

CONSTRUCTION MANAGEMENT PLAN

CARTER GROUP LIMITED RYANS ROAD DEVELOPMENT

Document Record

Client: Carter Group Limited

Site Address: 104 Ryans Road, Harewood, Christchurch

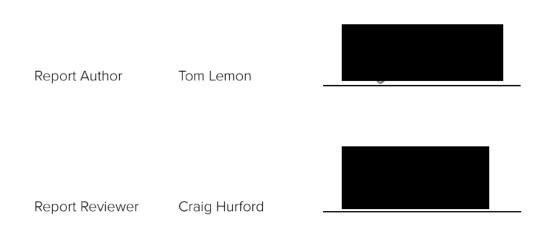
Project Number: 1252

Document Title: 1252 – Construction Management Plan

Document Type: Construction Management Plan (CMP)

Document Status

REVISION	DATE	REVISION DETAILS	AUTHOR	APPROVER
Draft	24/01/25	Client Review	TL	
А	10/03/25	For Approval	TL	CH
В	21/11/25	For Approval	TL	CH



Contents

1	Inti	4	
	1.1	Purpose	4
2	Site	e Description	5
	2.1	Location	5
3	Pro	eject Description	6
	3.1	Phase 1 – Subdivision Work	6
	3.2	Phase 2 – Building Work	6
4	Res	sponsibilities	7
	4.1	Stakeholder Identification	7
	4.2	Roles and Responsibilities	7
5	Co	nstruction Methodology & Programme	8
	5.1	CIAL Aircraft Protection Rules	8
6	Res	source Consents	11
7	Не	alth and Safety Plan (HSP)	12
	7.1	Objectives	12
	7.2	Legal Requirements	12
	7.3	Project Hazards	12
8	En	vironmental and Social Management	14
	8.1	Earthworks Management	14
	8.2	Erosion and Sediment Control Plan (ESCP)	14
	8.3	Dust Management	14
	8.4	Discharges of Fuel, Lubricants and Hazardous Materials	14
	8.5	Accidental Discovery or Archaeological Artifacts	15
	8.6	Traffic Management	15
	8.7	Noise and Vibration	15
	8.8	Machinery Condition and Operation	16
	8.9	Network Utilities	16
	8.10	Lighting	16
	8.11	Waste & Debris Management	16
	8.12	Securing of Objects	16
9	Mo	nitoring	17
	9.1	Resource Consent Requirements	17
	9.2	Monitoring Requirements	17
	9.2	.1 Pre-Construction	17
	9.2	.2 During Non-Work Periods	17
	9.2	.3 Daily Maintenance	17
	9.2	.4 Weekly Inspection	17

9.2	5 Record of Maintenance	18		
9.3	Incident Response / Corrective Action	18		
9.4	Complaints Register	18		
Appendix A – Engineering Plan Set19				
Appendix B – Consent Approvals				

1 Introduction

1.1 Purpose

Carter Group Limited (CGL) proposes to construct a 126-lot industrial development at 104 Ryans Road, Harewood, Christchurch.

Capture Land Limited (CCL) has been engaged by CGL to prepare a Construction Management Plan (CMP) to provide guidance and procedures to address aspects of the construction activities that have the potential to create adverse environmental effects.

The CMP will be included in draft format as part of the documentation package submitted with the fast-track consent application for the project and will be finalised by the Consent Holder prior to construction commencing.

The CMP is considered a live document that needs be reviewed and updated as required during construction works.

2 Site Description

2.1 Location

The site is located on the northern side of Ryans Road approximately 100m to the east of Pound Road and Ryans Road intersection. The site adjoins the Christchurch International Airport (CIAL) on the western and northern boundaries and Grays Road on the eastern boundary. Refer to Figure 1.



Figure 1 – Site Location

The site is held in two separate parcels of land as descripted in Table 1.

Site Address	Appellation	Area (ha)	Record of Title (RT)
104 Ryans Road	Lot 4 DP 22679	31.5592	CB 7A/401
20 Grays Road	Pt Lot 1 DP 2837	2.1069	
104 Ryans Road	Pt Lot 3 DP 22679	23.9758	CB 13A/1098
	Total Area:	57.6419	

Table 1

The site is currently zoned Rural Urban Fringe Zone under the Christchurch City Council (CCC) District Plan. The site adjoins the Christchurch International Airport Limited (CIAL) land to the west and as a result there is a designation over a western portion of the property and airport protection rules, which are outlined in Section 5 of the CMP.

3 Project Description

The construction requirements for the development are separated into the following two phases.

3.1 Phase 1 - Subdivision Work

Phase 1 of the development is to subdivide the property into a 126-lot industrial development over two stages as shown in Figure 2. This involves undertaking:

- Earthworks to form roads
- Installation of civil infrastructure (stormwater, wastewater, water) to provide service connections to the new industrial lots
- Construction of roads, including upgrading existing road frontage adjacent to the site (Ryans Road and Grays Road)
- Installation of utility services (power, fibre, streetlights) to provide service connections to the new industrial lots
- Landscape planting



Figure 2 – Development Plan with proposed staging

3.2 Phase 2 – Building Work

Phase 2 will be the development of the individual industrial lots with buildings and hardstand areas. This involves undertaking:

- Earthworks to form building platforms and hardstand areas
- Construction of buildings
- Installation of drainage and services
- Construction of hardstand areas
- Landscaping & fencing

4 Responsibilities

4.1 Stakeholder Identification

Key Project Stakeholders for the development are:

Phase 1 Subdivision Works - Carter Group Limited

Phase 2 Building Works – Future Lot Owners

The above stakeholders will appoint agents, representatives, consultants and contractors as required for the construction works.

4.2 Roles and Responsibilities

Carter Group Limited (Phase 1) and Future Lot Owners (Phase 2) (and their agents or representatives, and including on behalf of other key stakeholders as appropriate) will:

- Oversee the contract management processes as principal to the contract(s) and ensure that all contractual requirements are met by the Project team including by all consultants and contractors.
- Jointly ensure, with other responsible parties, that all management processes and consent conditions are met through monitoring and reporting, environmental compliance audits, and health and safety audits, taking any action as required.

Contractors (Phase 1 and 2) will:

- Lead the management and delivery of construction activities in accordance with the construction contract.
- Ensure that effects of the works on the site, and public traffic operations are managed safely throughout the construction period.
- Comply with all statutory and regulatory requirements relating to the Project including the resource consents, aircraft protection rules and ensure that all parties under the contractor's management are aware of their obligations under the relevant legislation.
- Produce and implement all the necessary management plans for the works.
- Update the CMP, when required.
- Ensure that all construction personnel including all subcontractors are trained and fully conversant with the requirements and processes within all construction management plans.
- Ensure that all Project site security and access control measures are implemented and maintained throughout the construction works, and that all Project personnel entering the site are inducted and familiar with the site hazards at all times, all as required by the site-specific Health and Safety Plan(s).

5 Construction Methodology & Programme

The Contractor(s) will submit a construction methodology and programme to the Project Stakeholders outlined above for approval prior to commencement of construction works.

The construction methodology, management and programme will take into consideration approved resource consent conditions, management plans, New Zealand legislation requirements, Christchurch International Airport Limited (CIAL) aircraft protection rules (outlined below) and any other reasonable CIAL specific requirements (eg – crane permit, etc).

5.1 CIAL Aircraft Protection Rules

The following aircraft protection rules apply to the site:

 <u>Aircraft Protection Surfaces for Christchurch International Airport</u> - These are defined surfaces in the airspace above and adjacent to the aerodrome (refer to Figure 3 and 4 below). Activities that protrude through these protection shafts are restricted or prohibited to enable aircraft to maintain a satisfactory level of safety while manoeuvring at low altitude in the vicinity of the aerodrome.

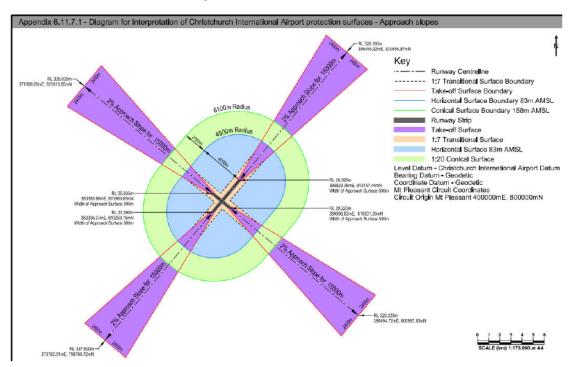


Figure 3 – CIAL Approach Slopes

Figure 3 above has been overlaid on the development site and is shown on drawing RC-PG-120 in **Appendix A**.

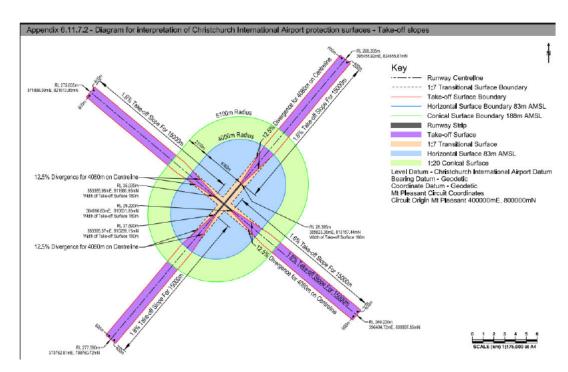


Figure 4 – CIAL Take-off Slopes

Figure 4 above has been overlaid on the development site and is shown on drawing RC-PG-121 in **Appendix A**.

Garden City Helicopter (GCH) Protection Surfaces - These are defined surfaces in the
airspace to protect take-off and approach from GCH (refer to Figure 5 below). GCH is
located to the north of the subject, so only the south take-off and approach surface is
relevant. Activities that protrude through these protection surfaces are restricted or
prohibited to enable aircraft to maintain a satisfactory level of safety while manoeuvring
at low altitude in the vicinity of GCH.

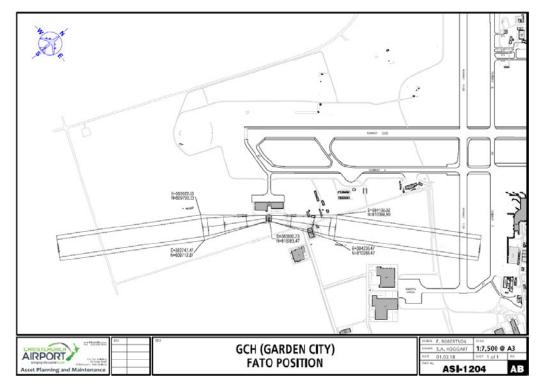


Figure 5 – GCH Take-off and Approach Slopes

The south take-off and approach surface shown in Figure 5 above has been overlaid on the development site and is shown on drawing RC-PG-125 in **Appendix A**.

• Runway End Protection Areas (REPAs) - These relate to four specific areas located at the end of the runways for the Christchurch International Airport. The area of the site within the defined REPA is shown in Figure 6 – Airport Designation (blue hatched area). The provisions of the REPA is to avoid activities at the ends of runways that would interfere with the vision of a pilot, or exacerbate the effects of an aircraft accident. For example, the provisions seek to avoid unwanted light sources, the mass assembly of people, most buildings, and the use and storage of hazardous substances.



Figure 6 - REPA (Airport Designation)

 <u>Birdstrike Management Area</u> (within 3 km of the thresholds of the runways at Christchurch International Airport). Activities that have the potential to attract birds are managed within a defined radius of Christchurch International Airport, to avoid or mitigate the potential for increased risk of birdstrike on aircraft taking off and landing. See other consultant reports which further address birdstrike management.

The contractor will need to comply with the CIAL protection rules.

6 Resource Consents

The relevant resource consents, outline plans, and permits, that apply to the Project, form part of the CMP and need to always be adhered to.

Copies of all relevant approvals are to be included in Appendix B

Note that, the future building developments on the individual industrial sites maybe be subject to further consents, which will need to be obtained prior to and adhered to during construction.

7 Health and Safety Plan (HSP)

7.1 Objectives

The Contractor(s) will prepare a comprehensive Project specific HSP prior to commencement of works, which:

- Incorporates the relevant requirements of the key client and stakeholder HSP;
- Incorporates the Contractor's own HSP and H&S system, and applies to any subcontractors working on the Project;
- Is tailored to suit the specific conditions; and
- Identify and manage risks appropriate to the Project.

The overall objective of the HSP is to enable a safe working environment and avoid harm for all parties involved in the Project, and the public.

7.2 Legal Requirements

The HSP will be prepared and will be maintained and managed in accordance with the Health and Safety at Work Act 2015, and all other relevant health and safety legislation and regulations.

The Health and Safety at Work Act 2015 requires the employer and employees to do all that is reasonably practicable to ensure the safety of staff whilst at work. This includes ensuring that:

- All persons are appropriately trained, skilled and/or supervised for their tasks;
- All hazards are identified, notified, and managed to accepted industry and H&S standards;
- Safety barriers and signage are provided as appropriate, and hazard registers and noticeboards are kept up to date and discussed at regular site toolbox meetings;
- Appropriate personal protective equipment is worn at all times; and
- All visitors to the site are safe at all times.

7.3 Project Hazards

The information below is a list of typical project hazards which are anticipated to apply to the Project site (not exhaustive). The contractor(s) must complete their own hazard assessment (including any updates as required) and identify these in their HSP.

- Construction machinery
- Open excavations
- Demolition
- Heavy trucks and other road-going vehicles
- Underground and overhead services
- Earthworks
- Potential Contamination
- Hazardous materials (fuels and oil)
- Noise and vibration
- Dust and fumes
- Craneage

- Trips, slips and falls
- Working at heights
- Confined spaces
- Public

8 Environmental and Social Management

8.1 Earthworks Management

An Earthworks Management Plan (EMP) has been prepared for the Phase 1 subdivision construction works for the roads and civil infrastructure. The contractor undertaking the Phase 1 earthworks will need to ensure compliance with the EMP. The EMP provides a base line of the measures relevant to the control of construction phase stormwater discharges and details the main protocols for ESDM measures, to protect receiving environment from uncontrolled runoff or dust emissions.

Contractors undertaking Phase 2 earthworks on the individual lots to form building pads and hardstand areas need to implement appropriate controls in accordance with ECAN Erosion and Sediment Control Toolbox and adhere to the following principles:

- Control run-on water onsite and treat with appropriate measures prior to discharge;
- Separate "clean" water from "dirty" water;
- Protect the land surface from erosion; and
- Prevent sediment and dust emissions from leaving the site.

8.2 Erosion and Sediment Control Plan (ESCP)

Contractors are required to submit an ESCP for approval of the key Stakeholder and consenting authority, if required, prior to commencing works onsite.

The ESCP must be prepared in accordance with ECAN Erosion and Sediment Control Toolbox

8.3 Dust Management

The soils underlying the site are prone to generating dust once vegetation is removed. It is imperative that the contractor be able to provide effective dust control, including during periods when earthworks operations cease and there are bare soils present. The following dust control measures, in conjunction with erosion and sediment controls, aim to reduce the generation and transport of dust from disturbed soils.

- Implement dust management techniques onsite i.e. watering exposed areas, limiting size of exposed areas open at one time, stabilising exposed areas, installing dust control barriers/fences.
- Limit earthworks or dust generating activities during periods of strong winds.

8.4 Discharges of Fuel, Lubricants and Hazardous Materials

The actions to be taken to minimise the potential for a discharge of fuel lubricants or hazardous substances are as follows:

- No bulk storage of fuel will be undertaken on site. Mobile tankers will be used to fuel plant.
- Spill kits will also be located at the project site office, in the hazardous material storage areas, and adjacent to where plant is being used.

- Fuels for hand-held equipment, lubricants and hazardous material will be stored in a suitable shed or container in a bunded storage area.
- Waste oil and lubricants, if generated, shall be removed from site for disposal at an appropriately consented facility.

In the event of a spill the contractor shall report it to the Stakeholder and Compliance Manager.

8.5 Accidental Discovery or Archaeological Artifacts

If during any earthworks there is the accidental discovery of any items of historical or cultural significance an Accidental Discovery Protocol will be followed.

8.6 Traffic Management

The Project construction works will at different times affect the local traffic network mainly along Ryans Road and Grays Road. The effects will vary throughout the Project as the Project works progress and construction is completed.

The Contractor(s) is responsible for preparing a Traffic Management Plan (TMP) and obtaining all Road Controlling authority approvals prior to working within the public road reserve.

The TMP must address construction traffic, works within the road corridor and safety of construction works and the public.

8.7 Noise and Vibration

Noise and vibration effects during construction can result from activities such as piling, ground compaction, construction traffic and machinery.

Construction noise will be short term and typical of a construction project. Mitigation measures to be undertaken in respect of construction noise will be in the form of defined hours of site operation, with noise not exceeding industry acceptable standards.

Proposed work hours will be:

- 7.00 am to 6.00 pm Monday to Saturday
- No work Sundays and Public Holidays.
- Unplanned emergency work would take place as and when required outside of these hours

Construction noise shall comply with the requirements of NZS 6803:1999.

Vibration should be assessed with reference to both DIN 4150 1999-2 Structural vibration – Human exposure to vibration in buildings and DIN 4150 1999-03 Structural vibration - Effects of vibration on structures. Any exceedance of the human nuisance guidance limits would inform communication strategy, whereas exceedance of higher guidance limits might encourage monitoring and/or condition assessment of dwellings.

8.8 Machinery Condition and Operation

To help manage multiple construction risks or effects, all construction machinery to be used on site will be required to be in a good state of repair and maintained in that condition during the project. The constructor will identify any machinery that is in a poor state or condition and will ensure the necessary steps to have the equipment repaired or removed from site. Examples of poor condition would be:

- Missing engine panels;
- · Broken or damaged exhaust systems; and
- Loose equipment that causes unnecessary noise chains/hatches/covers/lids.

8.9 Network Utilities

The existing roads adjacent to the Project contain a number of network utilities, including electricity overhead distribution lines and telecommunications. Ensuring that disruptions to service supply are kept to a minimum is critical as any outage or loss of levels of service can have a direct impact upon public health, safety or user convenience.

Upon completion of the Phase 1 subdivisions works, new underground infrastructure will be installed within the road corridors. The contractor will be responsibility for locating and protecting underground services during construction works to ensure damage or disruption to supply does not occur.

8.10 Lighting

Lighting from construction activities can have an adverse effect on amenity through glare and light spill, if it is not appropriately managed particularly for sensitive receivers close to the development. Construction lighting is temporary in nature.

The Christchurch International Airport (CIA) is a sensitive environment to lighting and as a result, no construction requiring artificial lighting should occur during the hours of darkness (dusk to dawn), unless the appropriate approvals from Civil Aviation Authorities are in place or CAA requirements are met and all District Plan lighting rules are complied with. Refer to Civil Aviation Authority Requirements and Part 77 of the Civil Aviation Act.

8.11 Waste & Debris Management

Large bins will be provided at the site offices for construction rubbish. The bins will have a lid and be emptied on a regular basis. The bins will be the only facility on site where waste may be placed. Where opportunities arise waste will be separated for reuse /recycling. The Constructor will ensure that no litter or debris can be blown by wind from the site.

8.12 Securing of Objects

All materials, temporary structures, vehicles and objects shall be so constructed, tied down or secured that nothing can be blown from the site by wind, or rotorwash from helicopters passing overhead.

9 Monitoring

Monitoring of environmental performance and compliance with resource consents and designations is required throughout the construction phase of the Project. This enables the effectiveness of the environmental controls to be determined and allows areas of noncompliance to be identified so that corrective actions can be taken.

9.1 Resource Consent Requirements

Monitoring of construction must be in compliance with the approved Resource Consent conditions and industry standards.

9.2 Monitoring Requirements

9.2.1 Pre-Construction

A pre-construction meeting must be held with the contractor and Stake Holders prior to commencement of works onsite to discuss.

- Timeframes for key stages of works authorised under the consent.
- Resource consent conditions
- Approved ESC plans and management requirements
- Construction Traffic Management Plan
- Site Specific Health and Safety Plan
- Insurance cover

9.2.2 During Non-Work Periods

The contractor must continue to monitor and maintain all environmental controls when work on site ceases (for any unforeseen reason) and until the reinstated areas are sufficiently stabilised to allow environmental measures to be decommissioned.

9.2.3 Daily Maintenance

Daily walkovers will be undertaken by the Site Manager to assess compliance with ESC plan and consent requirements. These daily site inspections will involve informal visual inspections to check that appropriate controls are in place and procedures implemented.

This will include observation of dust management and whether any adjustments or improvements can be made due to the sensitive surrounding environment. Furthermore, waste and debris management, along with objects security, will be part of the daily site inspections and toolbox meetings.

9.2.4 Weekly Inspection

Formal site inspections by the Compliance Manager to assess the site and ongoing environmental performance, compliance and identify enhancement opportunities.

This shall involve the following items as a minimum:

- Health & Safety
- Traffic Management
- ESC
- Dust Management
- Waste & Debris Management
- Securing of Objects
- Construction monitoring and consent compliance
- Complaints

All site controls are to be maintained in good working order; if repair is necessary, it will be initiated within 24 hours of inspection.

9.2.5 Record of Maintenance

A record of inspection and maintenance shall be kept by the Contractor and made available upon request to the Stake Holder.

9.3 Incident Response / Corrective Action

There is the potential for unforeseen events to occur that may impact on the environment and that will require an urgent response. Such incidents may include:

- Discharges from unstabilised areas not treated by erosion and sediment control measures;
- · Any spill of fuel or hazardous substances; and
- Any other incident which either directly or indirectly causes, or is likely to cause, adverse
 environmental effects.

On identifying, or being notified of, an incident the Constructor will determine if the scale of incident triggers the requirement to notify the Councils. If it does, the Constructor will notify the Stake Holder as soon as possible following the incident. The Constructor will then:

- Liaise with Council and Stake Holder to establish what remediation and/or rehabilitation works are required and whether such works are practical to implement;
- Carry out any remedial action as required by and to the satisfaction of Council and Stake Holder;
- Any affected parties shall be contacted as soon as possible if an incident occurs that may affect any land outside of the Project's construction site; and
- Maintain a permanent record of the incident on site.

9.4 Complaints Register

A register is to be kept by the main contractor of any complaints received from the public (or council). This register is to be made available for viewing by the Stake Holder. Each complaint is to be actioned accordingly.

Letter drops, door knocks, emails to neighbouring properties adjacent to the site will be incorporated throughout the works. A transparent working relationship with all adjoining residents is important to be maintained throughout works.

Appendix A – Engineering Plan Set

Appendix B – Consent Approvals

(Consent approvals to the added when received)