

TE KOWHAI EAST LIMITED PARTNERSHIP

Construction Management Plan (Draft)

Te Kowhai East Industrial Development

270 Te Kowhai Road and 28 Mathers Road, Horotiu, Hamilton

TKE-CMP-001

Prepared for Fast-track Approvals Act 2024 Consent Application

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Date	31 August 2026
Version	Rev A
Status	DRAFT

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A1 Abbreviations

Abbreviation	Meaning	Abbreviation	Meaning
ABM	Automatic Bat Monitoring	ADP	Accidental Discovery Protocol
BMP	Bat Management Plan	BMHCP	Black Mudfish Habitat Creation Plan
CCO	Council Controlled Organisation	CBR	California Bearing Ratio
CIA	Cultural Impact Assessment	CMP	Construction Management Plan
CMW	CMW Geosciences	CNVMP	Construction Noise and Vibration Management Plan
CoPTTM	Code of Practice for Temporary Traffic Management	DCP	Dynamic Cone Penetrometer
DOC	Department of Conservation	EcIA	Ecological Impact Assessment
ER	Environmental Representative	ESA	Equivalent Standard Axles
ESC	Erosion and Sediment Control	ESCP	Erosion and Sediment Control Plan
ESL	Ecological Solutions Limited	EWMP	Earthworks Management Plan
FMP	Fish Management Plan	FTAA	Fast-track Approvals Act 2024
FWI	Far Western Interceptor	GIR	Geotechnical Investigation Report
GPS	Global Positioning System	HCC	Hamilton City Council
HSMP	Health and Safety Management Plan	HSWA	Health and Safety at Work Act 2015
IAWAI	Publicly Owned Water Infrastructure CCO	ITA	Integrated Transport Assessment
LMP	Lizard Management Plan	NZTA	Waka Kotahi NZ Transport Agency
NZS	New Zealand Standard	PPE	Personal Protective Equipment
PAC	Polyaluminium Chloride	SH1C	State Highway 1C
RITS	Regional Infrastructure Technical Specifications	SQEP	Suitably Qualified and Experienced Practitioner
SH39	State Highway 39	SRP	Sediment Retention Pond
SRB	Sediment Retention Basin	STMP	Stream Works Management Plan
SSTMP	Site-Specific Traffic Management Plan	TMP	Traffic Management Plan
TKE / TKELP	Te Kowhai East / Limited Partnership	TWWG	Tangata Whenua Working Group
TR2009/02	WRC Erosion and Sediment Control Guidelines for Soil Disturbing Activities	WGA	Wallbridge Gilbert Aztec
WDC	Waikato District Council	WRC	Waikato Regional Council

1. Introduction

This Baseline Construction Management Plan (CMP) sets out the overarching site-wide management framework for the construction and civil development of the Te Kowhai East Industrial development. It establishes the operational, environmental, safety, traffic, and compliance framework required during of the Project.

Where specific technical methodologies, staging, or environmental controls for earthworks, stream works, or freshwater ecology are detailed in standalone management plans those plans govern the relevant technical matter. These include Earthworks Management Plan (EWMP), Stream Works Management Plan (STMP), Fish Management Plan (FMP), Bat Management Plan (BMP), Lizard Management Plan (LMP), Black Mudfish Habitat Creation Plan (BMHCP), Construction Noise and Vibration Management Plan (CNVMP).

Prior to the commencement of physical works, the appointed Principal Contractor will prepare a detailed Construction Management Plan (CMP) for that stage of works. The CMP required for a construction stage will be prepared generally in accordance with this Baseline CMP and will be submitted for certification where required by the applicable consent conditions.

The operational hierarchy of construction management documentation is established as follows:

- **Baseline CMP:** Establishes site-wide environmental controls, regulatory hold points, roles and responsibilities, and management frameworks to support the resource consent application.
- **Sub-staging / Updated CMPs:** Prior to physical works commencing in any given earthworks stage, a Sub-staging CMP (and associated stage-specific ESCPs) shall be submitted to Waikato Regional Council for certification. These documents will detail localised staging boundaries, cut-fill balances, and specific erosion control layouts aligned with this Baseline CMP.
- **Contractor's CEMP:** Prior to site establishment, the appointed Principal Contractor shall prepare a Site-Specific Construction Environmental Management Plan (CEMP) operationalising the requirements of this CMP, the EWMP, and the STMP into daily site procedures.

2. Site Location and Description

The Project site comprises a large, contiguous landholding located on the north-western edge of Hamilton. It is generally bounded by Te Kowhai Road to the south, Koura Drive and Mangaharakeke Drive (State Highway 1C) to the east, and Onion Road to the north. The site is made up of multiple land titles, legal descriptions, and associated physical addresses.

For identification purposes, the site is commonly referred to by the primary addresses of 270 Te Kowhai Road and 28 Mathers Road. The site is identified in Figure 1 below.



Figure 1: Site Location Plan

The site contains approximately 19.5 km of watercourses, including 16.2 km of artificial farm drains and the main stem of the Mangaheka Stream (~1,900 m on site). The site is currently operated as a dairy farm and will be developed as an integrated industrial precinct comprising industrial development, a neighbourhood centre, transport and three-waters infrastructure, stormwater management areas, and ecological reserves.

3. Roles and Responsibilities

The following roles and responsibilities are anticipated for the construction of the Project. Contractor-specific roles will be confirmed prior to commencement of the relevant works.

Role	Organisation	Key person/Position	Primary Responsibility & Hold Point Authority
Developer and delivery			
Developer / Principal	Te Kowhai East Limited Partnership	GD Jones / Nathan York	Overall Project sponsorship and regulatory governance.
Delivery Lead	Te Kowhai East Limited Partnership	Jon Crooks	Overall Project Delivery oversight
Construction			
Project Manager	[To be appointed]		
Site Manager	[To be appointed]		
Quantity Surveyor/Contract administrator	[To be appointed]		
Independent Certifier/Engineer to the Contract	[To be appointed]		
Site Engineer	[Contractor to nominate]		
Specialists			
Civil Engineer (lead)	Maven Associates	Ryan Wyllie	Engineering design
Geotechnical Engineer	CMW Geosciences	Kori Lentfer / Andre Shine	Geotechnical investigation (GIR HAM2025-0116AF Rev 0), compaction oversight (NZS 4431:2022), subgrade testing, and Earthworks Completion Reporting.
Hydrogeologist	WGA	Clare Houlbrooke	Hydrogeological monitoring and implementation of any groundwater-related mitigation requirements
Ecological Specialist (Fish, Lizard, Bat)	Ecological Solutions Limited	Chad Croft / Phil Taylor / Richard Montgomerie	Implementation and oversight of the relevant ecological management plans, including fauna surveys, salvage/relocation, vegetation clearance protocols, ecological hold points and monitoring.
Planner	BBO	Emily Patterson	Resource consent compliance advice, planning support and, where required, management of consent changes or approvals.
Environmental Representative (ER)	Maven Associates	Ryan Wyllie	Environmental compliance oversight, auditing and coordination of environmental hold points; incident reporting; and authority to require works to cease where necessary to address an actual or potential environmental non-compliance.

4. Scope of Works

The principle construction activities associated with the Te Kowhai East development include:

- **Site Establishment & ESC:** Establishment of construction compounds and access points, together with clean and dirty water diversions, stabilised construction entrances, sediment retention devices and other erosion and sediment controls required by the EWMP and stage-specific ESCPs.
- **Bulk Earthworks:** Staged stripping, cut-to-fill earthworks, ground improvement, temporary stockpiling, topsoil management and associated earthworks across the development area, generally in accordance with the EWMP and geotechnical requirements.
- **Stream Modification & Instream Structures:** Staged reconstruction and realignment of the Mangaheka Stream, construction of associated flood conveyance channels, culverts and bridge/culvert crossings, together with temporary diversions and other works required to facilitate construction, in accordance with the STMP.
- **Stormwater & Drainage Infrastructure:** Construction of stormwater devices (wetlands and raingardens), gravity reticulated stormwater and wastewater networks, water reservoir, wastewater pump station, rising main, and potable water/power/telecom utilities.
- **Transport Network & Retaining Structures:** Construction of internal road network, State Highway 39 roundabout, Onion Road intersection and road upgrades, active-mode infrastructure north-western access embankment (up to 4.0 m fill), and northern boundary retaining walls (up to 6.0 m height).

5. Hours of Work

5.1 Operational Hours

Construction activities shall comply with NZS 6803:1999 Acoustics – Construction Noise and applicable consent conditions.

The standard hours of work are summarised below for convenience. Where there is any inconsistency between this section, the CNVMP and the consent conditions, the consent conditions and CNVMP prevail.

Monday to Friday

- **6:30 am – 7:30 am:** Arrival of personnel, site preparation, deliveries, plant checks and other low-noise activities.
- **7:30 am – 6:00 pm:** General construction activities.
- **6:00 pm – 8:00 pm:** Limited construction activities where noise remains within the applicable consent limits. High-noise activities (e.g. rock breaking, piling or hammering) will not normally be undertaken during this period.

Saturday

- **7:30 am – 6:00 pm:** General construction activities.

Sunday and Public Holidays

- No routine construction works are proposed.
- Emergency works or activities specifically authorised under the Resource Consent may be undertaken where necessary.

Works outside the standard construction hours may only occur where permitted by the applicable consent conditions and managed in accordance with the CNVMP.5.2 Seasonal Constraints

Construction activities are also subject to seasonal or timing constraints established by the specialist management plans and consent conditions. Key constraints are summarised below.

Activity / Domain	Operational Window / Constraint	Governing Plan / Requirement
Earthworks Season & Winter Shutdown	Major bulk earthworks are generally to be undertaken during the earthworks season, with stabilisation requirements applying prior to winter shutdown, in accordance with the EWMP and applicable consent conditions.	EWMP Section 6.7 (Table 6.1)
Native Fish Spawning Restriction Window	Instream works and channel modification are subject to seasonal fish-spawning constraints and any specialist ecological clearance requirements in the STMP and FMP.	STMP Section 6.1 (HP-EW-05) & FMP
Bat Acoustic / Felling Window	Vegetation clearance within potential bat roost habitat is subject to the seasonal and pre-clearance requirements of the BMP.	BMP
Black Mudfish Habitat Pre- conditioning	Created black mudfish compensation habitat must be excavated, planted, and watered at least 6 months prior to fish translocation.	BMHCP Section 8

6. Sediment and Erosion Control

Erosion and sediment control measures will be implemented in accordance with the Earthworks Management Plan (EWMP), the applicable consent conditions, and certified stage-specific Erosion and Sediment Control Plans (ESCPs). Key control measures are likely to include:

- **Clean Water Management:** Clean water diversion bunds constructed on the high side of active catchments to bypass clean runoff around works directly to natural receiving channels or permanent conveyance channels.
- **Dirty Water Management: Catchment** runoff from exposed earthworks directed via dirty water diversion bunds to designated Sediment Retention Ponds (SRPs 1 to 9) or Decanting Earth Bunds (DEBs).
- **Sediment Treatment Device:** Sized at 3% of contributing catchment area with decanting T-bars, forebays, emergency spillways, and baffle systems. SRP operational readiness is a mandatory pre-condition for each phase per EWMP.
- **Perimeter Protection:** Silt fences deployed along all down-slope perimeters where runoff cannot reach SRPs. Inspected weekly and desilted when sediment accumulation reaches 50% of fabric height.
- **Progressive Stabilisation Timetable:**
 - Final grade achieved: Topsoil and grass seeding within 5 working days.
 - Temporary pause (>14 days): Hydroseeding or straw mulching within 7 calendar days.
 - Exposed >60 days: Polymer binder or erosion matting within 10 working days.
 - Winter Shutdown: 100% of exposed site stabilised with minimum 80% vegetation cover before 30 April.

6.1 Chemical Treatment and Flocculation Management

Chemical treatment of sediment retention devices and dewatering discharges will be undertaken where required in accordance with the EWMP, stage-specific ESCPs, applicable consent conditions and project-specific chemical treatment procedures.

Any chemical treatment system will be based on appropriate soil and water testing and will specify the treatment reagent, dosing methodology, monitoring requirements, operational triggers and contingency measures necessary to achieve the required discharge performance.

7. Environmental and Ecological Controls

The purpose of this section is to set out the site-wide environmental controls and ecological integration requirements that apply during construction. Detailed ecological mitigation, capture and relocation methods, and habitat enhancement requirements are governed by the standalone technical management plans listed below.

If there is any inconsistency between this CMP and a standalone ecological or environmental management plan, the standalone plan prevails for its relevant technical matter.

7.1 Ecological Hold Points and Pre-Clearance

Before vegetation clearance, earthworks or stream works commence in any stage, the ecological hold points applicable to that stage shall be completed in accordance with the relevant ecological management plans and consent conditions.

- **No-Go Zones:** High-value ecological areas, including the retained Mangaheka Stream corridor and designated wetland buffers, must be physically delineated using robust, high-visibility fencing before heavy machinery enters the area.
- **Pre-Clearance Surveys:** The Project Ecologist must complete all required surveys for bats, lizards, and nesting birds in accordance with the relevant management plans.
- **Fish and Black Mudfish Salvage:** Instream works or drain dewatering must not commence until all required fish and black mudfish salvage operations are completed and certified by the Project Ecologist.

7.2 Site-Wide Environmental Rules

All site personnel, including subcontractors, must comply with the following standard environmental controls:

- **Biosecurity — Check, Clean, Dry:** Machinery, equipment, and footwear used in or near streams and drains must follow Ministry for Primary Industries Check, Clean, Dry protocols before arriving on site and when moving between distinct catchments.
- **Spill Response:** Spill kits suitable for the chemicals and fuels used on site must be maintained in all active work areas and machinery. Spills must be contained immediately, and the Site Manager and ER must be notified in accordance with incident-response procedures.

7.3 Incident Management and Escalation

An environmental incident includes any event that results in an unauthorised discharge to the environment, unexpected discovery of contaminated material, or unauthorised disturbance of protected fauna or flora, including a fish kill.

- **Immediate Action:** Stop works in the affected area and apply containment measures.
- **Notification:** The Site Manager must notify the ER immediately.
- **Regulatory Reporting:** The ER is responsible for notifying Waikato Regional Council and/or Waikato District Council, as applicable, within 24 hours of any significant environmental incident, in accordance with Resource Consent conditions.

7.4 Register of Specialist Environmental and Ecological Plans

Contractors must carry out works in accordance with the following standalone technical documents:

- **Stream modification and works:** *Stream Works Management Plan (STMP)*, covering temporary diversions, stream shaping, and riparian stabilisation.
- **Native fish and eels:** *Fish Management Plan (FMP)*, covering capture, salvage, and relocation protocols.
- **Black mudfish:** *Black Mudfish Habitat Creation Plan (BMHCP)*, covering mudfish handling and compensation habitat requirements.
- **Bats and lizards:** *Bat Management Plan* and *Lizard Management Plan*, or equivalent EclA sections, covering felling protocols and relocation requirements.

8. Site Establishment

8.1 Pre-Construction Checklist

Prior to commencement of each relevant construction stage, the Principal Contractor shall confirm that the applicable pre-commencement requirements have been satisfied in accordance with the consent conditions and relevant management plans.

Action	Status	Comments
Applicable CMP approved		
Environmental Representative appointed/notified		
Tangata Whenua notified and cultural protocols completed (where required) per Section 16		
NZTA road opening consent and TMP approved for SH 39 access works		
Ecological pre-clearance requirements completed		
Fish Salvage and relocation plan confirmed		
Regulatory authorities notified of construction commencement		
STMP certified by WRC at least 20 working days before construction commencement		
CTMP finalised and certified prior to construction commencement		
Erosion and Sediment Controls installed and signed off		
Stabilised entrances established		
Security fencing and project signage installed		
Adjacent landowners and stakeholders notified		
Pre-start meeting completed with key project personnel		

8.2 Site Layout and Establishment

The contractor shall provide a site establishment plan as part of the CMP showing:

- **Site Compound & Facilities:** Site offices, ablution blocks, equipment storage, and parking areas shall be established within designated site compound boundaries. All temporary facilities must be located outside designated overland flow paths, flood hazard zones, and ecological setbacks.
- **Site Access & Fencing:** Secure perimeter fencing, safety/warning signage, hazard boards and controlled gate access shall be installed. Heavy vehicle site access via Te Kowhai Road and Mathers Road must be established and operated in strict accordance with the approved SSTMP.
- **Stabilised Construction Entrances:** All vehicle ingress and egress points must be fitted with aggregate stabilised construction entrances (or wheel wash facilities) to prevent sediment tracking onto public roads.
- **Hazardous Substances & Refuelling Area:** Storage of fuels, oils, and hazardous chemicals must be located within designated, bunded areas. Prior to establishment, subject area location and required setback distance from any stream or stormwater network are to be confirmed and certified by the Environmental Representative.

9. Earthworks

All earthmoving, stripping, cut-to-fill operations, compaction, and general earthworks across the Te Kowhai East Industrial development must be executed in strict accordance with the standalone EWMP.

9.1 Geotechnical Basis

Earthworks shall be undertaken in accordance with the recommendations of the project Geotechnical Investigation Report, the project-specific earthworks specification and applicable engineering standards, under the supervision of the Geotechnical Engineer.

9.2 Earthworks Methodology

Earthworks will be undertaken progressively in accordance with the staging set out in the EWMP. The methodology will include staged stripping, cut-to-fill operations, temporary stockpiling, ground improvement and progressive stabilisation, with phase-specific erosion and sediment controls and ecological pre-clearance requirements implemented before works commence in each stage.

Detailed earthworks quantities, stockpile requirements, staging boundaries and construction methodologies are set out in the EWMP and stage-specific construction documentation.

9.3 Groundwater and Construction Dewatering

Construction dewatering and localised groundwater management shall be undertaken in accordance with the EWMP, the project hydrogeological assessment and applicable consent conditions.

Dewatering discharges shall be appropriately managed and treated prior to discharge where required. Groundwater levels and any associated settlement risks shall be monitored where necessary, having regard to the nature and location of the excavation and the requirements of the Geotechnical Engineer and Hydrogeologist.

10. Civil Infrastructure

This section outlines the specific civil works scopes, commissioning requirements, and operational controls for key infrastructure components across the development.

10.1 Stormwater Devices Commissioning Requirements

Permanent stormwater management devices may be utilised for temporary erosion and sediment control purposes during construction where provided for by the approved design and EWMP/ESCPs.

Prior to commissioning as permanent stormwater devices, they shall be de-silted, completed and inspected in accordance with the approved stormwater design, relevant engineering requirements and applicable consent conditions. Conversion from temporary sediment-control use to permanent stormwater operation shall occur only once the contributing catchment has been appropriately stabilised, and the Civil Engineer confirms that the device is suitable for commissioning.

10.2 Reticulated Drainage Infrastructure

Stormwater and wastewater reticulation will be installed progressively as each development stage is constructed. Installation shall be undertaken in accordance with the approved engineering design, project specifications and applicable Council/IAWAI requirements.

Stage-specific construction methodologies shall address excavation and trench support, groundwater management, geotechnical inspection, pipe installation, testing, backfilling and reinstatement as required

10.3 Utility Installation Sequencing

Utility installation shall be coordinated with earthworks, drainage and road construction to minimise rework and avoid unnecessary disturbance of completed infrastructure.

The detailed sequence for installation, testing, acceptance and reinstatement of utilities shall be established through the construction programme and approved engineering plans.

10.4 Pavement and Road Reserves

Final pavement designs will be confirmed at detailed engineering plan approval in accordance with the Regional Infrastructure Technical Specification (RITS) and relevant Council standards for each road class.

Pavement design will consider the anticipated traffic loading and site subgrade conditions. Subgrade strength will be confirmed by appropriate field testing, including CBR testing, with any required subgrade improvement determined at detailed design.

Road type	Preliminary Pavement Approach
Industrial Collector Road	Sealed flexible pavement designed to RITS / Council standards, with the pavement structure confirmed based on traffic loading and subgrade conditions.
Industrial Local Road	Sealed flexible pavement designed to RITS / Council standards, with the pavement structure confirmed based on local industrial traffic loading and subgrade conditions.
Shared paths and footpaths	Pavement and surfacing to RITS / Council standards, with final thickness and surfacing confirmed at detailed design.

Any required subgrade improvement will be confirmed following site testing at detailed design.

10.5 Water Supply and Wastewater Infrastructure

Water supply and wastewater infrastructure will be constructed progressively to service the staged development in accordance with the approved servicing strategy, detailed engineering design, infrastructure-provider requirements and applicable consent conditions.

Where interim servicing arrangements are required prior to implementation of the ultimate servicing solution, the relevant connection works and transition arrangements will be addressed through detailed design, infrastructure-provider approvals and the applicable stage-specific construction documentation.

Construction methodologies for reservoirs, pump stations, rising mains, network connections and other major three-waters infrastructure will be developed prior to undertaking those works.

10.6 Construction Traffic and Haulage Operations

Construction traffic, external haulage, worker parking and public-road interfaces shall be managed in accordance with the Construction Traffic Management Plan requirements in Section 18, the ITA, applicable consent conditions and any required Site-Specific Traffic Management Plans.

11. Noise and Vibration Management

Construction noise and vibration shall be managed in accordance with the Construction Noise and Vibration Management Plan (CNVMP), applicable consent conditions and NZS 6803:1999 Acoustics – Construction Noise.

The CNVMP sets out the applicable construction hours, noise and vibration limits, mitigation measures, monitoring requirements, communication procedures and response requirements for construction activities.

Where there is any inconsistency between this CMP and the CNVMP in relation to construction noise or vibration, the CNVMP prevails.

12. Dust and Air Quality Management

Dust and air-quality effects associated with construction shall be managed to avoid dust nuisance and minimise off-site effects, particularly at nearby residential properties and public roads.

Dust-control measures shall be implemented as necessary having regard to weather conditions, exposed surface areas, construction traffic and the nature of the works. Measures may include:

- water application to haul roads and exposed surfaces;
- stabilisation of inactive or completed earthworks areas;
- management of vehicle speeds on unsealed surfaces;
- wheel-wash or equivalent controls at site exits; and
- modification or temporary cessation of dust-generating activities where required.

The Environmental Representative shall monitor dust conditions during construction and require additional controls where necessary to maintain compliance with the applicable consent conditions and avoid objectionable or offensive dust beyond the site boundary.

13. Contamination Management

Contaminated land and unexpected contamination encountered during construction shall be managed in accordance with the applicable contaminated land assessment, consent conditions and any site-specific contamination management plan required for the works.

If material is encountered that exhibits unusual odour, staining, discolouration or other characteristics indicative of potential contamination, works in the affected area shall cease and the area shall be secured pending assessment by a suitably qualified contaminated land specialist.

Any affected material shall be managed, tested, removed or remediated in accordance with the specialist's recommendations, applicable consent conditions and relevant disposal requirements.

14. Health and Safety

The Contractor(s) will prepare a comprehensive Site-Specific Health and Safety Plan which:

- Incorporates the relevant requirements of the key client and stakeholder Health and Safety (H&S) plans;
- Incorporates the Contractor's own H&S system, and applies to all subcontractors working on the Project; and
- Is tailored to suit the specific conditions and risks appropriate to the Te Kowhai East (TKE) Project.

The objective is to have a single, project-specific H&S Plan that applies to the entire site, administered and managed by the Contractor who is in control of the site. The overall objective of the H&S Plan is to enable a safe working environment and avoid harm for all parties involved in the Project, as well as the public.

14.1 Statutory Compliance

The H&S Plan will be prepared, maintained, and managed in accordance with the Health and Safety at Work Act 2015 (HSWA) and all other relevant health and safety legislation, regulations, and industry codes of practice.

The HSWA requires employers and workers to do all that is reasonably practicable to ensure the health and safety of staff and others while 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 (PPE) is always worn; and
- All visitors to the site are always kept safe.

14.2 Anticipated Project Hazards

The list below identifies project hazards anticipated to apply to the Project site. Any additional hazards identified during the construction lifecycle will be incorporated into the live site hazard register and managed accordingly:

- Construction plant and heavy machinery
- Open excavations and trenching
- Demolition activities
- Heavy trucks and other road-going commercial and passenger vehicles
- Underground and overhead utility services
- Earthworks, cut-and-fill operations
- Contamination and hazardous materials handling
- Explosive or flammable materials
- Noise and vibration
- Dust, smoke, and fumes
- Craneage and lifting operations
- Slips, trips, and falls
- Working at heights
- Working over water (adjacent to/within the Mangaheka Stream corridor)
- Confined spaces; and
- Public driving through or past the site interfaces.

15. Quality Control

15.1 Quality Management and Testing

Quality Management Plans will be prepared by Contractor detailing how works will be constructed, monitored, tested, inspected and approved in accordance with the drawings, specifications, manufacturer's requirements and any specific consent conditions.

15.2 Geotechnical Certification and Compaction Testing

- **Compaction Standards:** Earthfill construction and compaction testing shall comply with NZS 4431:2022 (*Earthfill for Residential Development*), executed under the direct supervision of a Chartered Professional Geotechnical Engineer (CPEng).
- **Material Traceability:** Material origins, volumes, and placement areas shall be tracked via GPS or site logs to support verification records.
- **Earthworks Completion Report:** Upon completion of earthworks (or stage-specific increments), the Geotechnical Engineer shall prepare and issue an Earthworks Completion Report certifying the adequacy of works, confirming bearing strengths for future foundation design, and providing all associated compaction test results.

15.3 As-Built Documentation

As-built surveys and documentation for all constructed infrastructure—including stormwater assets, three-waters networks, roads, and stream modification channels—shall be certified by a Licensed Cadastral Surveyor or qualified engineer and submitted to the consenting authority within the timeframe required by the applicable approval or consent condition.

16. Cultural Engagement and Communications

This section sets out the cultural engagement, notification, accidental discovery, reporting, and complaints requirements for construction works.

The Contractor shall include these requirements in the CMP and comply with any consent conditions or agreed requirements from mana whenua and the Tangata Whenua Working Group (TWWG) together with the recommendations of the Cultural Impact Assessment (CIA) and any Cultural Management Plan prepared for the Project.

16.1 Mana Whenua Engagement

The Mangaheka Stream, associated drains, and ecological areas have cultural values identified in the Cultural CIA. Mana whenua engagement shall be maintained throughout construction, particularly in relation to works that may affect the whenua, waterways, ecological areas and other cultural values identified in the CIA.

- The CIA recognises the mana whenua interests and enduring cultural relationships of Ngāti Reko, Ngāti Māhanga, Ngāti Wairere, Ngāti Hauā, Ngāti Tamainupō and Ngāti Koroki Kahukura.
- Engagement pathway: The TWWG shall be used as the main communication pathway unless another process is agreed.

The Delivery Lead shall ensure mana whenua are notified before key works that may affect cultural values and that ongoing engagement is maintained throughout the construction programme.

16.2 Pre-Commencement Cultural Requirements

Before each stage starts, the Contractor shall confirm that the required cultural notifications and hold points have been completed.

- Karakia whakawaatea: Notification: Mana whenua and the TWWG shall be notified before major earthworks, stream works, stream diversions, fish salvage, and vegetation clearance in sensitive areas. Prior to the commencement of works, mana whenua shall be provided with the opportunity to undertake karakia whakawaatea in accordance with the CIA and agreed engagement arrangements.
- Notification: Mana whenua and the TWWG shall be notified before relevant major earthworks, stream works, stream diversions, fish salvage and vegetation clearance where required by the CIA, relevant management plans or consent conditions.
- Cultural clearance: Any required cultural clearance or cultural monitor attendance shall be recorded before works start in the relevant area.
- Karakia and monitoring: Mana whenua shall be given the opportunity to carry out karakia or cultural monitoring at agreed hold points where required or agreed.
- Plan alignment: Works shall be completed in accordance with the CIA, any Cultural Management Plan, Stream Works Management Plan, relevant ecological management plans, and relevant consent conditions.

16.3 Accidental Discovery Protocol

An Accidental Discovery Protocol (ADP) shall apply to all earthworks and development activities undertaken as part of the Project. If kōiwi tangata, taonga, archaeological material, cultural material or suspected archaeological features are discovered during works, the requirements of the ADP and any applicable archaeological authority shall apply.

1. Stop works in the immediate area.
2. Secure the area to prevent further disturbance.
3. Notify the Site Manager, Delivery Lead, ER, mana whenua representatives, and Heritage New Zealand Pouhere Taonga as required by the ADP and applicable archaeological authority.
4. Do not restart works in the area until the requirements of the ADP and applicable archaeological authority have been satisfied.
5. Record the discovery, notifications, actions taken, and confirmation that works may recommence.

17 Communications, Reporting and Complaints

This section sets out the general communication, reporting and complaints requirements that apply during construction of the Project.

The Contractor shall maintain appropriate records of construction activities, notifications, inspections, incidents, complaints and close-out actions. Records shall be made available to the Delivery Lead, Environmental Representative, relevant regulatory authorities and other parties where required by the applicable consent conditions or management plans.

17.1 Communications and Reporting

The Contractor shall keep records of notifications, inspections, incidents, complaints, and close-out actions. Records shall be made available to the Delivery Lead, ER, mana whenua, TWWG, or council where required.

Record	Content	Timing	Owner / recipient
Pre-start notice	Stage scope, start date, duration, haul routes, ESC status, and hold points.	Before each stage starts, as required by the applicable consent condition.	Contractor / Delivery Lead / TWWG / council.
Daily log	Inspections, ESC checks, incidents, weather, actions, and any cultural or ecological observations.	Maintained throughout construction.	Contractor / ER.
Incident report	Event, cause, action taken, notifications, corrective actions, and close-out.	Within the timeframe required by the applicable consent condition or management plan.	Contractor / ER / Delivery Lead / council.
Stage close-out	As-builts, ESC status, stormwater status, cultural hold point close-out, and open actions.	At stage completion.	Contractor / Delivery Lead.

17.2 Complaints

The Contractor shall keep a Complaints Register for construction complaints. This includes complaints about traffic, road condition, dust, noise, vibration, ecological matters, and cultural matters.

The complaints register shall record:

- the date and time the complaint was received;
- the nature and location of the complaint;
- the investigation undertaken;
- any response or corrective action;
- any notifications made; and
- the date the matter was closed out.

Complaints shall be investigated and responded to in accordance with the applicable consent conditions and relevant management plans. Matters involving potential non-compliance, environmental effects, safety risks or cultural values shall be escalated to the Delivery Lead and Environmental Representative, and to other relevant parties where required.

18. Construction Traffic Management Plan (CTMP)

Construction traffic associated with earthworks, civil works and infrastructure construction shall be managed in accordance with the Integrated Transport Assessment (ITA), applicable consent conditions and a Construction Traffic Management Plan (CTMP) prepared for the Project.

The CTMP shall establish the overarching requirements for management of construction traffic and public road interfaces. Site-Specific Traffic Management Plans (SSTMPs) shall be prepared where required for particular works or road interfaces and shall give effect to the CTMP and the requirements of the relevant road controlling authority.

REFERENCES

Document Title / Technical Reference	Author / Organisation	Version / Date	Relevance to CMP
Geotechnical Investigation Report (HAM2025-0116AF Rev 0)	CMW Geosciences	August 2026	Primary geotechnical baseline & material parameters (Section 9)
Hydrogeological Technical Memorandum (WGA212384-RP-HG-0007_D)	WGA	June 2026	Groundwater & dewatering assessment (Section 9)
Fish Management Plan (TKE-FMP-001 Draft v1)	Ecological Solutions Ltd	19 June 2026	Fish capture & salvage protocols (Section 7.1)
Black Mudfish Habitat Creation Plan (TKE-BMHCP-001)	Ecological Solutions Ltd	June 2026	Mudfish habitat compensation (Section 7.1)
Stream Works Management Plan (TKE-STMP-001)	Maven Associates	13 August 2026	Stream modification & instream works (Section 7.4)
Earthworks Management Plan (TKE-EWMP-001)	Maven Associates	13 August 2026	Earthworks phasing & ESC strategy (Section 6 & 9)
Cultural Impact Assessment (	Tangata Whenua Working Group	13 August 2026	Cultural values & mana whenua engagement (Section 16)
Integrated Transport Assessment (ITA)	CKL	July 2026	Traffic management & SH39 access (Sections 10.6 and 18)
WRC TR2009/02 Erosion & Sediment Control Guidelines	Waikato Regional Council	January 2009	Regional ESC design standard (Section 6)
NZS 4431:2022 Engineered fill construction for lightweight structures	Standards New Zealand	2022	Residential & industrial earthfill standard (Section 9)
NZS 6803:1999 Construction Noise Standard	Standards New Zealand	1999	Noise compliance limits (Sections 5.1 and 11)