial Precinct, with the adherence to contemporary design principles.

S20.1.6 The principles guiding the Bardowie Industrial Precinct Structure Plan are as follows:

(a) A contemporary industrial precinct that is readily accessible, visually attractive and which embodies Cambridge's unique character;

(b) Maximisation of multi-purpose open space network opportunities;

(c) Low impact design is encouraged (in terms of both stormwater and built form);

(d) A local transport network that is fully integrated with the regional transport network;

(e) A Campus Hub is developed for public open space, appropriately scaled commercial and retail amenities, a wellness centre that serve the employees of the industrial precinct. In addition, other activities that have co-benefits to the Bardowie Industrial Precinct and the Cambridge township such as a visitor accommodation facility and a conference centre, may be considered in this area provided they do not impact on the Cambridge central business district and can be accommodated within the servicing capacity of the precinct;

(f) Flexibility around the staging and sequencing of development;

(g) The provision of transportation corridors and infrastructure design capacity, taking into account the balance of the C10 Growth Cell and not foreclosing the opportunity for efficient servicing and development of other land within the growth cell; and

(h) Ensuring health, safety and site security is provided for.

S20.1.7 In developing the Bardowie Industrial Precinct Structure Plan, specific assessments for geotechnical considerations, archaeology, urban design, stormwater, water and wastewater and transportation have been undertaken.

S20.2 Bardowie Industrial Precinct Structure Plan

S20.2.1 The Bardowie Industrial Precinct is divided into four development nodes that are available for development at different times (subject to private land release agreements), as follows:

(a) **Node 1A** - 12.5 hectares – Window manufacturing and associated activities.

(b) **Node 1B** – 5.2 hectares – Land currently owned by Shoof Properties Limited and partially occupied by Shoof International Limited.

(c) **Node 2** - 16.3 hectares – Window manufacturing and associated activities, including the Campus Hub.

(d) **Node 3** – 22.7 hectares – General industrial activities that are designed in accordance with the urban design guidelines and private covenants.

Activities within the Bardowie Industrial Precinct

S20.2.2 The Bardowie Industrial Precinct is intended to enable a light to medium industrial precinct to be developed within an identified Strategic Industrial Node. It will initially provide for the development of a large-scale window and door manufacturing business along with general industrial activities as provided for in the Industrial Zone rules in the Waipa District Plan.

S20.2.3 The Bardowie Industrial Precinct will be a contemporary industrial development including a Campus Hub. The Campus Hub is a mixed-use area and is provisioned to include cafes (including a licenced premise), education and child care facilities, limited retail activities, a wellness centre[1], a conference centre and visitor accommodation facility as well as areas of greenspace, walkways and parking areas. The scale of the Campus Hub (as shown spatially on the Structure Plan) will be appropriate to avoid any issues with the commercial hierarchy and overall planning framework for Commercial Zones.

S20.2.4 As a modern industrial precinct, there will be opportunities for advanced technology industries to locate and develop within the area. In that regard, in the context of the Bardowie Industrial Precinct (and the District Plan permitted activity rules), "Innovation and Advanced Technology Activities" means all activities involved in the research, development, manufacture and commercial application of advanced technology including, but not limited to, information technology, energy technology, manufacturing technology, materials technology, software development, telecommunications, data storage, data management and processing, infrastructure systems and management".

Infrastructure

S20.2.5 In order to develop a site within the Structure Plan area, a development proposal will need to demonstrate compliance with the Waipa District Plan, including infrastructure provision. The following sections detail how the site is intended to be serviced.

Stormwater

S20.2.6 The stormwater generated from the Bardowie Industrial Precinct will be managed at the site by the adoption of a water sensitive design approach whereby the stormwater solutions are integrated within the built form and landscape. For example, soakage basins can be designed to provide for a variety of functions such as lower wetter areas planted with native species

[1] Defined in the Urban Design and Landscape Guidelines as "Wellness centre, incorporating a medical centre (doctors, dental care) gymnasium, swimming pool, sports courts and support services"

which can take the form of a wetland, as well as potentially slightly higher areas which could be grassed and used for recreational and amenity benefits.

S20.2.7 Soakage potential across the Bardowie Industrial Precinct Structure Plan Area can be maximised either by way of larger scale soakage basins with an array of underdrains or under hardstand areas using modular crate systems with close to 100% void space to reduce footprint and increase storage.

S20.2.8 To ensure no adverse impacts on the Waikato Regional Council rural drainage network, 10-year ARI runoff volumes will be contained within the communal basins using a combination of live storage and infiltration.

S20.2.9 10 year and 100-year ARI flows will be managed safely within the site so as to ensure no unacceptable risk to people, property, the environment and road users.

S20.2.10 The existing 100-year ARI flows to the Mangaone Stream will not be exceeded post development using a series of attenuation basins and swale conveyance and storage.

Water Supply

S20.2.11 Water supply to the Bardowie Industrial Precinct will be provided by the proposed works of the Waipa District Council commencing in 2019/2020. That is, the splitting of the existing reticulation from a dedicated supply into the Fonterra and the Bardowie Industrial Precinct. For normal supply, demand can be met from the proposed network, and in periods of high daily demand, the supply can be supplemented by a pumped system.

S20.2.12 Development of Node 1A (an initial 12.5-hectare site) is anticipated to be completed in February 2020 therefore priority will be given to advancing the planned Waipa District Council 375mm diameter trunk main extension to align with the first stage of the development.

S20.2.13 There is appropriate allocation in the water network to service the Bardowie Industrial Precinct. Water supply and demand will assume 'dry industry' and a ratio of 30 persons per hectare occupancy.

S20.2.14 The Bardowie Industrial Precinct cannot be supplied with sufficient water flows and capacity to meet the FW7 firefighting requirements that are anticipated to be required for the large buildings proposed within Node 1A and Node 2. However, water flows and capacity to a level similar to the requirements of FW3 will likely be possible across the Bardowie Industrial Precinct. The developer and future owners will need to design and provide for firefighting requirements in accordance with the NZ Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008.

Wastewater

S20.2.15 Wastewater generated around the development will drain to one of at least two wastewater pump stations. These will pump through a rising main to the Taylor Street pump station. Modelling shows there is capacity in the network to convey the extra flow.

S20.2.16 There is appropriate allocation in the wastewater supply network to service the Bardowie Industrial Precinct.

Transport

S20.2.17 A right turn bay adequate for Nodes 1A and 2 at the southern access point should be created prior to industrial activities occurring. A right turn bay can accommodate up to 45 hectares of

typical industrial development, but not the whole Bardowie Industrial Precinct Structure Plan Area without long queues and delays. The intersection should be design and formed with enough space to provide traffic signals if required for the subsequent development of Node 2.

S20.2.18 Node 1B already obtains access via Laurent Road.

S20.2.19 Prior to development in Node 2, a Traffic Impact Assessment is required to determine when/whether traffic signals are required.

S20.2.20 No development shall occur in Node 3 until connectivity with the surrounding transport network has been formed to service the general industrial area.

S20.2.21 The nature of the access into the Bardowie Industrial Precinct will accommodate and cater for the access requirements of the entire C10 Growth Cell including the southern portion of the Bardowie Industrial Precinct (should the southern access be required to be closed in the future). The exact location and configuration of the northern access has not been included in the Bardowie Industrial Structure Plan to enable flexibility in its location and configuration (and collective discussions between stakeholders), as this area is not anticipated to be developed until 2024.

S20.2.22 The Structure Plan shows potential locations of roading connectivity to the east and north, beyond the Bardowie Industrial Precinct, the final location of which will be determined through a Master Planning process for the entire C10 Growth Cell. Roading and service connections to the north (to the property boundary of the part of Pt Allotment 190 Hautapu Parish within the C10 Growth Cell) and to the east to connect with the balance of the C10 Growth Cell shall be identified and vested as local purpose reserve (road) at the time of the first subdivision of Node 3 in accordance with any C10 Growth Cell Master Plan and/or Structure Plan relating to the balance of the C10 Growth Cell that has been approved by the Waipa District Council.

Electricity

S20.2.23 Waipa Networks has confirmed that electricity can be supplied to the Bardowie Industrial Precinct. All new powerlines constructed within the Bardowie Industrial Precinct Structure Plan Area shall be underground. Existing power lines shall be undergrounded at the time of the development of each respective Bardowie Industrial Precinct node (in accordance with the staged land release). Telecommunication lines shall be treated in the same manner (i.e. undergrounded).

Gas

S20.2.24 First Gas has confirmed that gas can be supplied to the Bardowie Industrial Precinct.

Fibre

S20.2.25 Ultrafast Fibre has confirmed that fibre can be supplied to the Bardowie Industrial Precinct.

Development Agreement

S20.2.26 No development within the Bardowie Industrial Precinct Structure Plan Area shall be approved until such time as a Development Agreement is signed between Council and the developer, unless otherwise approved in writing by the Council. The Development Agreement shall specify all those items of infrastructure that are required to be upgraded at full or partial cost to the

developer and the division of public and private assets and shall also identify any public reserves.

Heritage and Cultural Values

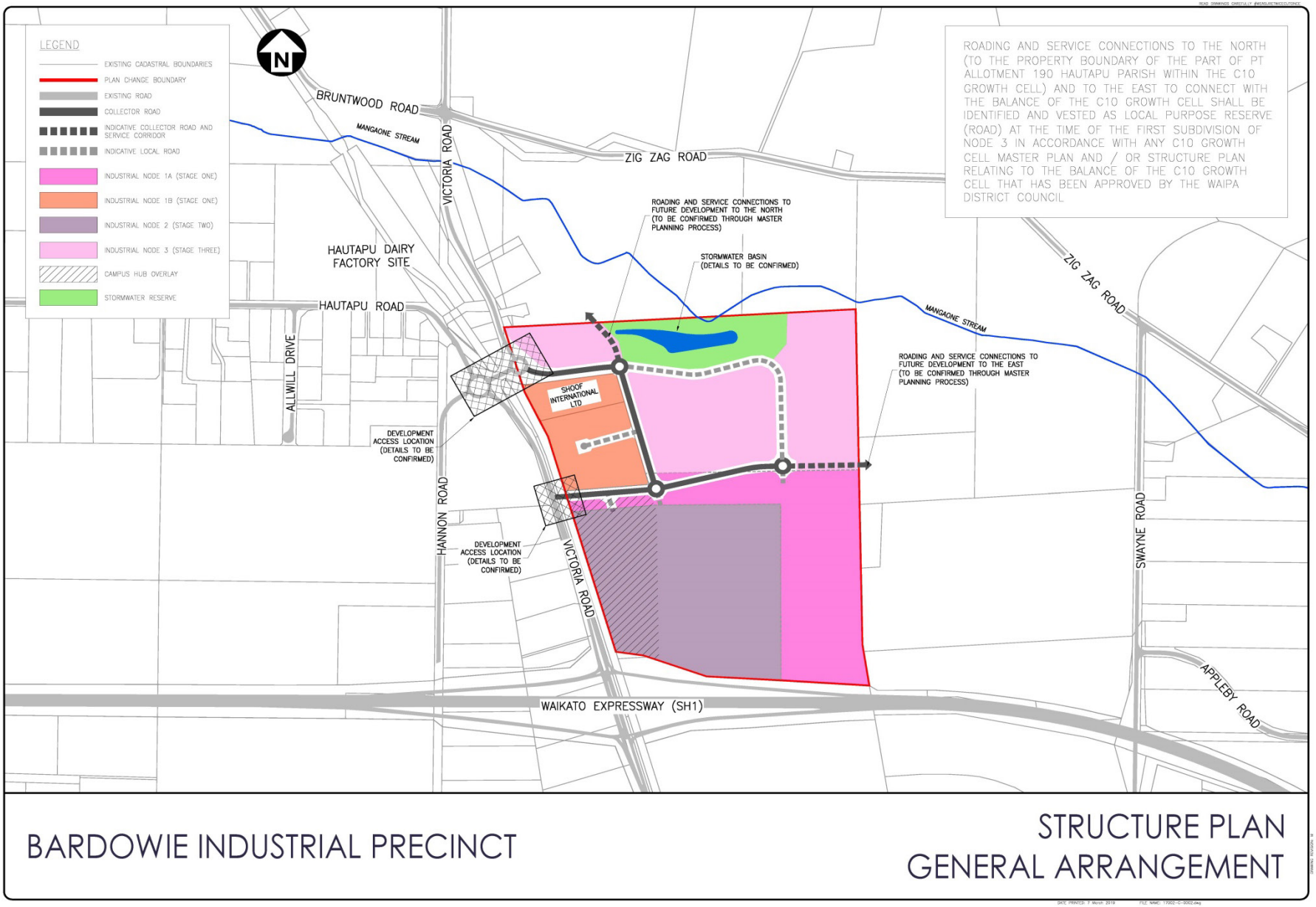
S20.2.27 The Heritage New Zealand Pouhere Taonga Act 2014 makes it unlawful for any person to destroy, damage or modify the whole or any part of an archaeological site without the prior authority of Heritage New Zealand. Sites associated with human activity that occurred before 1900 are protected, whether or not they are recorded with Heritage New Zealand. An authority to destroy or modify any archaeological evidence is required from Heritage New Zealand under the Heritage New Zealand Pouhere Taonga Act 2014 prior to the works commencing. This is the case regardless of whether the land on which the site is located is designated, or a resource or building consent has been granted.

S20.2.28 Appendix N3 contains the known archaeological sites of the Waipā District based on New Zealand Archaeological Association records as at 2009. Sites are marked with a number and 'X' symbol on the Planning Maps. Additional archaeological sites may have been identified since the notification of this Plan. For this reason, people are also referred to the NZAA Database. Consultation with Heritage New Zealand is advisable.

S20.2.29 In the event of accidental discovery of archaeological features or artefacts, Heritage New Zealand has a procedure that must be followed.

Structure Plan

S20.2.30 The figure below is the Bardowie Industrial Precinct Structure Plan.


LEGEND
EXISTING CADASTRAL BOUNDARIES
PLAN CHANGE BOUNDARY
EXISTING ROAD
COLLECTOR ROAD
INDICATIVE COLLECTOR ROAD AND SERVICE CORRIDOR
INDICATIVE LOCAL ROAD
INDUSTRIAL NODE 1A (STAGE ONE)
INDUSTRIAL NODE 1B (STAGE ONE)
INDUSTRIAL NODE 2 (STAGE TWO)
INDUSTRIAL NODE 3 (STAGE THREE)
CAMPUS HUB OVERLAY
STORMWATER RESERVE
N
BRUNTWOOD ROAD
MANGAONE STREAM
VICTORIA ROAD
ZIG ZAG ROAD
HAUTAPU DAIRY FACTORY SITE
HAUTAPU ROAD
ALLWILL DRIVE
HANNON ROAD
ROADING AND SERVICE CONNECTIONS TO THE NORTH (TO THE PROPERTY BOUNDARY OF THE PART OF PT ALLOTMENT 190 HAUTAPU PARISH WITHIN THE C10 GROWTH CELL) AND TO THE EAST TO CONNECT WITH THE BALANCE OF THE C10 GROWTH CELL SHALL BE IDENTIFIED AND VESTED AS LOCAL PURPOSE RESERVE (ROAD) AT THE TIME OF THE FIRST SUBDIVISION OF NODE 3 IN ACCORDANCE WITH ANY C10 GROWTH CELL MASTER PLAN AND / OR STRUCTURE PLAN RELATING TO THE BALANCE OF THE C10 GROWTH CELL THAT HAS BEEN APPROVED BY THE WAIPA DISTRICT COUNCIL
ROADING AND SERVICE CONNECTIONS TO FUTURE DEVELOPMENT TO THE NORTH (TO BE CONFIRMED THROUGH MASTER PLANNING PROCESS)
STORMWATER BASIN (DETAILS TO BE CONFIRMED)
ROADING AND SERVICE CONNECTIONS TO FUTURE DEVELOPMENT TO THE EAST (TO BE CONFIRMED THROUGH MASTER PLANNING PROCESS)
SHOOF INTERNATIONAL LTD
DEVELOPMENT ACCESS LOCATION (DETAILS TO BE CONFIRMED)
DEVELOPMENT ACCESS LOCATION (DETAILS TO BE CONFIRMED)
VICTORIA ROAD
SWAYNE ROAD
APPLEBY ROAD
WAIKATO EXPRESSWAY (SH1)
BARDOWIE INDUSTRIAL PRECINCT
STRUCTURE PLAN
GENERAL ARRANGEMENT

S20.3 Urban Design and Landscape Guidelines

S20.3.1 The Structure Plan provides design guidelines to steer the quality of development and ensure that intended urban design outcomes are achieved. The Structure Plan also outlines the infrastructure that is required to service the parcels of land. Services that are required to be constructed by developers and those provided by Council will be determined as part of the preparation of a Development Agreement.

S20.3.2 The purpose of these design guidelines is to provide guidance for future development within the Bardowie Industrial Precinct. These guidelines form part of the Bardowie Industrial Precinct Structure Plan and support Section 7 (Industrial Zone) of the Waipa District Plan.

S20.3.3 The following overarching Design Objective has been developed to frame the design principles and provide clear direction in relation to the development aspirations for the Bardowie Industrial Precinct:

BARDOWIE INDUSTRIAL PRECINCT DESIGN OBJECTIVES	
(a)	To encourage high quality contemporary industrial development.
(b)	To enable industrial activities to locate at the Precinct and become part of the industrial campus community.
(c)	To facilitate the assessment of development activities and resource consent applications through the development of clear and instructive design guidelines.
(d)	To enshrine principles of environmental sustainability within the Bardowie Industrial Precinct.
(e)	To facilitate consistency in built form outcomes throughout Bardowie Industrial Precinct.
(f)	To encourage low carbon design to support the transition to a low carbon economy.
(g)	To encourage the use public transportation, walking and cycling for those working in the Bardowie Industrial Precinct, and to support people's wellbeing through the development of a health focused Campus Hub.
(h)	To ensure the environment is safe for all those working in the precinct, and those who are visiting.
(i)	To provide a framework for clear decision making.

S20.3.4 To assist in achieving the objectives above, there are eight key areas that future development within the Bardowie Industrial Precinct should respond to, as outlined within these guidelines:

(a) Site Responsive Design;

(b) Access and Movement;

(c) Building Layout;

(d) Built Form;

(e) Landscaping;

(f) Campus Hub;

(g) Sustainability; and

(h) Security and Safety.

S20.3.5 Objectives and guidelines are outlined under each of these headings. The objectives are overarching design statements that the development should seek to achieve. The specific guidelines are provided to help direct the design of the development, therefore achieving the overarching design objectives.

Interpretation

S20.3.6 Overall consistency with the Bardowie Industrial Precinct Structure Plan Urban Design and Landscape Guidelines shall be achieved for developments within the Bardowie Industrial Precinct. Specific or minor non-compliance with the Urban Design and Landscape Guidelines may not constitute non-compliance with the District Plan rules subject to the overall amenity and urban design outcomes being achieved.

S20.3.7 The example images are for explanatory purposes only and are included as guidance for those wishing to develop in the Bardowie Industrial Precinct. They should not be interpreted as being requirements of the Bardowie Industrial Precinct.

S20.3.8 The explanatory images and design guidelines follow.

S20.3.9 SITE RESPONSIVE DESIGN

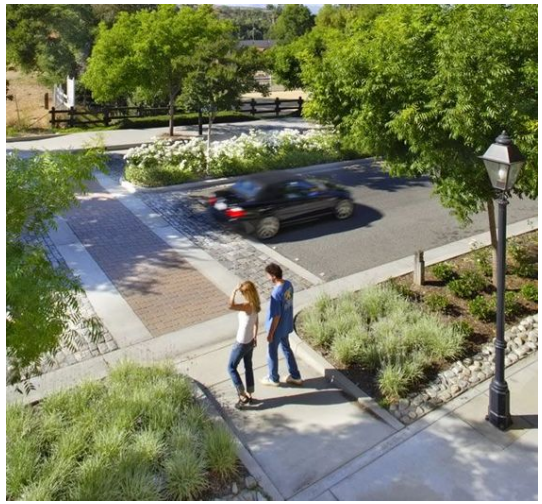
S20.3.9.1 Site and Context Assessment	
Design Objectives	**Design Guidelines**
To ensure that new development responds to its context and reinforces its character setting.	(a) A site analysis should be undertaken at the beginning of, and to inform, the design process. The analysis should include: (i) Surrounding land uses - existing and proposed future uses (ii) Existing and future transport networks - road, pedestrian and cycle paths, and public transport (iii) Built form, character and heights of surrounding buildings (iv) Areas of vegetation (v) Predominant landscape and cultural heritage character of the area (vi) Understanding of drainage systems both within and beyond the site (vii) Views and outlook (viii) Climatic conditions including solar access and prevailing winds. The analysis must demonstrate that the development design responds appropriately to each of the above elements.

Image supporting S20.3.9.1(a) - This outdoor space incorporates an appropriate use of planting, open space and clear access ways, and also provides for an attractive contemporary design detail.

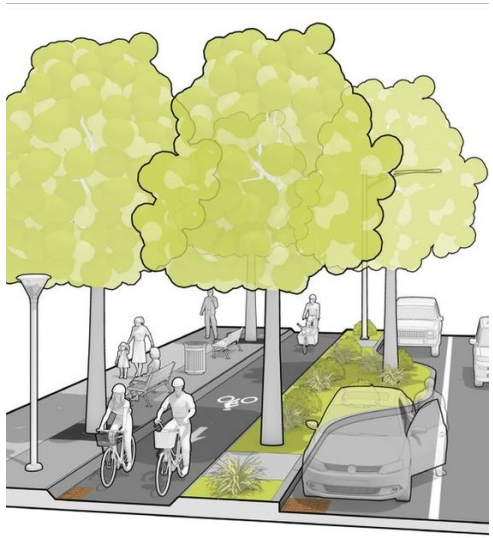
S20.3.9.2 Lot Design	
Design Objectives	**Design Guidelines**
▪ To create an appropriate range of lot sizes to facilitate different types of compatible developments. ▪ To create lots that enable the promotion of built form.	(a) Enable the creation of a variety of lot sizes, particularly in Node 3, to allow for a variety of different types of industrial uses. (b) Facilitate the design of the lot layout to ensure that any industrial buildings would have appropriate frontage to enable positive interactions with areas of public space (for example, streets, water bodies and public open space).

S20.3.10 ACCESS AND MOVEMENT

S20.3.10.1 Pedestrian and Cyclist Network	
Design Objectives	**Design Guidelines**
▪ To facilitate safe and easy access for pedestrians and cyclists to, from and within the industrial area. ▪ To provide good quality walking and cycling facilities within the industrial area. ▪ To provide for separation between pedestrian / cycling pathways and vehicles	(a) Facilitate an industrial development that encourages and supports the use of public transportation, walking and cycling. (b) Provide for clearly defined pedestrian, cyclist and electric cart routes in and around the industrial area. (c) Maintain clear sight lines at pedestrian and cycling crossings. (d) Design driveway access to minimise vehicle and pedestrian / cyclist conflicts by maintaining clear sight-lines between exiting or entering vehicle and pedestrians. (e) Provide secure bicycle storage that is close to building entrances to assist in increasing accessibility and provide passive surveillance. (f) Where practical, provide bike storage and change room facilities in, or within close proximity to, the main building to promote the use of cycling. (g) Enable a separation between pedestrians, cyclists and electric carts from motor vehicles. (h) Encourage, facilitate and enable the use of non-motorised (e-bikes / electric golf carts) transport when moving between areas and within the Bardowie Industrial Precinct. (i) Facilitate connectivity between the wider Hautapu Industrial Area and the Bardowie Industrial Precinct Campus Hub.



Images supporting S20.3.10.1(b) - An example of clear site access ways for pedestrians.



Images supporting S20.3.10.1(c) - These images provide a good example of clear site lines for cyclists and other forms of transport.

Images supporting S20.3.10.1(e) - The integration of green spaces, seating and bike storage for local workers.

S20.3.10.2 Vehicle Movement	
Design Objectives	**Design Guidelines**
▪ To provide safe, convenient and efficient access for all vehicles to and from the industrial area. ▪ To minimise the impacts of traffic on the surrounding area. ▪ To provide access and car parking arrangements that are logical and obvious to visitors and employees. ▪ To minimise the impacts of crossing points on pedestrians and cyclists.	(a) Developments should be designed to allow all vehicles to enter and exit a site in a forward motion. Turning areas must provide for larger vehicles where necessary. (b) All access points should have clear sight-lines, enabling vehicles to enter and exit safely and efficiently. (c) Ensure there is a road hierarchy that considers all road users including heavy vehicles, public transport, cars, cyclists, electric carts and pedestrians.

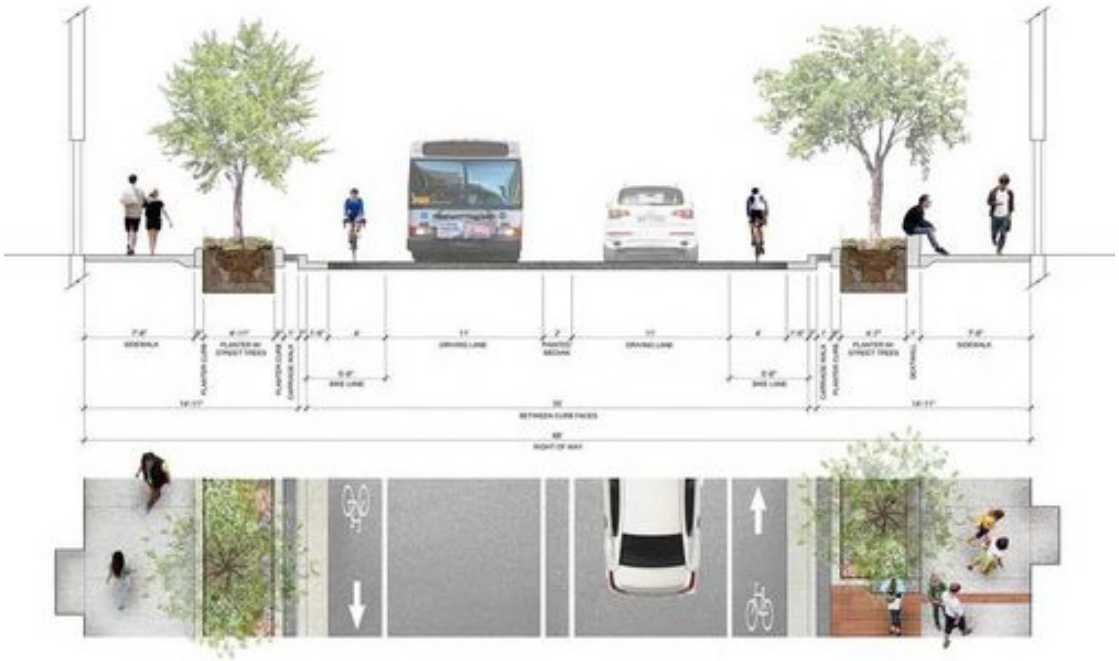


Image supporting S20.3.10.2(c) - A road hierarchy that considers all users.

S20.3.10.3 Loading and Servicing	
Design Objectives	**Design Guidelines**
▪ To provide safe and efficient loading and servicing areas for all sites. ▪ To minimise the visual impact of loading bays and service areas when viewed from surrounding public areas.	(a) Access to loading areas should be where practicable, separated from vehicle access routes. (b) Loading areas should be designed to allow unobstructed vehicle access and provide appropriate turning areas and allow for sufficient and safe collection of waste materials. (c) Provide storage and loading areas of adequate size to avoid the need to use car parks for the temporary storage of goods. (d) Boundary treatment should provide adequate screening of the loading and service areas from surrounding dwellings.

S20.3.10.4 Car Parking Layout and Design	
Design Objectives	**Design Guidelines**
▪ To provide sufficient car parking for the needs of the business. ▪ To provide an environment where parking is not perceived as the dominant element from the street and other public areas. ▪ To provide safe and efficient access within car parks for all users. ▪ To provide safe accessible car parking for local amenities.	**Node 1A and Node 2** (a) 1 parking space per full-time equivalent employee for single use, single occupancy industrial activities in very large buildings (GFA > 10,000m^2) shall be provided. (b) Visitor and staff parking areas should be located adjacent to areas of the building that are commonly accessed, and a pedestrian pathway should be provided to the entrance of the building. (c) Large car parking areas should be broken up through high quality landscaped treatments.
	Node 1B and Node 3 (d) Large expanses of car park, greater than 20 spaces, should be located to the side or rear of the building. (e) Car parking within the front setback of the site should generally be restricted to visitor parking. Visitor spaces should be clearly distinguished with suitable signage or markings. (f) Visitor and staff parking areas should be located adjacent to areas of the building that are commonly accessed, and a pedestrian pathway should be provided to the entrance of the building. (g) Visitor and staff parking should be located in a separate location from operational areas such as truck manoeuvring areas, and external storage areas. (h) Car parking should be avoided within 2.5m of the front property boundary to allow sufficient space for landscaping and footpaths. (i) Parking areas should be separated from buildings by landscaping. (j) Large car parking areas should be broken up through high quality landscaped treatments. (k) Car parking areas should be designed with a regular grid of shade trees, of a suitable species, between parking rows at a ratio of approximately 1 tree per 8 car bays. (l) Carparking should include safe pedestrian links, designed to provide access for all users. (m) Provide on-street car parking (including disabled car parking) adjacent to public open space and amenities, e.g. adjacent to the Campus Hub as illustrated on within the structure plan.

Images supporting S20.3.10.4(c) and (j) - The use of planting, materials, hardscapes in carparks helps to break up the extent of hard surfaces.

S20.3.11 BUILDING LAYOUT

S20.3.11.1 Setbacks	
Design Objectives	**Design Guidelines**
▪ To provide a clear and legible front entrance that is visible from the street. ▪ To site buildings so they provide adequate space for landscaping and reduce visual impacts on surrounding public areas (including roads).	(a) Front setbacks should be landscaped in accordance with the Landscape Guidelines, and should not be used to store goods, materials or waste.

Images supporting S20.3.11.1(a) - ***Left: An example of effective use of planting / screening in a contemporary style. Right: An example of planting to screen from the main road, which also allows for the architecture to be a feature.***

S20.3.12 BUILT FORM

S20.3.12.1 Street Address	
Design Objectives	**Design Guidelines**
▪ To provide buildings that are easy for visitors and workers to locate. ▪ To create an attractive setting for industrial buildings that support a range of movements, connections and enable safe pedestrian/ cyclist access where appropriate. ▪ To provide passive surveillance of surrounding public spaces.	(a) Ensure offices are clearly visible from the street frontage and visitor parking areas. (b) Avoid blank, unarticulated walls along the front façades and provide planting where this is unavoidable. (c) Buildings should be orientated so that the building frontage (i.e. entrance, reception, customer service area) is parallel with the primary street frontage. (d) If there is an office, showroom, shop, staff recreational space or other such component on site, locate it facing and close to the street with as much glazing as possible. (e) Where practicable (i.e. where there are no locational / functional / sizing constraints on building orientation), orientate buildings to take advantage of a northern aspect to maximise opportunities for passive solar heating and cooling.

Images supporting ***S20.3.12.1(a) - These images show buildings that have clearly visible street frontages.***

Image supporting ***S20.3.12.1(b) - The use of planting can hide large expanses of blank wall space.***

S20.3.12.2 Building Design	
Design Objectives	**Design Guidelines**
▪ To reinforce the character of the local area through appropriate built form and landscape elements. ▪ To provide buildings that facilitate visual interest and variety in form and appearance. ▪ To provide practical building forms that meet the purpose of the industry or business. ▪ To encourage building design that is environmentally sensitive.	(a) Avoid excessive blank walls. (b) Large expanses of building walls that are visible from the street should be broken up or otherwise detailed to reduce the scale and increase interest. (c) Use simple, orthogonal forms that are broken up by contrasting materials, colours and textures.

S20.3.12.3 Material Finishes and Colours	
Design Objectives	**Design Guidelines**
▪ To provide colours, materials and finishes that are compatible with the character of the Cambridge area. ▪ To provide a co-ordinated palette of colours, materials and finishes. ▪ To provide materials that are durable and robust.	(a) Reference materials to be utilised within the Bardowie Industrial Precinct are of neutral theme with strong compositional balances which are encouraged to break down mass of form as a preference to monochromatic bulk. (b) Natural stone exposed aggregate concrete, steel, zinc, anthracite and stainless steel should be utilised as the primary building finishes where appropriate. (c) Proportional colour schemes are to be preferentially utilised, with a guiding principle of Primary, Secondary and Accent colourways (Primary = 70%, Secondary = 20%, Accent = 5%) and cladding materials and finishes shall avoid adverse reflectivity effects. (d) The Resene BS5252 Group A selections are the preferred (but not required in all instances) colour palette for the Bardowie Industrial Precinct (Appendix A). These colours reflect the primary tonal directions preferred in contemporary design materials such as natural stone, exposed aggregate concrete, steel, zinc, anthracite and stainless steel. (e) The façade of buildings should be modulated – for example via stepping form, shadow lines and providing glazed areas to articulate building envelope to the extent practicable to break down the sense of bulk form and promote occupant wellness by providing natural light and outlook to natural features.

S20.3.12.4 Building Heights	
Design Objectives	**Design Guidelines**
▪ To provide buildings that are appropriately scaled to provide for a variety of industries. ▪ Within Node 1A and Node 2, enable appropriately sized buildings to be developed to enable specialised industry that has functional requirements for large buildings. ▪ Within Node 1B and Node 3, to provide industrial and office buildings that have minimal impact on the surrounding area.	**Node 1A and Node 2** (a) A 20m maximum building height restriction is applied across the buildings on the site, except for within 40 metres of State Highway 1 (Waikato Expressway) and Victoria Road where the height limit is 10 metres. **Node 1B and Node 3** (b) A 20m maximum building height restriction is applied across the buildings on the site, except for within 40 metres of Victoria Road where the height limit is 10 metres. (c) Building heights should respond appropriately to the surrounding area and incorporate lower elements towards the street to relate to the pedestrian scale. (d) Taller elements of the building should be recessed from the street. (e) Buildings should not generally overshadow public footpaths or public open space.

S20.3.12.5 Roof Form	
Design Objectives	**Design Guidelines**
▪ To integrate the roof form into the overall design of the building. ▪ To ensure roof forms reflect the industrial function of the building. ▪ To avoid clutter on the roof.	(a) Roof forms should generally be of a low pitch unless necessitated by the particular industry function. Avoid bulky or highly detailed roof forms. (b) Utilise roof forms to differentiate between the various elements of the building. This could include the transition between the office / sales area through to the larger buildings behind. (c) Building infrastructure which is located on the roof including air conditioning units, plant room, lift motor etc. is to be screened from adjoining streets and areas utilising roof forms or parapets that integrate with the overall design of the building. Solar panels shall be integrated into the design of the building and not deviate more than 15 degrees from the angle of the roofline on which they are located.

S20.3.12.6 Signage and Advertising	
Design Objectives	**Design Guidelines**
▪ To provide for the identification of businesses in a way that maintains the character and amenity of the street. ▪ To ensure signage is informative and co-ordinated in a way that enables customers to easily locate the industry	(a) Directional signage should be provided within sites to delineate entries and exits, staff and visitor parking, office /reception areas, and loading areas. Directional signage within the site should be consistent in style and form. (b) Signage attached to front fences and temporary A-Frame signage on footpaths should be avoided.

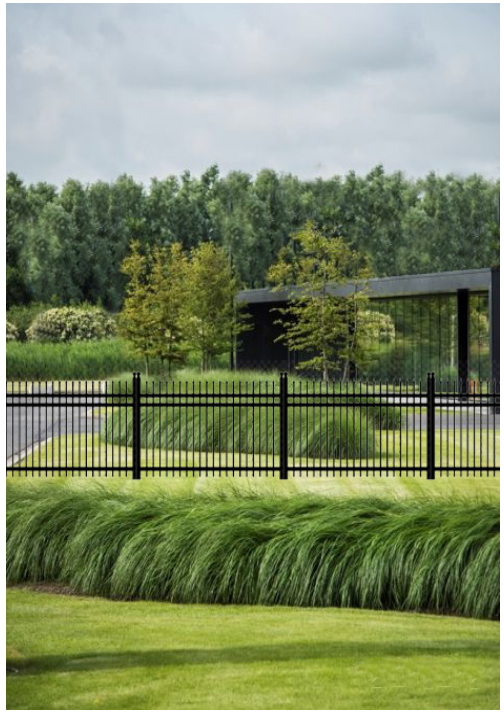
S20.3.12.6 Signage and Advertising	
or business and determine its services. ▪ To ensure signs contribute positively to an area and do not compromise visual amenity. ▪ To ensure signs are managed so as to ensure they do not have an adverse effect do not have an adverse effect.	(c) Signage which directs vehicles to parking and servicing areas should be clearly visible and unobstructed by building features or landscaping. (d) All signs should be high quality and low maintenance with direct lighting. (e) Sign colours should be similar colour to those used in buildings, with allowance for no more than 50per cent of the sign coverage to include corporate colours and logos. (f) Free standing tenant signs may be placed at locations near entry driveways. (g) Building mounted signs should be limited to a maximum of one per tenant.

S20.3.13 LANDSCAPING

S20.3.13.1 Landscape Design	
Design Objectives	**Design Guidelines**
▪ To provide landscape design that responds to the characteristics and qualities of the area. ▪ To provide high quality landscaping that enhances the setting of buildings. ▪ To provide low maintenance landscaping. ▪ To facilitate landscape design that promotes sustainable stormwater management and, where possible, promotes positive biodiversity outcomes.	**Landscaped Setbacks – Node 1A and Node 2** (a) A 5m amenity planting strip shall be provided along the southern boundary, adjacent to the Waikato Expressway. The purpose of this planting is to provide visual screening between the Expressway and the Structure Plan area. Plant species and design should take into account adjoining planting within the Expressway corridor. (b) Where appropriate, drainage management measures are to be integrated into amenity areas.
	Landscaped Setbacks – Node 1B and Node 3 (c) A 5m wide minimum screening and amenity planting strip will be provided along the north-west interface of the Node 3, when Node 3 is developed, while the land immediately to the north is zoned Rural Zone (i.e. the common boundary with the Henmar Trust property). The screening shall not include building materials. The screening and amenity planting shall take into account: (i) The location and orientation of existing dwellings; (ii) The proposed land use and building form within north western part of Node 3; and (iii) Constraints associated with areas in proximity to existing power lines. There is no requirement to undertake screen planting along the common boundary of the Bardowie Industrial Precinct and the property currently owned by Fonterra. (d) Front and corner sites shall have an amenity planting strip along the entire road boundary to the minimum depth of 2.5m, except for access and egress points. (e) The amenity planting strip will consist of a combination of groundcovers (i.e. shrubs and/or grass) and trees, with at least one tree planted for every 10m of road frontage. (f) Where appropriate, drainage management measures are to be integrated into amenity areas.

S20.3.13.1 Landscape Design	
	(g) Landscaping in rear setbacks should be provided if the rear of the site adjoins or is visible from a public street.
	Street Tree Planting – Whole Site (h) Amenity street tree planting at 30m maximum spacings will be provided along Laurent Road and Victoria Road, and any road vested with the Waipa District Council.
	Gateways – Whole Site (i) The two entry points into the industrial area, along Victoria Road, will require special streetscape planting to reinforce the contemporary character of the Bardowie Industrial Precinct and to provide a site feature.
	Species Selection – Whole Site (j) Species should be selected to incorporate both the surrounding landscape character and Cambridge more generally, and the contemporary style to connect and integrate with the landscape of adjoining sites where appropriate. (k) Landscape areas should be planted with species that are low maintenance and hardy. Species selection should generally provide an emphasis on native and indigenous plants that are appropriate to the site and landscape character of the area (refer to Appendix B).
	Carpark Landscaping – Whole Site (l) For large car parks, provide canopy tree planting for every 8 car parking spaces. The species should be selected to provide shade for vehicles and pedestrians and allow clear views between pedestrians and the vehicles. (m) A landscape planted strip of at least 1 metre should be provided to separate car parks from side and rear boundaries. (n) Landscaped areas should be separated from vehicle access through the use of kerbs, wheel stoppers, or raised edging to ensure the maintenance of vegetation. (o) Utilise water sensitive urban design techniques to treat storm-water runoff from car parks and passively irrigate vegetation.
	Staff Amenity Areas – Whole Site (p) Where provided for or where the features of a site or proposal make it feasible or necessary, functional outdoor staff areas should be located to take advantage of northern aspect, connection to internal staff meals areas, and be landscaped with shade trees and seating.
	Establishment and Maintenance – Whole Site (q) Landscaping should be completed within 9 months of building construction completion and be carried out

S20.3.13.1 Landscape Design	
	in accordance with the approved landscape plan. (r) Provide for the ongoing maintenance of landscaped areas and generally utilise low maintenance and durable landscaping techniques.



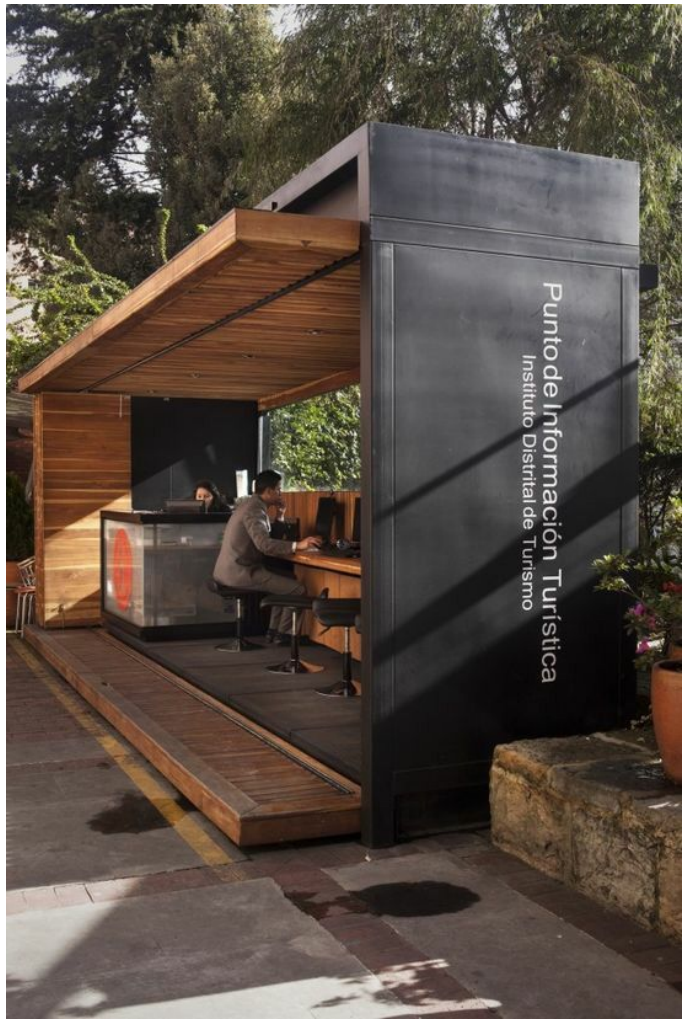
Images supporting the Landscaping Guidelines - ***Left: An example of integrating security fencing with landscaping. Right: An example of contemporary planting styles and incorporating landscaping with the use of water for drainage assistance.***

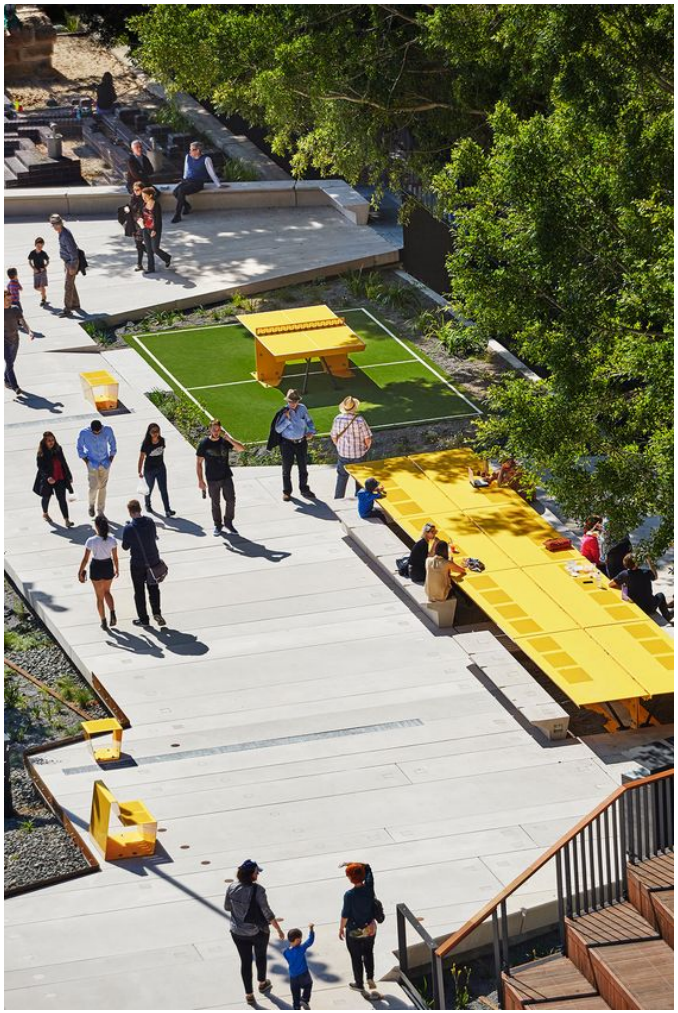
S20.3.13.2 Fencing Design	
Design Objectives	**Design Guidelines**
▪ To ensure the front boundary treatment contributes positively to the appearance of the streetscape and clearly delineates the public and private realms. ▪ To ensure fencing provides for adequate site security. ▪ To ensure fencing is co-ordinated with the design of the building and landscaping.	(a) Fencing along the front boundary should generally be avoided. Utilise landscaping to delineate the front property boundary. If security fencing is a requirement, it should be setback from the road boundary behind a planting buffer strip. (b) Where front fencing is required for security purposes, the fence should be: (i) Unobtrusive and not exceed 1.5m in height; (ii) Allow clear views between the street and the business; (iii) Utilise materials and colours appropriate to the location, building and landscape design; and (iv) Avoid the use of high and/or solid structures / materials. (c) If security fencing is required, it should have a high degree of transparency and be constructed in black plastic-coated chain link wire or black steel post style. Provide landscaping around the fencing to soften the visual impact. (d) If security fencing is required along the front boundary, it should be provided at or behind the building line to enable stronger visual and physical connection between the street and building entries. (e) Where screen fencing is required, it should be designed to integrate with the materials and colours utilised throughout the site. (f) Razor wire and barbed wire are to be avoided.

S20.3.14 CAMPUS HUB

S20.3.14.1 Campus Hub	
Design Objectives	**Design Guidelines**
▪ To maximise safety, accessibility and attractiveness of the Campus Hub. ▪ To provide commercial activities that provide for everyday needs of employees and visitors. ▪ To provide safe, accessible public open space for use by local employees and visitors.	(a) Through an integrated design approach, provide for a mix of uses within the Campus Hub including a mix of commercial and public amenities, e.g.: (i) Local commercial amenities such as a banking facilities, dairy, bakery, café, limited retail or similar activities; (ii) Open space including a mix of informal playing fields, exercise equipment and/or passive recreation facilities, e.g. seating and picnic benches; (iii) Wellness centre, incorporating a medical centre (doctors, dental care) gymnasium, swimming pool, sports courts and support services; (iv) Childcare and other educational facilities; (v) A Visitor accommodation facility; (vi) A Conference facility; and

S20.3.14.1 Campus Hub	
	(vii) Innovation centre (which may include shared office spaces, research and development centres, a small-scale industrial heritage museum, and a place to showcase new technologies). (b) Where appropriate, integrate open space and amenities with adjoining stormwater elements such as ponds and swales, such as could contribute to the amenity outcomes for the Campus Hub. (c) Provide for a comprehensive approach to landscaping throughout the Campus Hub, taking into account Appendix B: Recommended Species Selection, as well as CPTED principles. (d) Enable passive surveillance that contributes to the safety and amenity of the Campus Hub by ensuring that commercial amenities and adjoining activities face on to open space and public activities, and by avoiding fencing and dense vegetation along boundaries of the public area. (e) Provide for public cycle and vehicle parking opportunities, including disabled parking, within the Campus Hub. (f) Commercial amenities should be designed to be of a 'human scale' through appropriate scale, detailing and modulation. (g) Suitable signage indicating way finding information and amenities should be used to complement the area.





Images supporting S20.3.14.1(a) - ***Left: Example of possible solutions of places to sit / eat. Right: Outdoor recreational activities incorporated into public space.***

S20.3.15 SUSTAINABILITY

S20.3.15.1 Sustainability	
Design Objectives	**Design Guidelines**
▪ To enable the development of the Bardowie Industrial Precinct, incorporating sustainable development principles.	(a) Where practicable, retain existing indigenous vegetation. (b) Utilise open space networks for recreational and exercise opportunities for those working in the precinct. (c) Investigate the use of vertical gardens and green roofs, where appropriate, for their co-benefits in relation to sound and heat isolation, energy productivity, air quality improvement, heat island reduction and aesthetics / amenity. (d) Provide connectivity between open space networks and plantings where appropriate. (e) Utilisation of effective thermal insulation and material in buildings if practical. (f) Facilitate the use of both passive and active alternative energy systems. (g) Promote the efficient use of water, including where practicable the incorporation of rainwater harvesting and grey water re-use processes. (h) Provide charging stations to encourage the use of electric vehicles. (i) Facilitate and promote the use of appropriate waste management practices, including the promotion of recycling (i.e. through the development of a centralised recycling facility within the Bardowie Industrial Precinct). (j) Enable and encourage the development, operation, use and maintenance of individual and small-scale renewable energy technologies, including solar and batteries.

Images supporting ***S20.3.15.1(c) - Left: Images showing the use of a green roof and the integration of green features with solar panels. Right: Image showing use of green wall spaces which helps to improve air quality, heat island reduction and aesthetics / amenity.***

Image supporting ***S20.3.15.1(i) - Encouraging the use of separating waste items.***

Image supporting ***S20.3.15.1(h) - Right: Image showing a carpark with charging stations for the use of electric cars.***

S20.3.16 SAFETY AND SECURITY

S20.3.16.1 Safety and Security	
Design Objectives	**Design Guidelines**
▪ To provide safe accessibility around all site and hours. ▪ To ensure safe movement and connections.	(a) Ensure appropriate lighting is provided within the Bardowie Industrial Precinct to support the 24-hour operation of some of the industries. (b) Ensure there is separation between public building entrances and any private service area, storage area or other entrance. (c) Enable for the establishment and operation of monitored security including CCTV.

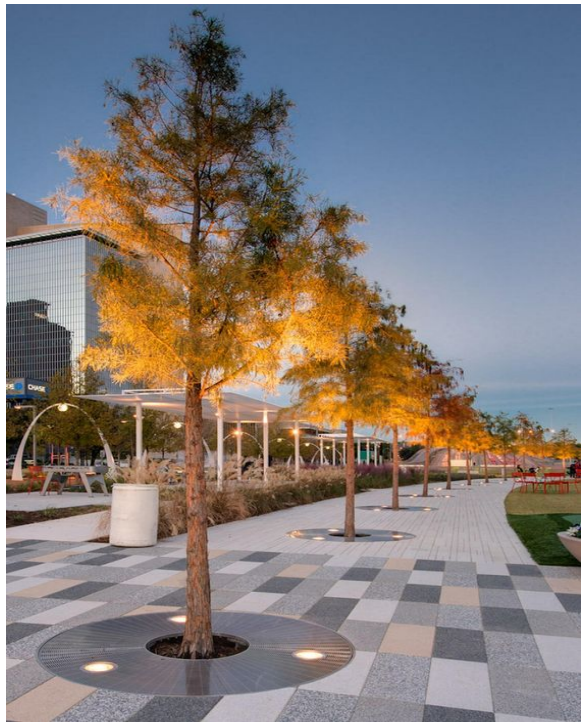
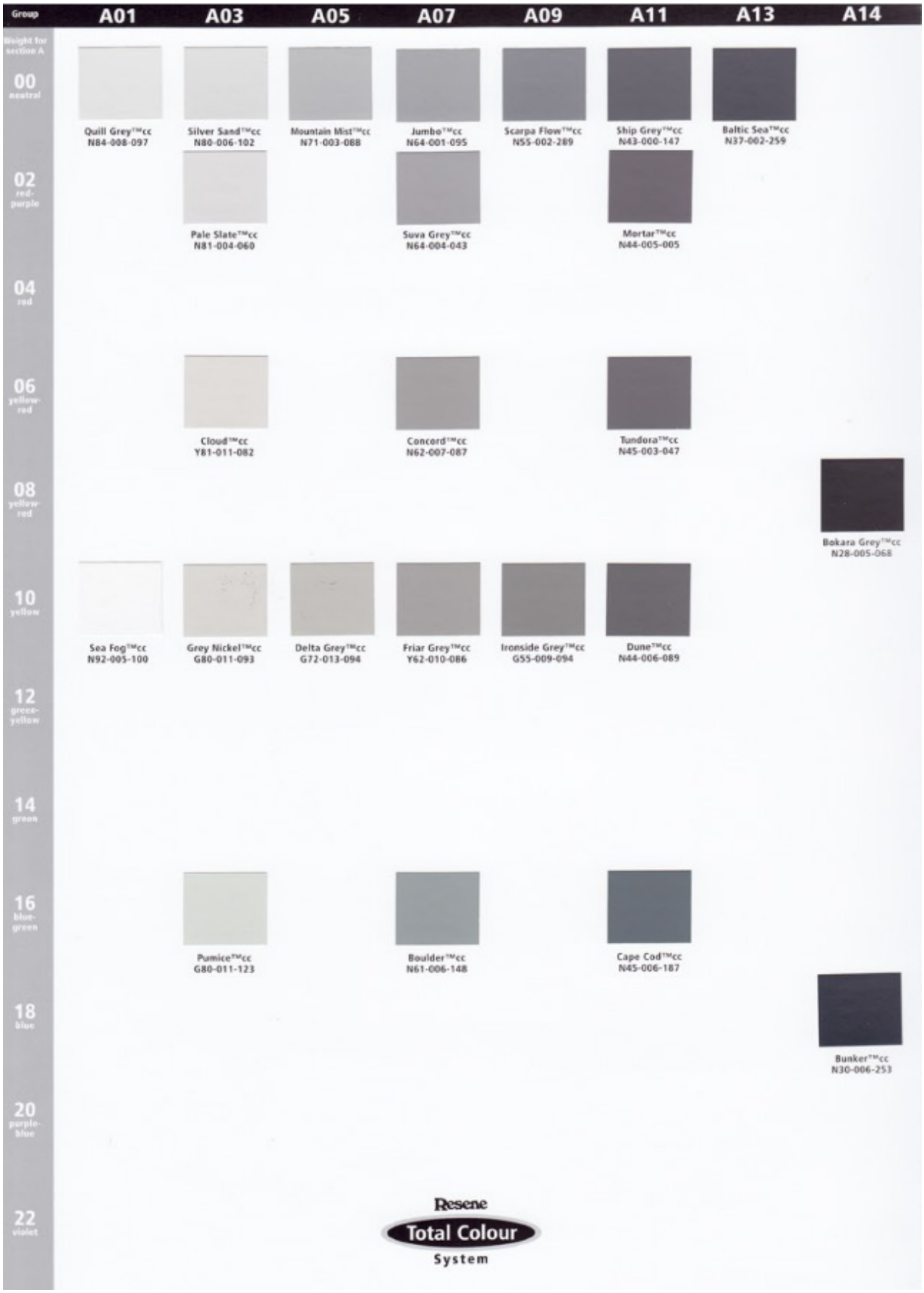


Image supporting S20.3.16.1(a) - ***Image showing good use of lighting and open walkways to provide a safe environment for local workers.***

Attachment A:Bardowie Industrial Precinct Colour Palette



Attachment B: Recommended Plant Species Selection

Public Road Streetscape and Amenity Trees	
Botanical Name	**Common Name**
Acer species	Maple
Alectryon excelsus	Titoki
Alnus species	Alder
Amelanchier canadensis	Service Berry
Carpinus species	Hornbeam
Cercis canadensis species (Exotic)	Forest Pansy / Hearts of Gold
Cornus species (Exotic)	Dogwood
Dacrycarpus dacrydioides (Native)	Kahikatea
Dacrydium cupressinum (Native)	Rimu
Fagus Sylvatica 'Dawyck Green' (Exotic)	Upright Green Beech
Fagus Sylvatica 'Dawyck Purple' (Exotic)	Upright Purple Beech
Fraxinus excelsior 'Green Glow' (Exotic)	European Ash
Ginkgo species (Exotic)	(Male only) Maidenhair
Knightia excelsa (Native)	NZ Honeysuckle
Liriodendron tulipifera (Exotic)	Tulip Tree
Liquidambar 'Gum Ball' (Exotic)	
Magnolia species (Exotic)	
Michelia species (Exotic)	
Platanus species	London Plane
Podocarpus gracilor (Exotic)	Fern Pine
Quercus species (Exotic)	Oak
Tila cordata (Exotic)	Small leaved lime
Ulmus species	Elm
Sophora species	Kowhai

Public Road Streetscape and Amenity Trees

Landscaping Low Street & Amenity Planting	
Botanical Name	**Common Name**
Astelia species (Native)	Astelia
Carex species (Native)	Carex
Coprosma 'Hawera' & 'Red Rocks'	Hawera / Red Rocks
Corokia (Native) (for shaping)	Corokia
Helleborus species	Winter Rose
Lomandra species	Lomandra
Muehlenbeckia astonii (Native) (for shaping)	Shrubby Tororaro
Ophiopogon species	Mondo grass
Pachysandra terminalis	Japanese Pachysandra
Pittosporum (Humpty Dumpty / Golf Ball)	
Viburnum davidii	
Chionochloa rubra	Red Tussock

Landscaping Low Street & Amenity Planting

Landscaping Buffer Plantings (Tall)	
Botanical Name	**Common Name**
Agathis australis (Native)	Kauri
Alectryon excelsus (Native)	Titoki
Cordyline australis (Native)	Cabbage Tree
Dacrycarpus dacrydioides (Native)	Kaihikatea
Griselinia littoralis (Native)	Kapuka
Hoheria sexstylosa (Native)	Lace bark
Kunzea ericodies (Native)	Kanuka
Leptopsermum scoparium (Native)	Manuka
Pittosporum (Native)	
Pseudopanax (Native)	Lancewood
Sophora tetraptera (Native)	Kowhai

Landscaping Buffer Plantings (Tall)

Landscaping Buffer Planting (Medium to Low)	
Botanical Name	**Common Name**
Astelia species (Native)	
Brachglottis species (Native)	
Carex species (Native)	
Coprosma 'Hawera' (Native)	
Coprosma 'Red Rocks' (Native)	
Cornus alba 'Siberia' (Exotic)	
Corokia species (Native)	(Can be hedged)
Griselinia littoralis (Native)	Kapuka (can be hedged)
Hebe species (Native)	Hebe
Libertia species (Native)	Peregrinans / Ixioides
Lomandra species (Exotic)	Lime Tuff/ Tanika / White Sands
*Muehlenbeckia astonii (*Native)	Hedged or shaped
Phormium species (Native)	Flax
Pittosporum 'Golf Ball' (Similar varieties).	Golf Ball / Humpty Dumpty

Landscaping Buffer Planting (Medium to Low)

Wetland Planting	
Botanical Name	**Common Name**
Apodasmia similis (Native)	Oi Oi
Baumea articulata	Jointed Rush
Carex secta (Native)	
Cyperus ustulatus (Native)	Giant Umbrella Sedge
Eleocharis acuta	Common Spike Rush
Eleocharis sphacelata	Tall Spike Rush
Juncus gregiflorus (Native)	Giant Rush
Schoenoplectus tabernaemontani	Grey Club Rush

Wetland Planting

Note: The planting list is inclusive of species that reflect both native and heritage characteristics of the Cambridge area, and also provide for more contemporary landscaping.