KIRKTON SOLAR PHOTOVOLTAIC (PV) AND ENERGY STORAGE FACILITY

FLOOD RISK ASSESSMENT

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Kirkton PV FRA
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March 2021

rpsgroup.com

Document status

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D McGinnis	25 March 2021

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1 INTRODUCTION

RPS were commissioned by Elgin Energy to prepare a Flood Risk Assessment (FRA) for a new solar PV and energy storage facility (the proposal) at Kirkton, due east of the A90 and approximately 1.2km southeast of St.Fergus Village, Peterhead. The site is within the Aberdeenshire Council area.

The report forms part of the application for consent presented to the Scottish Government's Energy Consents Unit (ECU). The FRA has also been prepared to meet the requirements of Scottish Planning Policy, June 2014 (SPP)[1], SEPA Policy 41 (Planning Authority Protocol)[2] and The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR)[3].

The study comprised the following:

- Consultation with Aberdeenshire Council and SEPA;
- Consideration of sources of flood risk;
- Review of flood mitigation measures;
- Preparation of a report to meet the requirements of Scottish Planning Policy (SPP); and SEPA protocol.

The Flood Risk Assessment (FRA) is consistent with the reporting requirements detailed within SEPA's Technical Flood Risk Guidance for Stakeholders[4]. The aim of this document is to ensure that the information is presented in a clear and concise manner that can be easily reviewed by the consenting authorities and by SEPA.

[1] Scottish Planning Policy - gov.scot (www.gov.scot)

[2] sepa-planning-authority-protocol-41.pdf

[3] The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (legislation.gov.uk)

[4] Technical flood risk guidance for stakeholders (sepa.org.uk)

2 OVERVIEW OF THE EXISTING SITE

The proposed location for the solar PV and energy storage facility site is at North and South Kirkton, to the south of St. Fergus, and approximately 7km to the north of Peterhead. The location and key features are shown in Figure 2.1. The exact planning boundary is shown in Appendix A. The site is currently agricultural. The land-holding on which the development is proposed is approximately 112.7Ha/ 278 acres. The site is bounded by the A90 to the west and by the North Sea to the east.

As shown in Figure 2.1, the Annachie Burn is located to the north of the site, flowing north as a tributary from the Black Water that outfalls to the North Sea at the St Fergus Gas Terminal. To the south is the Cuttie Burn, a small watercourse that flows west to east and outfalls to the North Sea at a sandy bay to the north of Peterhead.

The North Sea is located a short distance the site to the east beyond intervening agricultural land and/ or sand dunes. There are sandy beaches along the coastline characterised by bays and small headlands, backed by sand dunes that tie into higher ground. There is no tidal influence on the watercourses in proximity to the site.

The proposed site is gently undulating across its extents.

The underlying geology of the site varies across the site. To the east at the coast the superficial deposits are Marine beach deposits (sand, gravel and silt), Blown Sand inland of that, with Lacustrine deposits (clay, silt and sand) followed by Hatton Till Formation (clay, sand and gravel). Bedrock is dominated by Crinan Subgroup and Tayvallich Subgroup bedrock[5].

Access to the site is proposed from an existing access point off the A90 at the west.

The nearest properties are the North and South Kirkton cottages in the middle of the site. Whilst the proposed site boundary skirts both of these properties the proposed infrastructure has been set back significantly from both. There are no known flood alleviation measures in place in the vicinity of the site.

The site has no formal existing drainage network. There are agricultural drainage features throughout the site in the form of open drainage ditches and pond features.

[5] Geology of Britain viewer - British Geological Survey (bgs.ac.uk)

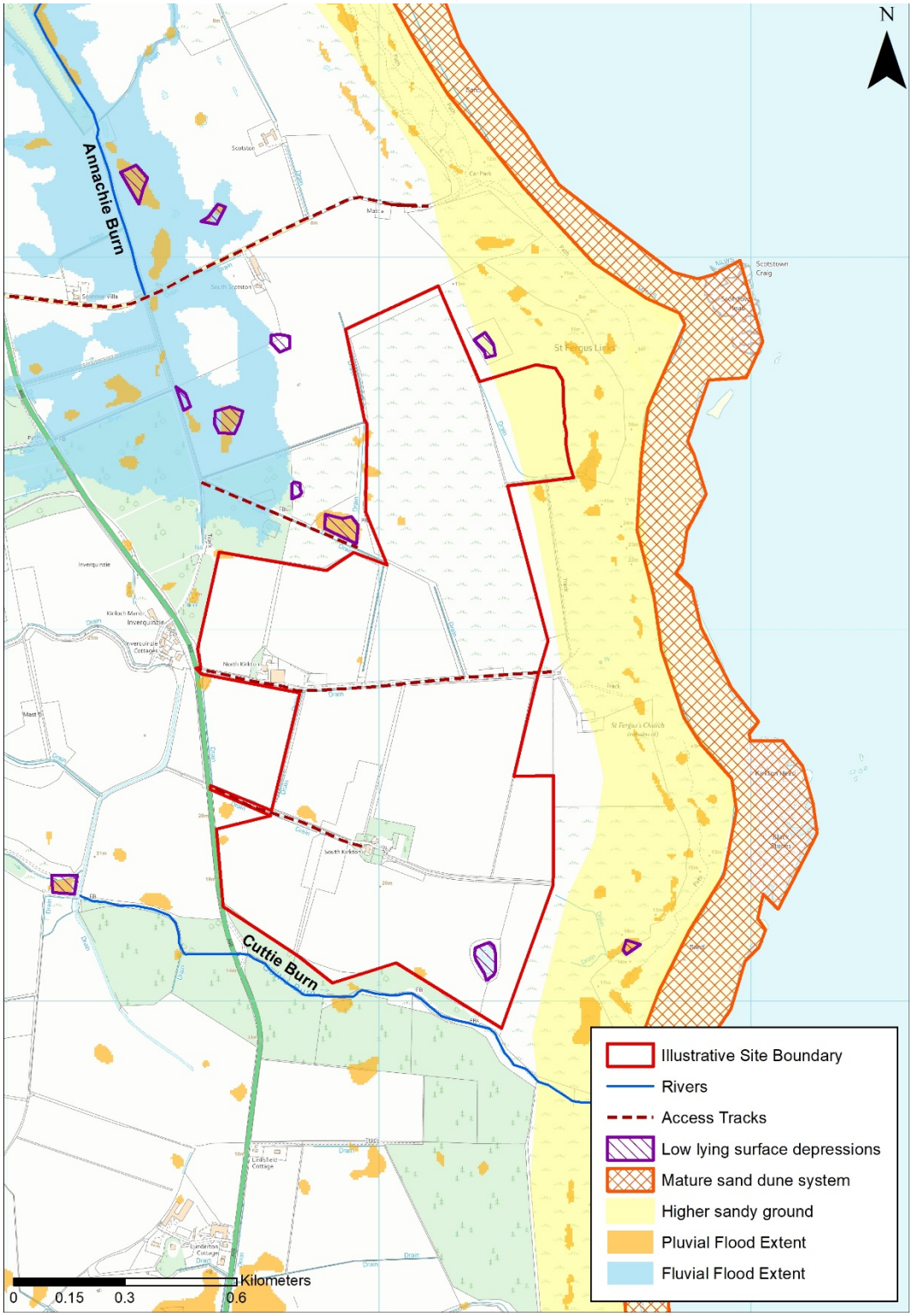

Figure 2.1 Kirkton solar PV and energy storage facility site features

3 PROPOSED DEVELOPMENT

The proposed development will consist of a solar PV and energy storage facility. The main development components are solar PV panels set on mounting frames, an onsite substation, inverter stations, an energy storage facility consisting of 10 storage units similar in look to shipping containers, and ancillary construction works including perimeter (deer style) fencing, CCTV units and internal service tracks.

Solar panels will be mounted on aluminium or steel frame tables. These will be supported by steel/ aluminium posts/ frames that will be pushed or screwed into the ground. Panel rows will be separated by between 2m and 6m, depending on site topography. The front bottom edge of the panels will be typically 0.8m above existing ground level. As part of the solar PV plug and play system, small connecting cables run along the back of each panel to the end of every row where they connect to the main cables which in turn connect to the inverter stations and primary substation. Whilst the small connecting cables are not under-grounded, main cables will be installed underground throughout the site as they proceed firstly to the inverters and then the on-site substation.

The onsite substation will typically measure 6m (l) x 3.2m (w). It is located within a larger compound comprising a permeable hardstanding area of approximately 20m². Inverter stations are small cabin like buildings constructed on a concrete base, typically measuring 7m x 2.5m. Energy storage units measure approximately 12.2m (l) x 2.4m (w). Again these will be set on a concrete base atop a permeable surface. Access roads will be kept at existing ground level and will be constructed from permeable hardcore.

A series of design principles have underpinned the design evolution of the project. These include:

- Undertaking development proposals within the existing site constraints including field boundaries, existing vegetation and site topography;
- Tree retention across the site and accommodation of development proposals within existing landscape features. Internal access tracks will be facilitated via existing gateways where possible;
- Avoiding re-grading of land or cut and fill to facilitate panel placement. Excavation is required to allow cable laying only together with the foundations for the inverter stations and on site substation;
- Avoiding areas of greatest environmental sensitivity within the wider site; and
- Including in-built landscape proposals and ecological enhancement measures as integral components of the project.

Further to completion of development proposals the site will have duel usage, not only as a renewable energy facility, but also retaining agricultural use as sheep grazing.

The draft solar PV layout and details of the various elements is shown in Appendix B.

4 POTENTIAL SOURCES OF FLOOD RISK

Scottish Planning Policy, June 2014 (SPP) highlights that there are a number of potential sources of flooding that could impact any site. These are coastal, fluvial (originating from a watercourse), surface water (pluvial), groundwater, reservoirs and drainage systems (sewers and culverts). The purpose of this report is to provide an assessment of flood risk to the site from those sources.

4.1 Coastal Flooding

Although the site lies close to the coast of the North Sea, SEPA Flood Maps show that the site is not at risk of coastal flooding. An extract from the SEPA Flood Map- Coastal Flood Extent (medium probability) is shown in Figure 4.1, with the approximate site boundary marked on in red.

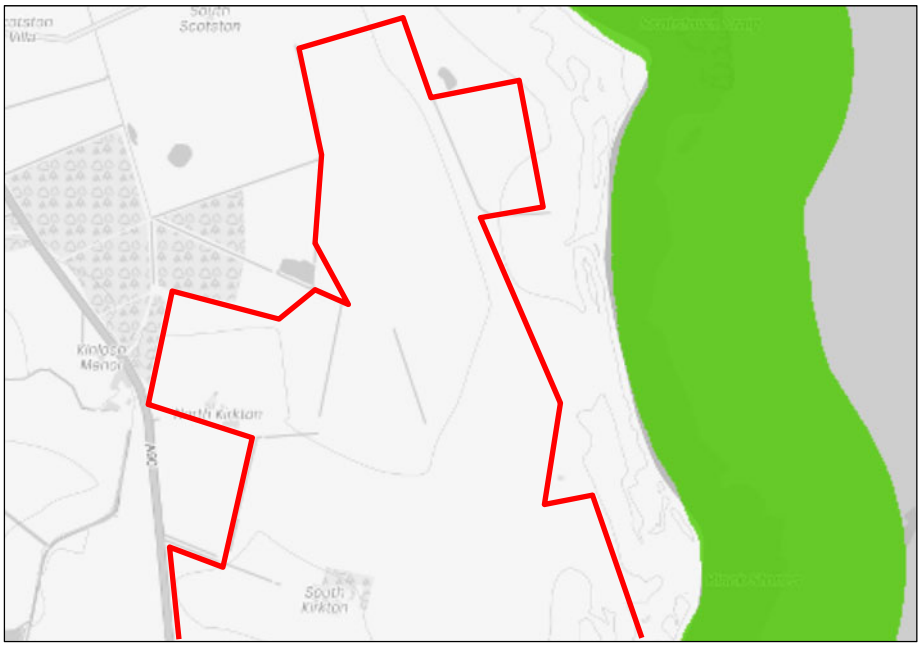

Figure 4.1 Extract from SEPA Flood Map- Coastal Flood Extent (Medium probability)

4.2 Fluvial Flooding

An extract from the SEPA Flood Map- River Flood Extent (medium probability) is shown in Figure 4.2. As the SEPA Flood Maps have been produced following a consistent, nationally-applied methodology for catchment areas equal to or greater than 3km^2, the fluvial flood risk from minor watercourses has not been modelled or shown on the SEPA Flood Map. The map therefore only shows flooding for the Annachie Burn, which is located outside of the site boundary as shown in Figure 4.2.

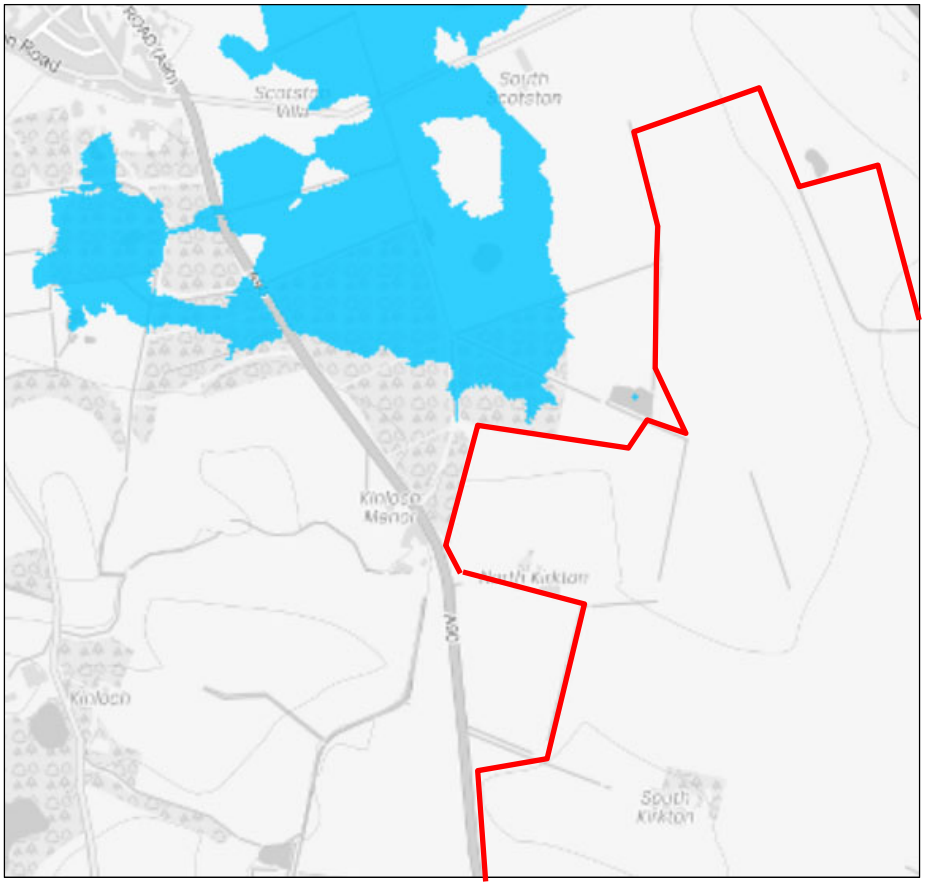

Figure 4.2 Extract from SEPA Flood Map- River Flood Extent (Medium probability)

4.3 Surface Water Flooding

Surface water flooding occurs from intense rainfall related overland flows and ponding in localised depressions. An extract from the SEPA Flood Map- Surface Water Flood Extent (medium probability) is shown in Figure 4.3. The map shows very small areas of potential surface water flooding within the site.

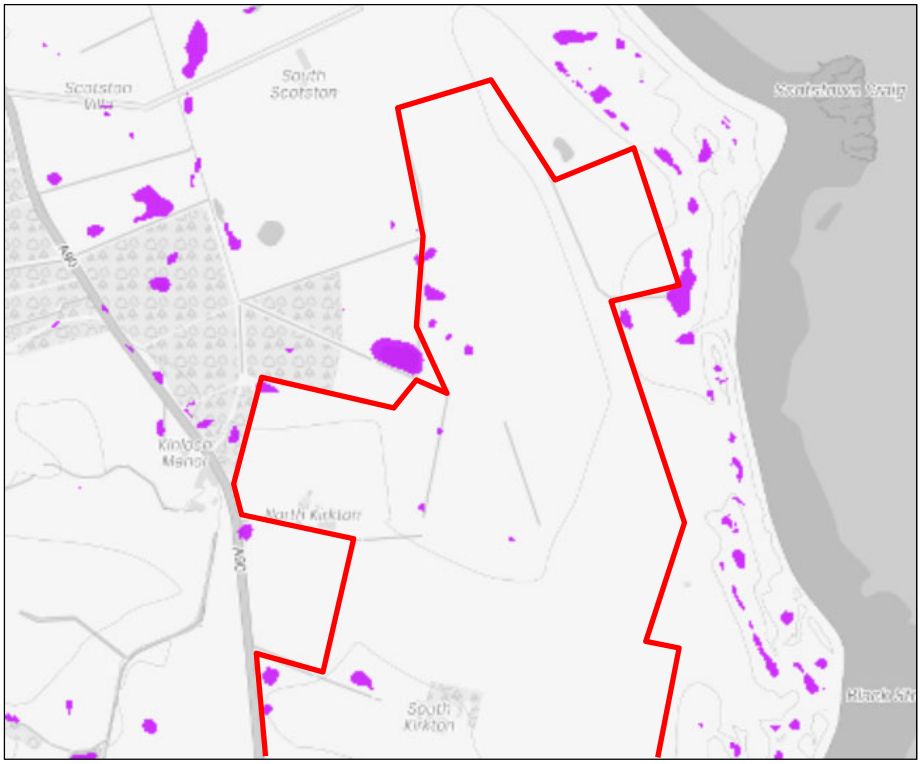

Figure 4.3 Extract from SEPA Flood Map- Surface Water Flood Extent (Medium probability)

4.4 Groundwater Flooding

Groundwater flooding is caused by unusually high groundwater levels or flow rates. During flooding, groundwater can emerge at the ground surface or within man-made underground structures such as basements. The SEPA Flood Map includes an indicative groundwater flood map. The proposed development site is not located within the indicative area of groundwater influenced flooding shown on the SEPA map.

4.5 Reservoir Flooding

The SEPA Flood Map- Reservoirs shows that the site is not affected by the potential inundation area of any reservoirs.

4.6 Flooding from Drainage Systems

The site is rural in nature and therefore is not deemed to be at flood risk from sewers. No culverts have been identified through a review of the site.

4.7 Historical Flooding

The following sources were consulted:

- Readily available archives of flood events, including the internet based Chronology of British Hydrological Events[6] showed no historical flood events;
- Aberdeenshire Council- the site is rural with a few dwellings and therefore the Council does not hold any information relating to flooding at the site. The closest records of flooding are in St Fergus, out with the site boundary; and
- SEPA holds no specific records of the area being subject to flooding.

4.8 SUMMARY

RPS has considered all possible sources of flooding (coastal, fluvial, surface water, groundwater, reservoirs, and drainage systems) and the results of this are summarised in Table 4.1. The table shows that fluvial and surface water flooding must be considered further.

Table 4.1 Summary of flood risk

Source of flooding	Description
Coastal	Although the site lies close to the coast of the North Sea, SEPA Flood Maps show that the site is not at risk of coastal flooding. .
Fluvial	As the SEPA Flood Maps have been produced following a consistent, nationally-applied methodology for catchment areas equal to or greater than 3km^2, the fluvial flood risk from minor watercourses has not been modelled or shown on the SEPA Flood Map. The map therefore only shows the floodplain for the Annachie Burn, which is located outside of the site boundary.
Surface water	The SEPA Flood Map shows very small areas of potential surface water flooding within the site.
Groundwater	The proposed development site is not located within the indicative area of groundwater influenced flooding shown on the SEPA Flood Map.
Reservoirs	The map shows that there is no potential inundation from any reservoirs.
Drainage systems	The site is rural in nature and therefore is not deemed to be at flood risk from sewers. No culverts have been identified through a review of the site

[6] National Library of Scotland - Map Images (nls.uk)

5 RUNOFF FROM THE PROPOSED DEVELOPMENT

The solar panels will not form large impermeable surfaces. Installation of the panels will have minimal impact on the ground as the panel stanchions are small in cross-sectional area and spaced at a distance apart. The front bottom edge of the panels will be typically 0.8m above existing ground level. The rear of the panels will be raised between 2.4 and 3m above the ground. Panel rows will be separated by between 2m and 6m, depending on site topography. In addition, there are spaces between each of the panels as they are affixed to the supporting structure, allowing rainwater to pass through the arrays and disperse evenly. These design features combine to ensure permeability within the solar panels, and runoff will be no greater for the developed site than it is for the pre-developed site. Rainfall will fall onto open ground as usual or run-off the panels through the gaps into the ground to be dispersed by the same routes that are currently in place. Photos of the panels from a recently constructed solar farm are shown in the Figures 5.1 and 5.2, where the spaces between the panels are clearly visible.

Figure 5.1 Photo of solar panels (front elevation)

Figure 5.2 Photo of solar panels (underneath)

The panels are being installed on the land as it is currently. Therefore there will be no changes made to existing ground levels or ground cover, and the existing surface runoff paths are unchanged. The existing vegetation beneath and around the solar panels will be retained. Grass cover helps reduce runoff and erosion by slowing movement of water in the affected area. Earth disturbance and grading activities will be minimised. This will therefore replicate the pre-development condition after the construction is finished. Figures 5.1 and 5.2 show how the grass has been retained at the recently constructed solar farm. A recent research paper 'Hydrologic Response to Solar Farms' (Cook and McCuen, Journal of Hydrologic Engineering, 2013) examined the effect of solar panel sites on surface runoff. A model was created to simulate stormwater runoff over a land surface without panels and then with solar panels added. Results found that the addition of solar panels over a grassy field does not have much of an effect on the volume of runoff, the peak discharge or the time taken for runoff to peak. Their analysis did find that with bare ground or gravel cover beneath the panels, peak discharge may increase resulting in the need for storm management. This will not be the case at the Kirkton site.

The research paper also examined the effect of soil type on the runoff. It found that the soil group influenced the actual volumes and rates, not the relative effect of the panelled condition when compared to the pre-panelled condition. Therefore the type of soil present on the site has no impact on whether there will be an increase in runoff as a result of the panels as this will be unchanged post development.

The site is gently sloping so there are no steep slopes that could cause significant runoff paths to develop. If the infiltration rate of the soil is exceeded the velocity of any standing water that does begin to form will be slow, giving a greater likelihood that it will be absorbed by the drier land under the panels.

Any flows that do not infiltrate will drain to the existing drainage ditches within the site. The overall drainage regime for the site will not therefore be significantly altered as a result of the proposed development. Therefore no additional drainage works are proposed as part of the development.

There is no other significant infrastructure being installed that will impact significantly on runoff. Access roads will be kept at existing ground level and will be constructed from permeable hardcore. The sub-station building will have gutters and downpipes, and rudimentary soakaways will be provided for each pipe (consisting of a stone pit). The sub-station will be located within a larger compound comprising a permeable hardstanding area of 20m². Small areas of roofs will be created by the invertor stations but these are insignificant compared to the size of the site, and any runoff will soak away. The energy storage units will be set on a concrete base atop a permeable surface.

The cable trenches will be approximately 1m deep, depending on the detailed terrain. The first 150mm of trenches will be filled with sand. The remainder of the trenches will be backfilled with the existing topsoil which was previously removed to facilitate the cable laying. There will be no importing of materials to facilitate this process. Vegetation soil turves will be laid beside the trench and used to reinstate the ground to original levels after the cables have been installed. The cable trenches will therefore not cause any additional surface water flow paths to develop.

6 FLOOD MITIGATION MEASURES

6.1 River Flooding

Areas highlighted as floodplain from the Annachie Burn in Figure 4.2 do not impact the site. As set out previously, it is acknowledged that the fluvial flood risk from minor watercourses has not been modelled or shown on the SEPA Flood Map. Therefore, a 10m buffer either side of any internal watercourse/ drain has also been used in the siting of the panels where no flood extents are available. Appendix C shows where these internal features are located within the site. This buffer is considered robust as the majority of the site is elevated above the level of the watercourse. The panels are a minimum of 800mm above ground level so will only be at risk of flooding if the depth exceeds this. The substation and invertor stations are located on higher ground, outside of the floodplains.

6.2 Surface Water Flooding

Surface water flooding occurs when the ground is unable to absorb the rainwater, causing it to flow over the surface and fill depressions and low spots in the landscape where the local natural and engineered drainage systems are overwhelmed. Small areas for potential flooding from surface runoff have been identified within the site. The areas of the site that have natural depressions that could cause a significant depth of potential surface water flooding have been avoided for the siting of panels as shown in the layout in Appendix B. In the few instances where panels are proposed across localised areas of surface water they will be kept a minimum of 800mm off ground level which is deemed to provide adequate protection.

As described in Section 5, the proposal will not significantly increase the rate of runoff from the current rates and no formal drainage systems are being installed. Therefore no further mitigation measures are proposed.

The retention of the existing grass cover helps reduce runoff and erosion by slowing the movement of water. Earth disturbance and grading activities will be minimised. This will therefore replicate the pre-development condition after the construction is finished. Disturbance during construction will be minimal and grass will be retained. However, where construction activities have impacted on existing areas of vegetation, these areas will be chisel ploughed and re-seeded with agricultural grazing/ silage sward grass species. Chisel ploughing will reduce soil compaction on the site and promote growth; it has been proven to significantly increase infiltration rates thereby reducing runoff rates. Additionally the planting provides high levels of natural attenuation which will serve to reduce the erosion and limit surface water flows across the site. The site will be actively managed to keep the soil in good condition during the operational phase and maintain the sward where possible.

It is not usual for water channels to form as a result of runoff from the panels, especially if the ground is vegetated. However, checks will be undertaken by staff visiting the site for maintenance visits at 6 monthly intervals. If necessary, erosion control methods will be used.

7 CONCLUSIONS

This FRA has been prepared to show that the proposal complies with Scottish Planning Policy. The main sources of flooding have been considered, based on published flood maps (coastal, river, surface water, groundwater, reservoirs, and drainage systems).

The Annachie Burn is located to the north of the site. The potential floodplain of the Annachie Burn is located outside of the site. The site is also affected by a number of minor watercourses/ drains, most of which are too small to be included in the SEPA Flood Map (NI). A 10m buffer will be maintained either side of all watercourses and the panels will be above the ground by at least 800mm. These measures will ensure that the risk of flooding to the panels is minimised. The substation and invertor stations will be located on higher ground. As the floodplains are unaltered, the development will not cause an increase in flood risk elsewhere.

The SEPA Flood Map shows very small areas of potential surface water flooding within the site. The areas of the site that have natural depressions that could cause a significant depth of potential surface water flooding have been avoided for the siting of panels as shown in the layout in Appendix A. In the few instances where panels are proposed across localised areas of surface water they will be kept a minimum of 800mm off ground level which is deemed to provide adequate protection.

As has been shown the proposals for the site will not increase the rate of discharge from the current pre-development surface water run-off rates, and no formal drainage systems will be installed. Disturbance during construction will be minimal and grass will be retained. However, where construction activities have impacted on existing areas of vegetation, these areas will be chisel ploughed and re-seeded with agricultural grazing/ silage sward grass species. The site will be actively managed to keep the soil in good condition during the operational phase and maintain the sward where possible. Checks will be undertaken by staff visiting the site for maintenance visits at 6 monthly intervals.

The FRA has shown that the development is at a low risk of flooding, and will not increase flooding elsewhere.

Appendix A

Planning boundary

Notes

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LEGEND

PLANNING BOUNDARY

Rev	Description	By	CB	Date
D	Amendments to redline	GG	AL	23/03/21
C	Amendments to redline	GG	AL	15/03/21
B	Amendments to redline	GG	AL	18/12/20
A	Amendments to redline	GG	AL	14/12/20

SCALE BAR 0 100 200 300

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Client ELGIN ENERGY EsCO LTD

Project KIRKTON PV

Title PLANNING BOUNDARY

Status	Drawn By	PM/Checked by
-	GG	AL

Job Ref	Scale @ A0	Date Created
JPW1202	1:2500	NOV-2020

RPS Drawing / Figure Number JPW1202-004 Rev D

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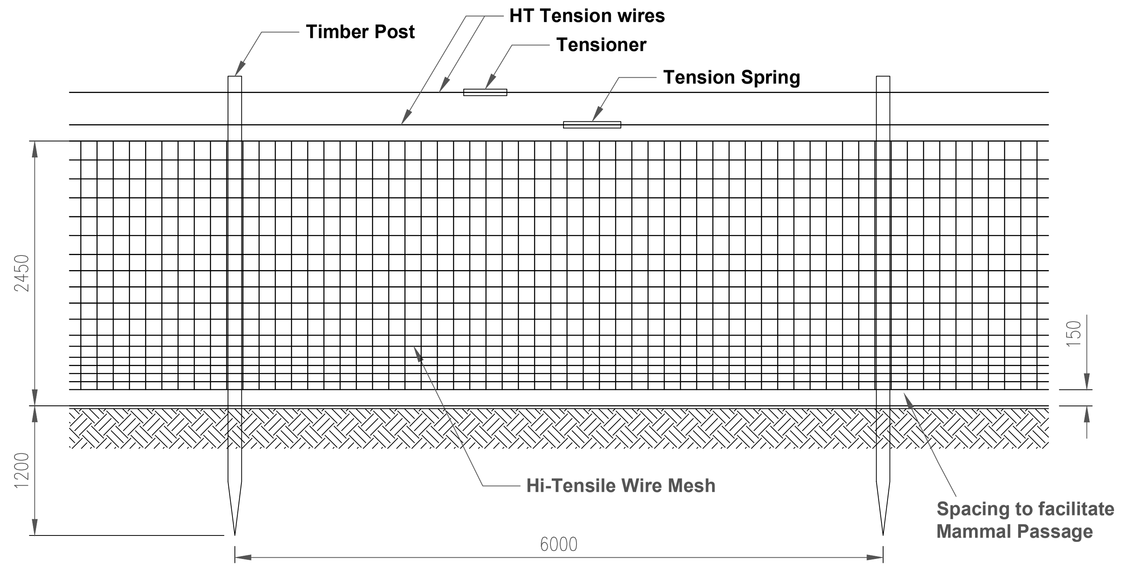
D:\04 JOBS\01 OPEN JOBS\JPW12xx\JPW1202 - KIRKTON SOLAR FARM\4. Drawings\1. RPS Drawings\DWG\JPW1202-004RevD_D210323_(Kirton Planning Boundary).dwg

Appendix B

Draft Solar PV Layout

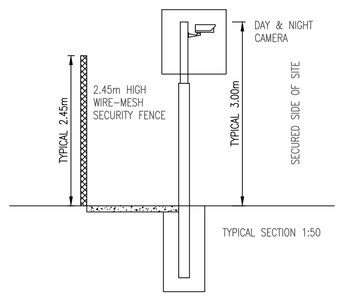


TYPICAL SECURITY DEER FENCE DETAILS

TYPICAL IMAGE OF DEER FENCE

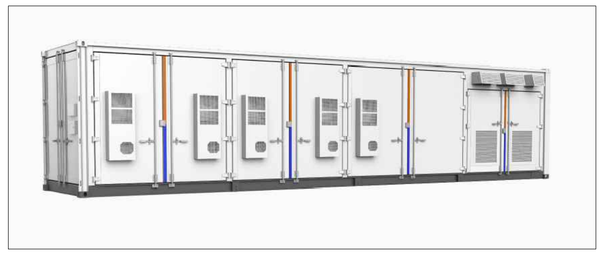
TYPICAL HIGH TENSILE FIXED KNOT FENCING:

1. 2.45M HIGH PRESSURE TREATED TIMBER POSTS AT 6M CENTRES.
2. HIGH TENSILE GALVANISED WIRE TO BS EN 10223 AND BS EN 10244.
3. 20 NO. HORIZONTAL LINES, 2.5MM WIRE, SPACING VARIES BETWEEN 75MM AND 175MM.
4. VERTICAL LINES, 2.5 WIRE AT 150MM CENTRES.
5. HIGH TENSILE TENSION WIRE TO TOP FITTED WITH TENSIONER AND TENSION SPRING.

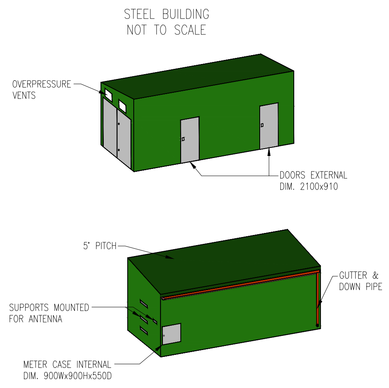


CCTV CAMERA DETAILS
TYPICAL SECTION

TYPICAL IMAGE OF CCTV CAMERA

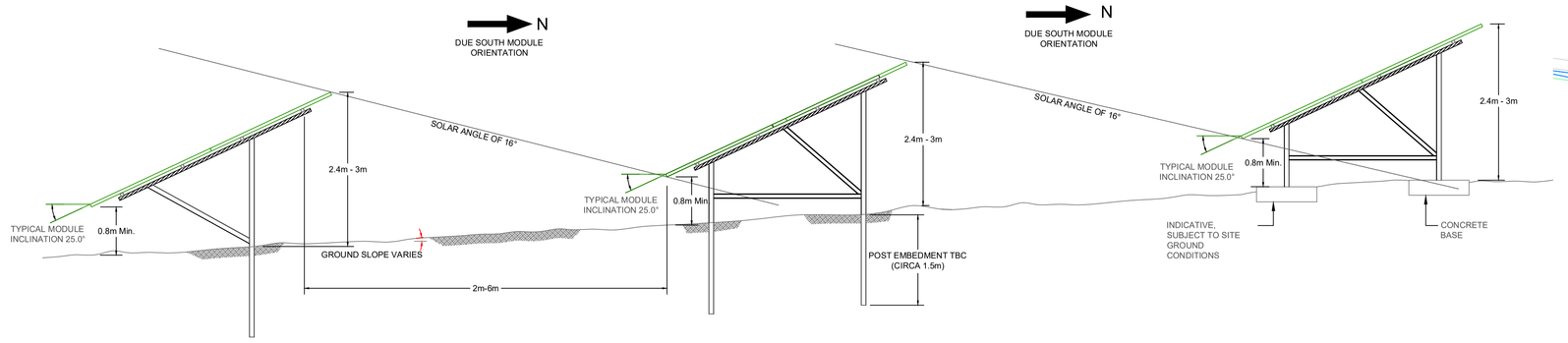


TYPICAL STORAGE UNIT
TYPICAL DIMENSIONS 12.2m x 2.4m x 2.6m HIGH
ALL SUBJECT TO FINAL DESIGN



TYPICAL PRIMARY SUBSTATION
TYPICAL DIMENSIONS 6m x 3.2m x 3.4m HIGH. ALL SUBJECT TO FINAL DESIGN

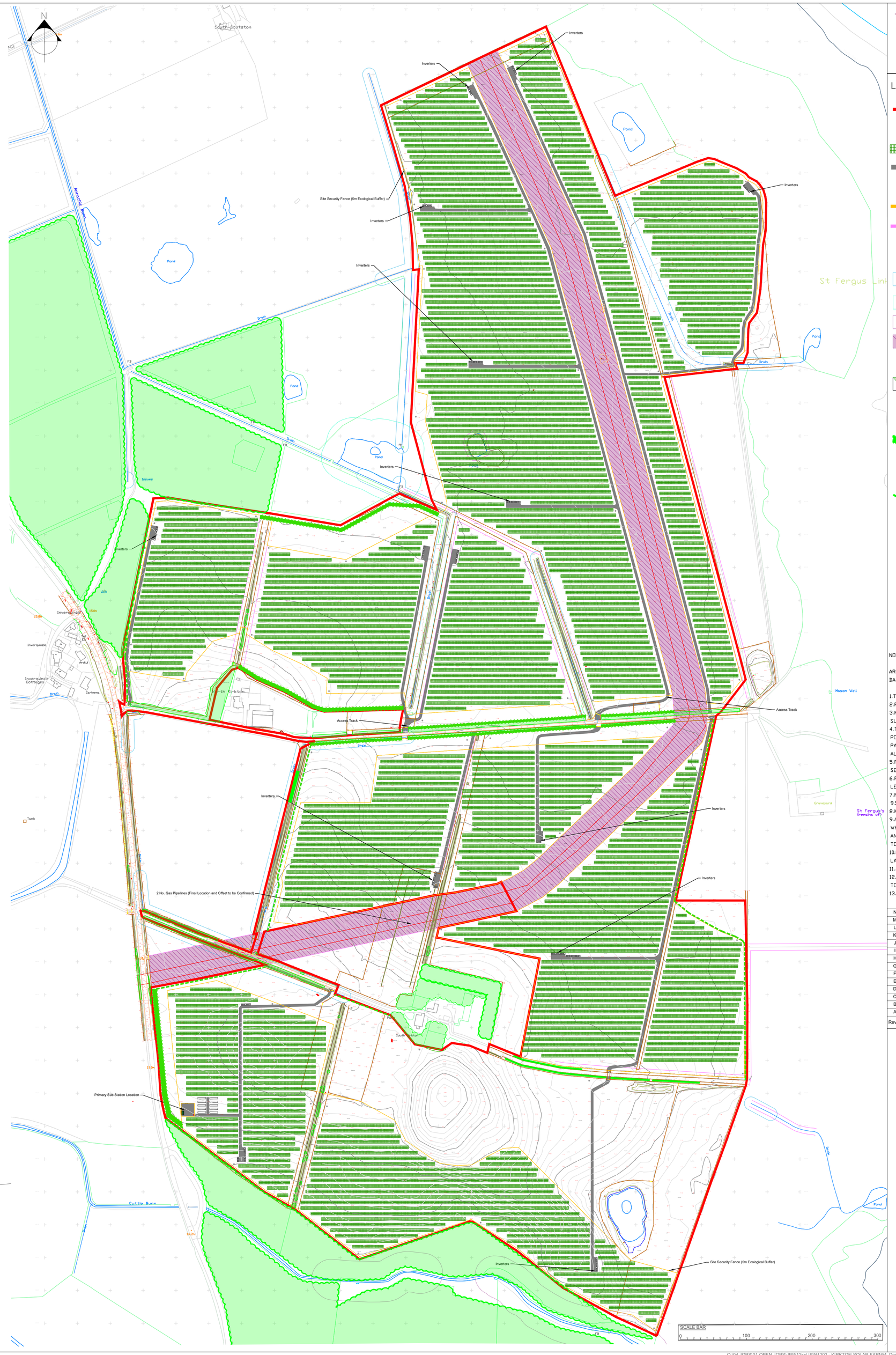
TYPICAL INVERTOR SUBSTATION
DIMENSIONS: 7m x 2.5m x 3m HIGH. ALL SUBJECT TO FINAL DESIGN



SINGLE POST TYPE | TABLE POST TYPE | CONCRETE BASE TYPE

TYPICAL SECTION THROUGH VARIOUS MODULE OPTIONS

SCALE 1:50



Notes
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LEGEND

- SITE BOUNDARY
- 3 x 12 = 36 MODULE PANEL (12m)
- 3 x 24 = 72 MODULE PANEL (24m)
- 3.5m ACCESS TRACK
- INVERTER SUBSTATION
- SECURITY FENCE
- 5m BUFFER FROM VEGETATION OR TREE CANOPY
- CCTV
- 10m BUFFER FROM WATER FEATURE
- 30m BUFFER FROM WATER POND
- 30m BUFFER FROM CUTTIE BURN
- GAS PIPELINE EASEMENT
- EXISTING VEGETATION TO BE RETAINED COMPRISED OF CONIFEROUS WOODLAND, MIXED SPECIES WOODLAND, REMNANT HEDGEROW AND SCRUB SHRUB AREAS
- PROPOSED MITIGATION SCREEN PLANTING COMPRISED OF LOCALLY APPROPRIATE TREE AND SHRUB SPECIES (Whips and transplants)
- PROPOSED HEDGEROW PLANTING PLANTED AS A DOUBLE STAGGERED ROW OF LOCALLY APPROPRIATE SPECIES (Planted as transplants)

NOTES:

ARRANGEMENT OF PANELS SHOWN IS BASED ON THE FOLLOWING DATA:

1.TYPICAL PANEL SIZE = 2.2m X 1.3m APPROX.
2.PANEL TYPICAL INCLINATION = 25 DEGREES TO HORIZONTAL
3.MODULE LENGTH = TYPICAL 15.6M RUN WITH 0.2M GAPS SUPPORTED ON FOUR POST/FRAMES.
4.THE TYPICAL MODULE SECTION SHOWS TWO PANELS IN PORTRAIT ORIENTATION. THREE PANEL IN PORTRAIT, FOUR PANELS IN LANDSCAPE OR SIX PANELS IN LANDSCAPE MAY ALSO BE REQUIRED. DETAILS ARE SUBJECT TO FINAL DESIGN.
5.FOR CLEAR AISLES DISTANCE BETWEEN PANELS REFER TO SECTION.
6.PANELS AT LOWEST POINT SET AT 0.8M ABOVE GROUND LEVEL INCREASING TO 2.4m to 3m APPROXIMATE.
7.PANELS NOT LOCATED WHERE LAND GRADIENT EXCEEDS 1 IN 9.5 (6 DEGREES) DUE TO EXCESSIVE LEG HEIGHTS.
8.MINIMUM 5M ECOLOGY BUFFER ALLOWED TO ALL BOUNDARIES.
9.ACCESS TRACKS TO CONSIST OF CLAUSE 804 MATERIAL WHERE REQUIRED I.E. AREAS OF SOFT SPOTS, FINAL EXTENT AND DESIGN TO BE CONFIRMED. ONLY PERMEABLE MATERIAL TO BE USED.
10.FOR EXTENT AND TYPE OF SCREENING REQUIRED REFER TO LANDSCAPE AND VISUAL ASSESSMENT REPORT FOR PROPOSALS.
11.ALL EXISTING HEDGE ROWS AND TREES TO BE RETAINED.
12.NUMBER AND LOCATION OF INVERTER SUBSTATIONS SUBJECT TO FINAL DESIGN.
13.LOCATION OF SECURITY FENCE SUBJECT TO FINAL DESIGN.

Rev	Description	By	CB	Date
N	Final planting added to layout design	GG	PM	23/03/2021
M	Amendments to layout	GG	PM	19/03/2021
L	Amendments to layout	GG	PM	12/03/2021
K	Amendments to layout	GG	PM	08/03/2021
J	Redline and layout amendments	GG	PM	25/02/2021
I	Redline and layout amendments	GG	PM	18/02/2021
H	Amends due to ecology constraints	GG	AL	21/01/2021
G	Amendments to the solar cross section	GG	AL	21/12/2020
F	Further refinement to red line boundary	GG	AL	17/12/2020
E	Fence line amendments	GG	AL	16/12/2020
D	Red line amendment	GG	AL	14/12/2020
C	General edits and layout amends	GG	AL	14/12/2020
B	Revised panel size and layout	GG	AL	07/12/2020
A	Revised area and panel layout	GG	AL	04/11/2020

MAKING COMPLEX EASY
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Client ELGIN ENERGY EsCO LTD

Project KIRKTON SOLAR

Title DRAFT PLANNING DRAWING

Status	Drawn By	PM/Checked by
PLANNING	GG	AL
Job Ref	Scale @ A0	Date Created
JPW1202	1:2500	NOV 2020
RPS Drawing/Figure Number		Rev
JPW1202-002		N

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Appendix C

Ecology survey showing locations of watercourses/ drains

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59 Belford Road, Edinburgh, EH4 3DE
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E: rpsed2@rpsgroup.com

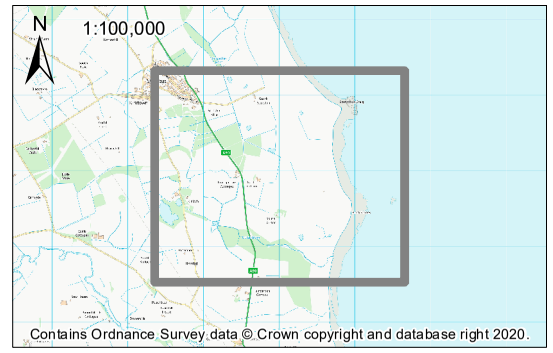
Surveyor:

Date:

Start time: | End time:

**Please attach weather sheet*

Notes:



Legend

- Planning boundary
- EPS survey area (50m buffer)
- Otter survey area (250m buffer)

Client	Elgin Energy EsCo Ltd
Project	Kirkton Solar PV
Title	EPS Survey Map - Overview

Status	Drawn By	PM/Checked By
DRAFT	KAG	-
Project Number	**Scale @ A3**	**Date Created**
SEC8343	1:10,500	NOV 2020
Figure Number		**Rev**
1		-

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W:\8343SEC - RPS Oxford, Kirkton Solar PV, Ecology\Technical\Graphics\GIS\MXDs\SurveyMaps\Nov2020\SEC8343_EPS_Survey_Overview.mxd