Appendix O Draft Erosion and Sediment Control Plan

Fast Track Approvals Act Application

Foxton Solar Farm

Genesis Energy Limited

SLR Project No.: 810.V14848.00001

13 February 2026

Draft Erosion and Sediment Control Plan

FOR

Foxton Solar Farm

January 2026

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Appendices

1. Introduction

1.1. Purpose and scope

This draft Erosion and Sediment Control Plan (ESCP) has been prepared to support the resource consent application for the proposed Foxton Solar Farm development (the project).

The purpose of this draft ESCP is to demonstrate that earthworks associated with the project can be managed to minimise the risk of potential sediment discharges and subsequent adverse effects on the receiving environment. This draft ESCP details principles and practices of erosion and sediment control management that will be implemented during construction along with indicative construction staging and the control devices that may be required across the site.

This ESCP has been prepared based on and incorporating the specific principles and practices contained within the document titled *"Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region dated February 2021"*, being the guidelines adopted by Horizons Regional Council.

It is expected that the resource consent will require the appointed EPC contractor to prepare a final ESCP which will detail design specifications of erosion and sediment control devices aligned with the EPC contractor's detailed site design, construction methodology, and works programme.

1.2. Site description

The proposed solar farm is located on a 436ha site north of Foxton shown in yellow on Figure 1. The project site excludes several areas of land to be retained by the existing landowners.

The site is split across two land holdings:

- The larger block is part of a working dairy farm and contains extensive irrigation infrastructure. The Transpower operated National Grid runs diagonally across the middle of the property. Two existing dwellings, milking shed, effluent pond, and other farm buildings are located outside of the project footprint and lease area.
- The smaller southeastern block is currently used for overnighting stock during transport. A number of existing farm buildings are location outside of the project footprint and lease area.

The site is generally flat, having been levelled for farming activities. Small, isolated remnant dunes are present in places along the eastern, western, and southern boundaries. A series of unfenced farm drains run through the site. Vegetation is primarily exotic pasture with infrequent shelterbelts and scrub along the site boundary. Wetland species have established in areas around drains and topographical depressions and a number of these areas meet the definition of natural inland wetland. Drains and wetland areas are shown on Figures 2 and 3.

The surrounding environment comprises a mix of pastoral farming and other agricultural activities alongside smaller lifestyle blocks with Motuiti Pā and urupā located to the west of the site.

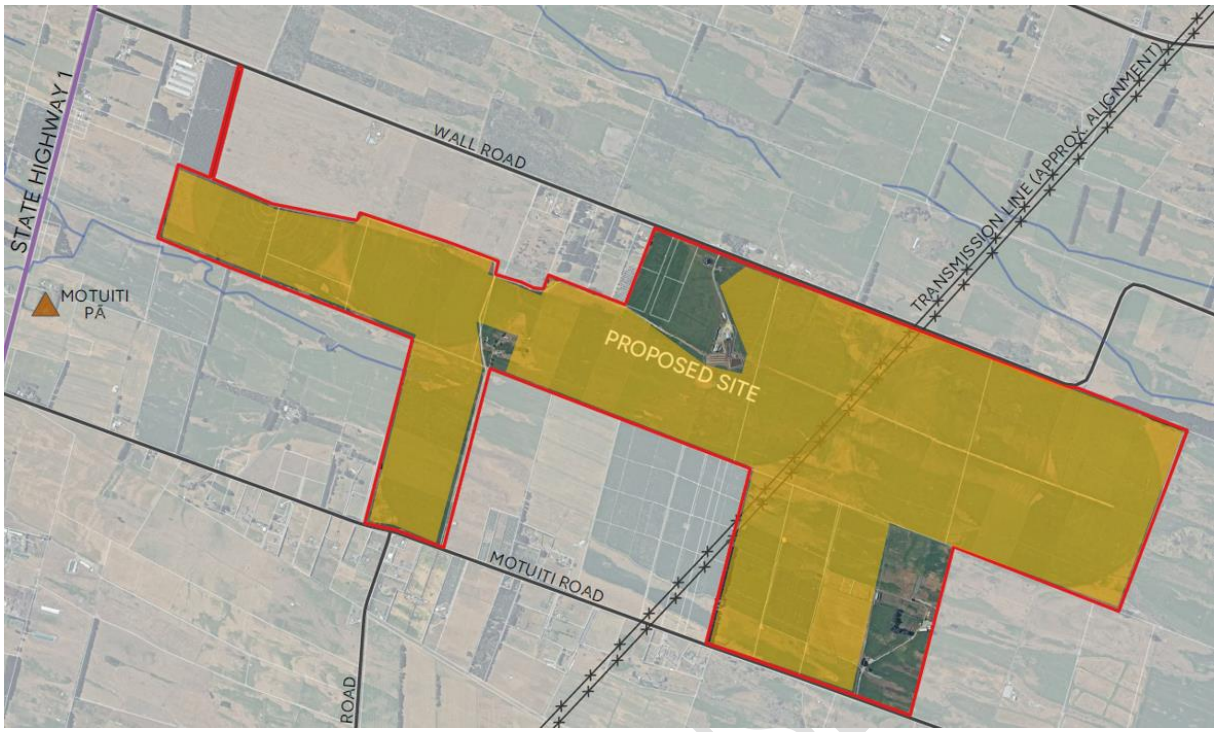


Figure 1: Project site (property outline red, approximate lease area yellow)

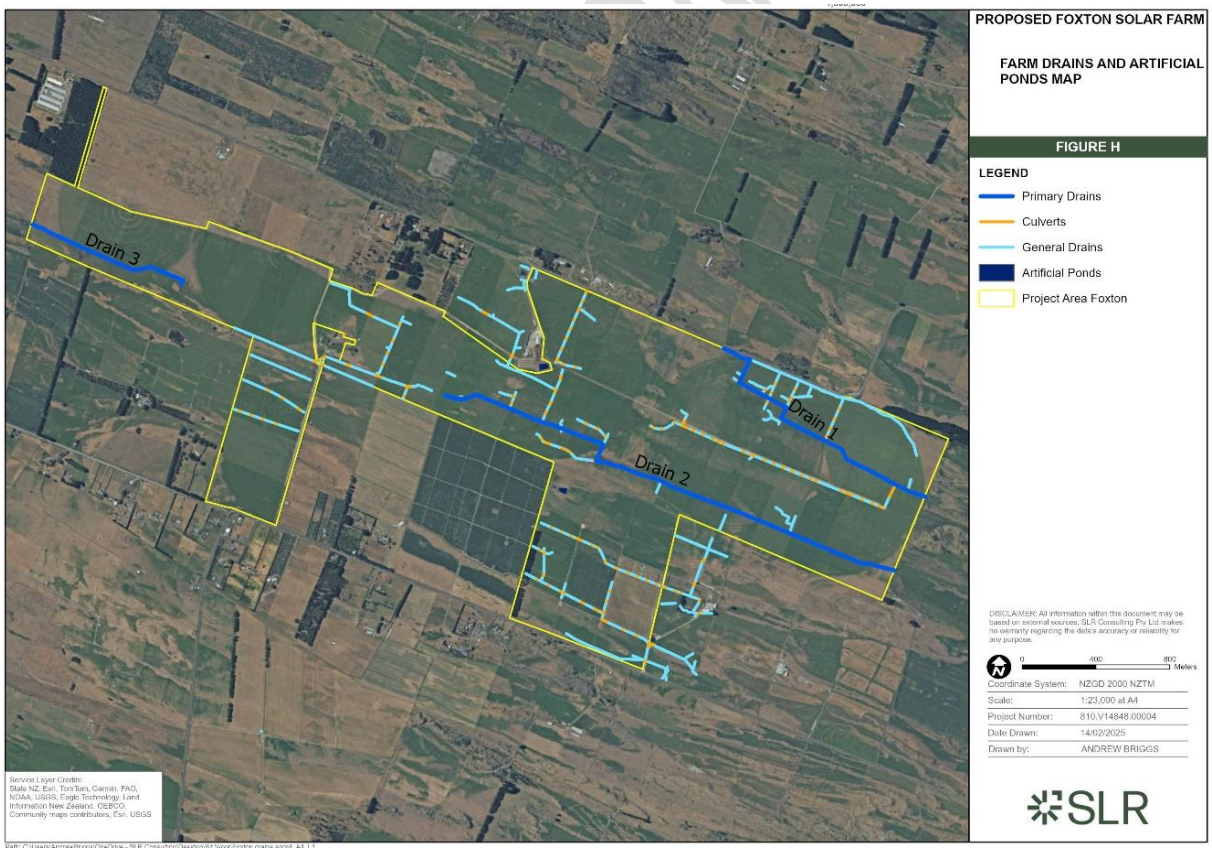


Figure 2: Farm drains

Figure 3: Wetlands

1.3. Project overview

The project includes the installation of a 180 MWac solar facility that will generate approximately 346 GWh of renewable electricity per year. At a high level, the solar farm will consist of:

- approximately 300,000 monocrystalline bi-facial solar panels installed on arrays supported by piles
- ancillary infrastructure including
  - inverter and transformer stations
  - underground cabling
  - a operations and maintenance building and control building
  - internal access tracks and parking, loading and manoeuvring areas
  - boundary fencing and security
- a new substation and a new connection to the National Grid
- provision for a 100MW/200MWh Battery Energy Storage System (BESS)
- landscape and wetland restoration planting

A general layout of the site is shown in Figure 4.

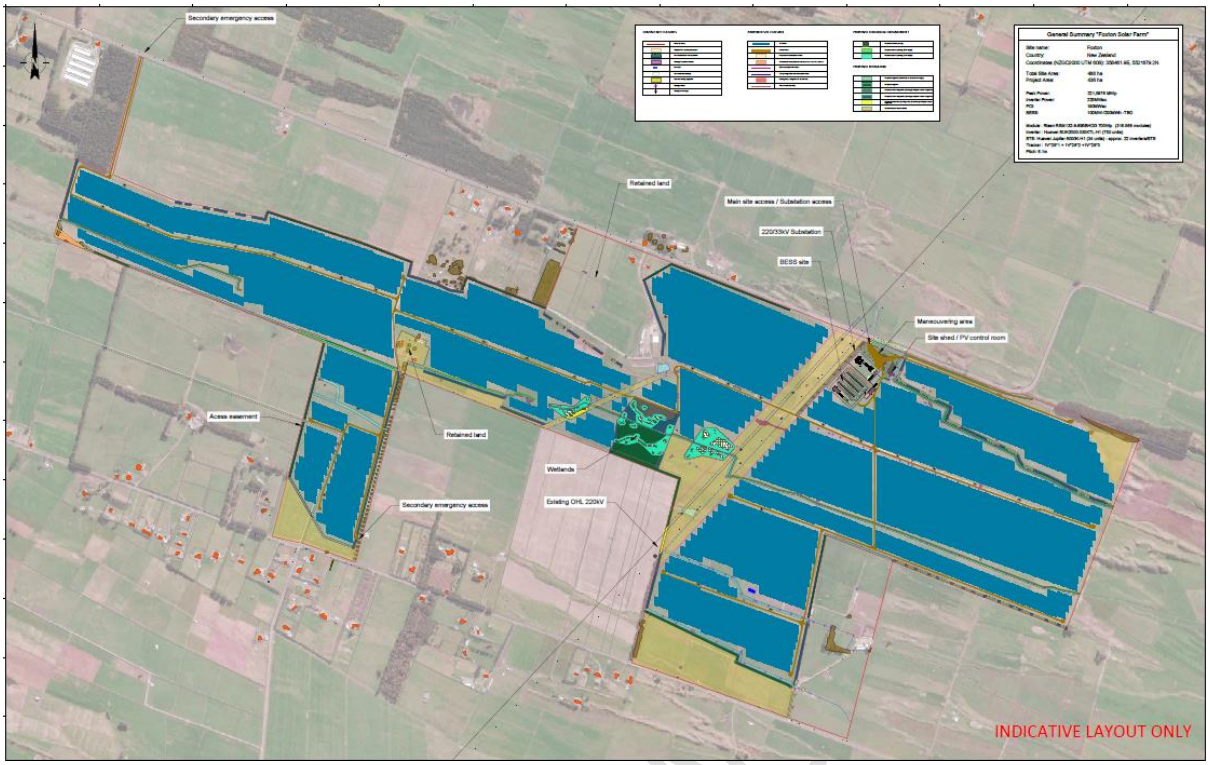


Figure 4: Concept site plan

1.4. Resource consent requirements

[To be inserted once consent received]

1.5. Roles and responsibilities

[To be inserted once contractor engaged]

Role	Key responsibilities	Contract details
Project Manager		
Construction Manager		
Environmental Manager		
Horizons Region Council compliance		

2. Proposed earthworks

2.1. Summary of earthworks

Much of the site is already flat, having been levelled to allow for operation of pivot irrigation; therefore, site-wide bulk earthworks are not required for the project.

The primary construction activity for development of a solar farm is piling and installation of the solar arrays on the piles. There is limited soil disturbance associated with these activities.

Earthworks will be required for linear infrastructure including the creation and upgrade of access tracks (and parking, loading, and manoeuvring areas) and trenching of cabling between solar panel arrays as well as in discrete areas for construction of foundation pads (for inverter and transformer units and O&M building) and the platform for the substation and BESS area.

Table 1: Estimated earthworks area and volume

Activity	Approx. area	Approx. volume
Access tracks ~14km at 4-6m wide, cut ~0.35m deep, place ~0.2m compacted soil then 0.15m compacted aggregate	70,000m^2	28,000m^3
Cable trenches ~50km, 1.2m deep, 0.3-2m wide depending on number of circuits required, backfilled with 0.4m thermal sand then excavated soil for remaining depth	60,000m^2	72,000m^3
Inverters & STS units ~40 20ft shipping container size units on concrete foundations (if central inverters used), a smaller number of STS units if string inverters used	1,000m^2	400m^3
Substation Flat hard stand area of ~11,000m^2 Excavate ~0.4m, backfill with engineered fill to ~0.3m above existing ground level	11,000m^2	7,700m^3
BESS Flat hardstand area of ~ 17,500m^2 Excavate ~0.4m, backfill with engineered fill to ~0.3m above existing ground level	17,500m^2	12,250m^3
Contingency and minor works 10% contingency allowance for changes during detailed design and minor works including parking and manoeuvring areas, ancillary buildings, and	14,000m^2	9,000m^3

small areas of cut/fill (including for site access, landscaping, and fencing)		
Total (rounded)	174,000m^2	129,000m^3

2.2. Construction methodology

A detailed construction methodology will be developed by the appointed contractor to align with their constriction programme and detailed design. At a high level, construction activities are expected to align with the following rough sequence, although some activities are likely to occur in parallel:

Site establishment / enabling works

- Construct new site accesses and amendments to existing site access to meet stabilised entrance requirements
- Establish construction laydown and storage areas
- Establish construction site office and associated facilities
- Install perimeter fencing and security
- Install erosion and sediment controls devices
- Remove / disestablish existing site infrastructure including removal of pivot irrigation, troughs, water lines, and internal fencing.

Establish access tracks

- Upgrade existing farm tracks (where these align with permanent access ways)
- Construct new access tracks: remove of topsoil, place of structural fill (where required), and place of metal/aggregate surfacing

Main works

- Install solar panel arrays: Drive piles, install frames and internal wiring, install solar panels
- Install inverter stations: Establish foundation pads and place inverter stations
- Complete cabling: Excavate trenches, place thermal bedding, lay cables, place thermal cover, backfill.
- Construction O&M buildings: Establish foundation pad / hardstand area, install building/s
- Construct substation: Establish foundation pad / hardstand area, install switch gear, transformer, and substation cabinetry
- Construct BESS hardstand: Establish foundation pad / hardstand area
- Install BESS infrastructure (TBC)

Solar farm commissioning

- Complete electric commissioning activities

Landscaping and revegetation

- Complete landscape planting and wetland restoration area planting

- Complete any remaining fencing
- Revegetate any remaining exposed areas

Site dis-establishment

- Remove any remaining erosion and sediment controls
- Remove any temporary construction buildings and laydown areas

Construction is expected to take 18-24 months from site establishment to commissioning, with the majority of earthworks completed within 12 months.

2.3. Construction programme

[Expected dates for the establishment of erosion and sediment control measures, commencement and conclusion of earthworks, and decommissioning of erosion and sediment control measures to be inserted]

3. Principles of erosion and sediment control

The key purpose of erosion and sediment control management is to undertake land disturbing activities in a way that reduces the likelihood of erosion of exposed soil surfaces and to treat sediment laden water prior to discharge from the site to minimise potential effects on the receiving environment.

The ten fundamental principles of erosion and sediment control are:

1. **Minimise disturbance**: Only disturb areas required for construction
2. **Stage construction**: Plan works to minimise the area disturbed at any one time
3. **Protect slopes**: Steep slopes are especially prone to erosion; disturbance should be avoided where possible and additional control measures may be required
4. **Protect receiving environments**: Map all streams, watercourses, and other sensitive areas
5. **Rapidly stabilise exposed areas**: Use progressive stabilisation are works are completed
6. **Install perimeter controls and diversions**: Keep 'clean' and 'dirty' water separate and divert clean runoff away from exposed areas
7. **Employ sediment retention devices**: Capture runoff to allow sediment to settle out and be retained on site
8. **Get trained and develop expertise**: Use a trained and experienced contractor
9. **Adjust the ESC Plan as needed**: Modify the plan as works progress and as the site changes throughout the project
10. **Assess and adjust your ESC measures**: Inspect, monitor, and maintain control measures, especially before and after storm events

3.1. Standards

Minimum standards for discharges from outlet structures:

- Visual clarity: 100mm, measured by Secchi disk or clarity tube, or alternative certified in writing by the Manawatū-Whanganui Regional Council.
- pH: 5.5 – 8.5 (from any device where flocculant is being used)

4. Erosion and sediment control measures

Soil disturbance at the site can be split into three general types:

1. Construction of hardstand areas, foundations, and access tracks: These areas can be considered stabilised as soon as they are complete
2. Trenching: Controls will be required to manage risk of sediment discharge from side cast material (prior to it being used to backfill the trench) and to manage dewatering of trenches following rain events
3. Disturbance associated with tracking of machinery for piling and fencing: Tracking across pasture will be minimised where practicable but is not avoidable. Pasture damage can be minimised by completing piling work during the drier summer months, if programme allows.

Proposed erosion and sediment control measures are shown on in **Appendix A**. The type and location of erosion and sediment control measures proposed in this draft ESCP are indicative only. In particular, the location of controls such as silt fences have not been shown at this stage. Actual control measures required will vary depending on the construction methodology and staging to be developed by the contractor and will be confirmed in an update ESCP to be submitted prior to construction.

Specific design details, including supporting calculations where relevant, will be included in the updated ESCP.

4.1. Performance criteria

Erosion and sediment controls will be designed, installed, and maintained in accordance with the document titled *"Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region dated February 2021"* (the Guidelines). Any deviation must be approved by Horizons Regional Council.

4.2. Stabilised entranceways, internal access tracks, and laydown areas

Several stabilised accessways will be constructed as depicted in **Appendix A**. The primary access will be a new access off Wall Road, near the transmission lines, with two secondary accesses off Motuiti Road and a new emergency access to be constructed further west on Wall Road.

The stabilised entranceways will be constructed in accordance with the Guidelines using a minimum 150mm of 50-150mm washed aggregate over a geotextile material.

Permanent internal access tracks will be constructed early in the construction sequence to provide access across the site. Tracks will range from 4-6m wide and be constructed to an all-weather metalled surface. Existing culvert crossings will be retained, where required.

Construction laydown, parking and loading areas will also be constructed with an all-weather metalled surface. The location of these areas will be confirmed prior to construction.

It is expected that access tracks and laydown areas will be constructed using a cut-and-cover method (where sections are completed to a stabilised standard within the day).

4.3. Stockpiles

Topsoil will be stockpiled for reuse where appropriate. All topsoil stockpiles will be placed within appropriate controls or stabilised.

Imported material (such as aggregate and structural fill for hard stand areas) and thermal sand (for trenches) will be stored in stockpiles until required. These materials are less likely to become a source of sediment but will be placed within appropriate controls or stabilised where required.

4.4. Minimising exposed areas and progressive stabilisation

The area of soil exposed at any one time will be minimised to that required to complete the project. Existing grass cover will be retained as far as practicable with machinery and other vehicles using the constructed access tracks to move around the site to reduce tracking over pasture.

A 'cut-and-cover' methodology may be employed for works such as access tracks, hard stand areas, fencing, and other small, isolated areas of disturbance.

The site will be progressively stabilised, generally by re-establishing pasture grass but temporary stabilisation with geofabrics, hay mulch, or soil stabilised may be employed where appropriate.

4.5. Clean water diversion

Diverting clean water minimises erosion of exposed areas and reduces the amount of flow to sediment retention devices, improving the efficiency of the device. The site is generally flat with existing farm drains acting to reduce the size of catchments reducing the need for formal clean water diversion channels. Clean water diversions may be installed upslope of larger areas of disturbance (such as the substation and BESS hardstands) if required to manage flows.

4.6. Silt fences and super silt fences

Due to the flat nature of the site and generally minimal disturbance required, silt fences and super silt fences are likely to be the primary control used to manage sheet flows, especially around drains. Any silt fences will be installed in accordance with the guidelines, including adequate returns.

4.7. Sediment retention ponds

It is expected that the majority of the site can be appropriately managed using silt fences and super silt fences without the need for sediment retention ponds.

If larger areas are expected to be exposed for long periods of time, use of sediment retention ponds (SRP) and decanting earth bunds (DEB) will be considered. SRPs and DEBs will be designed and constructed in accordance with the Guidelines with a minimum volume equivalent

to 2% of the contributing catchment, floating T-bar decants, and stabilised discharge points and emergency overflows.

If chemical flocculation of SRPs and DEBs is required, a Chemical Treatment Plan will be developed by the contractor.

4.8. Trench dewatering

Significant trenching is required for cables to connect the solar panel arrays, inverters, and substation. Trenches will range from 0.3-2m wide with a depth of around 1.2m and are likely to fill with rainwater following storm events. While this has the benefit of retaining potentially sediment-laden water, the trenches will need to be dewatered to enable installation of cabling and backfilling.

Clean water (>100mm clarity) may be discharged offsite directly.

Dirty water will be treated using a settlement tank, dewatering skip bin, dewatering bag, or turkey nest. Alternatively small volumes can be pumped directly to a silt fence or super silt fence or larger volumes to the forebay of a sediment retention pond (if any are in use on the site).

4.9. Dust control

While the project is not expected to have large areas of exposed soil that could give rise to dust, suitable water supply will be provided for dust control, where required.

4.10. Management of tracking onto local roads

If material is tracked onto adjacent local roads, this should be swept up as soon as practicable, subject to traffic management requirements. Sediment will be disposed of at an appropriate location within the site.

4.11. Additional controls for works within wetlands

Major infrastructure has been designed to be outside potential wetland areas; however, due to the nature of solar array technology and the scattered nature of these small wetland areas, it is not practicable to fully avoid these wetland areas. Piles for the solar panel arrays and trenching for cabling will occur in these areas.

Works within wetland areas will be undertaken in a manner that minimises disturbance of the wetland vegetation and soils:

- Tracking of machinery will be limited to the extent necessary to drive piles and/or excavate and backfill trenches with swamp mats used where appropriate
- Disturbed areas will be stabilised within 5 working days of backfilling or, where this is not practicable, as soon as reasonably practicable.

Wetland areas as shown on the plan in [appendix – updated wetland map to be inserted prior to construction in accordance with proposed conditions of consent].

5. Monitoring and maintenance

5.1. Routine monitoring

All erosion and sediment control measures will be inspected weekly. Specific activities should include:

- Site entrances: Top up with clean aggregate as required, clean out any structure being used to trap sediment, sweep road if required
- Silt/super silt fences: Check fences are toed in correctly, check for tears and other damage and repair or replace immediately, remove silt build up when bulges develop or deposition reaches 20% of fence height
- SRPs/DEBs: Check T-bar operational, check outlet and emergency spillway, clear out forebay and/or pond when 20% of capacity lost
- Stabilised areas: Check all stabilised areas have at least 80% grass cover or full aggregate / geofabric / other structural cover and top up as required

[Specific details and confirmed timing to be added prior to construction]

All weekly inspections will be recorded, including logging any maintenance required and verifying when maintenance is completed.

5.2. Heavy rainfall response and contingency measures

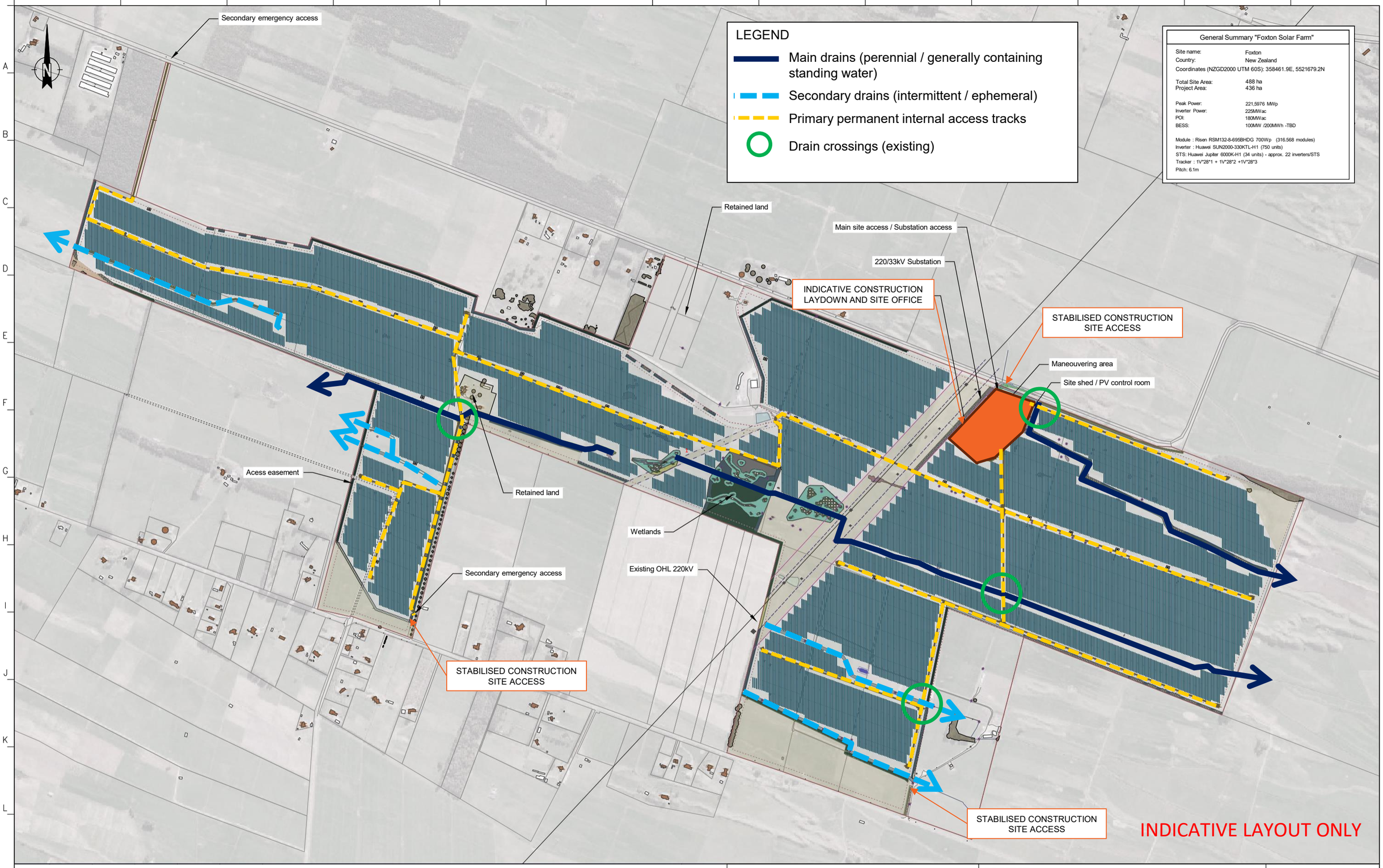
All erosion and sediment control measures will be inspected within 24 hours of a rainfall trigger event [trigger to be set in consultation with the council].

6. Plan updates

It is expected that the ESCP is reviewed and updated regularly as works progress. Major updates to the ESCP will require re-certification by Horizons Regional Council. Horizons Regional Council must be notified of minor updates (such as relocation of silt fences or additional areas of cut-and-cover works), but minor changes will not require re-certification of the ESCP.

Appendix A

Draft high-level ESCP layout



REV.	DATE	DRAWN	DESIGNED	CHECKED	APPROVED	DESCRIPTION	VERIFIED

PROJECT: FOXTON SOLAR FARM

A3

TITLE: INDICATIVE ESCP LAYOUT
LOCATION OF SPECIFIC CONTROLS TBC

REF. N°: –

N.° – 01.13 Rev.

SHEET – FOLLOW –