Longfield Solar Farm

Environmental Statement [PINS Ref: EN010118]

Volume 2

Appendix 2A: Concept Design Appendix

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Longfield Solar Energy Farm Ltd

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Work No 1. Solar Photovoltaic Generating Station Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
SOLAR PV PANELS			
Indicative Number of Solar PV Panels		701,568	The total surface area of PV Panels in each PDA within the Solar PV Array Works Areas will not exceed the surface areas set out in Appendix A and a total surface area of 191.6646ha. If additional PV Panels are located within the area of Work No. 2B shown on the Works Plans, those PV Panels will not contribute to this total but will be subject to the other limiting controls in this ODP document.
Indicative Solar PV Panels capacity watt peak (Wp)		530	
Indicative Total Solar PV Panels capacity watt peak (Wp)		371,831,040	
Indicative Solar PV Panels Dimensions	Width (mm)	1134	
	Length (mm)	2274	
	Depth (mm)	30	
	Area (m^2)	2.578716	
Indicative Slope of Solar PV Panels from Horizontal		15 degrees	The PV Panels will be positioned on the PV Tables at an angle of between 10 and 30 degrees from horizontal.
Direction of Solar PV Panel Slope		South-facing	The PV Tables will slope towards the south.
Maximum height of Solar PV Panels (m AGL)		3	The maximum height of highest part of the PV Panels will be 3m above ground level (AGL) (existing levels).
Ground clearance of Solar PV Panels (m AGL)		0.6	The minimum height of the lowest part of the PV Panels will be 0.6m AGL (existing levels).
Indicative Solar PV Panels Colour		Blue cells	The PV Panels will be dark blue, grey or black in colour.
Indicative Solar PV Panel Orientation		Portrait	The arrangement of PV Panels within a PV Table will be the same across all PV Arrays.
Frame type		Aluminium extrusion	N/A
Solar PV Panel Mounting Structures			
Indicative PV Table Width in Plan	Width (east to west) (m)	28	The total surface area of PV Panels in each PDA within the Solar PV Array Works Areas will not exceed the surface areas set out in Appendix A and a total surface area of 191.6646ha.
Indicative PV Table Depth in Plan	Width (east to west) (m)	9	
Minimum Space between rows (m)	Gap (north to south) (m)	2	
Indicative Solar PV Mounting Structure Material		Galvanised steel and aluminium	The PV Mounting Structures will be bare metal in appearance.
Indicative Foundation Type		Driven-piles (+ concrete pad foundations where required, estimated 5%)	The maximum depth of PV Mounting Structure piles will be 2m below ground level. Up to 5% of PV Mounting Structure legs could be supported on concrete footings (rather than piles being driven into the ground).
Indicative Pile Arrangement		20 per table 2 piles longtitudinally at 3m centres	
Indicative total number of driven piles		139,531	
Indicative total number of concrete pad supports (2 vertical mounts per concrete pad)		3,672	
Maximum depth of piles below ground level (m)		2	
Depth of concrete pad supports below ground level (m)		0.5	
Balance of Solar System			
Main components		Inverters, Transformers, Switchgear	
Indicative number of BoSS Locations in Concept Design (excluding string inverters)		125	There will be up to 150 BoSS locations.
Maximum number of BoSS Locations (excluding string inverters)		150	
Maximum total footprint of plant at BoSS Locations (excluding string inverters) (m2)		8925	The maximum total footprint of BoSS plant at each BoSS location will be 59.5m2.
Foundation design for BoSS components		concrete foundations with a maximum foundation depth of 1m or metal skids or feet.	N/A
Integrated Solar Stations			
Maximum Number of Integrated Solar Stations		150	Centralised inverters would be located at the up to 150 BoSS locations.
Indicative rating per integrated Solar Station (MW)		3	
Indicative Integrated Solar Station Dimensions	Height (mm)	3500	BoSS plant will not exceed 3.5m in height AGL (existing levels).
	Length (mm)	12500	The maximum total footprint of BoSS plant at each BoSS location will be ~~43.52~~59.5m2.
	Width (mm)	3100	
Central Inverters			
Maximum Number of Central Inverters		150	There will be up to 150 BoSS locations.
Indicative rating per central inverter (MW)		3	N/A
Indicative Inverter Dimensions	Height (mm)	3100	BoSS plant will not exceed 3.5m in height AGL (existing levels).
	Length (mm)	6500	The maximum total footprint of BoSS plant at each BoSS location will be 59.5m2.
	Width (mm)	2500	
Utility Scale String Inverters			
Indicative Number of String Inverters		1,500	If string inverters are used, these will be distributed throughout Work No. 1.
Indicative rating per String inverter (kW)		300	
Indicative String Inverter Dimensions	Height (mm)	660	N/A
	Width (mm)	1051	
	Depth (mm)	363	
Transformers			
Indicative Number of Transformers		150	There will be up to 150 BoSS locations.
Indicative Power Rating (MVA)		3	
Indicative Transformer Dimensions	Height (mm)	3,500	BoSS plant will not exceed 3.5m in height AGL (existing levels).
	Length (mm)	6,500	The maximum total footprint of BoSS plant at each BoSS location will be 59.5m2.
	Width (mm)	5,500	
Indicative Transformer Foundation Depth (below ground level) (m)		0.5	N/A
Indicative Transformer Colour		RAL 7004 (Signal Grey)	N/A
Switchgear			
Indicative Number of Switchgear		150	There will be up to 150 BoSS locations.

Indicative Switchgear Dimensions	Height (mm)	3,500	BoSS plant will not exceed 3.5m in height AGL (existing levels).
	Length (mm)	3,000	The maximum total footprint of BoSS plant at each BoSS location will be 59.5m2.
	Width (mm)	2,500	
Electrical Cabling			
Indicative combiner box dimensions	Height (mm)	700	Electrical cables within the solar PV array fields will be secured to the PV Mounting Structures, the BoSS, or will be underground. No new overhead lines will be constructed.
	Width (mm)	700	
	Depth (mm)	270	
Typical underground cable trench dimensions (Low Voltage)	Width (mm)	800	
	Depth (mm)	1500	
DC Cables from Solar PV Modules to Inverters (All Inverter Options)	Length (m)	8700000	
	Cross Sectional Area (mm2)	6	
DC Cables from Solar PV Modules to Inverters and Combiners (Central Inverter)	Length (m)	120000	
	Cross Sectional Area (mm2)	90	
DC Cables from Solar PV Modules to Inverters and Combiners (Utility Scale String Inverter)	Length (m)	90000	
	Cross Sectional Area (mm2)	35	
AC Cables from Inverters and Combiners to Transformers (central inverter)	Length (m)	N/A	
	Cross Sectional Area (mm2)	N/A	
AC Cables from Inverters and Combiners to Transformers (Utility Scale String Inverter)	Length (m)	30000	
	Cross Sectional Area (mm2)	35	

Work No. 2 Battery Energy Storage System (BESS) Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
BESS (overarching parameters)			
Indicative Foundation Type		Concrete pad or concrete piles	Where any components of the BESS will utilise concrete pad foundations, these will have a depth of no greater than 1m.
Maximum Foundation Depth of Plant (m)		1	
BESS Plant External Finishes		Metal enclosures - white or light grey or green Other plant - no external finish	The enclosures forming part of the BESS will be white or light grey or green in colour.
Maximum area of BESS Compound (ha)		5.2	The BESS Compound will be located within the areas marked as Work No. 2A and 2B on the Works Plans [EN010118/APP/2.2].
Maximum area of BESS Compound (Phase 1) (ha)		3.4	The BESS will be constructed in two separate phases. Phase 1 (Work No. 2A on the Works Plans [EN010118/APP/2.2] will be concurrent with the construction of the wider Scheme. Phase 2 (Work No. 2A on the Works Plans [EN010118/APP/2.2] will commence operation not less than 5 years after commencement of operation of the wider Scheme.
Maximum area of BESS Compound (Phase 2) (ha)		1.8	
BESS UNITS			
Indicative number of BESS units within enclosures		1296	N/A
Indicative BESS unit Dimensions	Length (mm)	3100	
	Width (mm)	2600	
	Height (mm)	3200	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
Indicative number of groups of enclosures (8 units per group)		160	N/A
Indicative BESS unit group Dimensions	Length (mm)	23000	
	Width (mm)	3100	
	Height (mm)	3200	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
BESS Cell Type		Li-ion	The BESS will utilise a lithium ion energy storage system.
TRANSFORMERS			
Indicative Number of Transformers		82	N/A
Indicative Transformer Dimensions	Length (mm)	5100	
	Width (mm)	4100	
	Height (mm)	4500	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
Indicative Number of Auxiliary Transformers		10	N/A
Indicative Auxiliary Transformer Dimensions	Length (mm)	4000	
	Width (mm)	3500	
	Height (mm)	2700	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
POWER CONVERSION SYSTEMS (PCS) OR INVERTERS			
Indicative Number of PCS or Inverters		164	N/A
Indicative PCS or Inverter Dimensions	Length (mm)	3700	
	Width (mm)	2200	
	Height (mm)	2400	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
SWITCHGEAR AND ANCILLIARY EQUIPMENT			
Indicative number of external switchgear (RMU for transformer stations)		82	N/A
CONTAINERS OR SIMILAR STRUCTURES PROTECTING, OR SKID FRAMES SUPPORTING SWITCHGEAR AND ANCILLARY EQUIPMENT			
Indicative number of containers or similar structures		14	N/A
Indicative containers or similar structures dimensions	Length (mm)	12200	
	Width (mm)	2500	
	Height (mm)	2900	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
A NETWORK OF ABOVE GROUND CABLE CIRCUITS; BETWEEN THE BATTERY BANKS AND THE INVERTERS, INVERTERS AND TRANSFORMERS AND TRANSFORMERS TO RMU (SWITCHGEAR) ON CABLE TRAYS AND SUPPORT FRAMEWORK.			
Maximum depth of underground cables within the BESS Compound (m)		1.5	N/A
ELECTRICAL CABLES CONNECTING TO WORK NO. 3			
Maximum depth of underground cables within the BESS Compound (m)		1.5	N/A
MONITORING AND CONTROL SYSTEMS HOUSED WITHIN CONTAINERS OR SIMILAR STRUCTURES WITH HVAC SYSTEMS IN WORK NO. 2(D) OR LOCATED SEPARATELY IN ITS OWN CONTAINER OR CONTROL ROOM			
Indicative number of containers		4	N/A
Indicative dimensions of containers or similar structures	Length (mm)	12200	
	Width (mm)	2500	
	Height (mm)	2900	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
FIRE SAFETY INFRASTRUCTURE SUCH AS FIRE WATER STORAGE TANKS			
Indicative number of fire water storage tanks		4	The BESS will be designed in accordance with the Battery Safety Management Plan (BSMP) submitted in respect of Requirement 8 of the draft DCO.
Indicative dimensions of fire water storage tanks	Diameter (mm)	7000	
	Height (mm)	3000	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
	volume (l)	108000	The BESS will be designed in accordance with the Battery Safety Management Plan (BSMP) submitted in respect of Requirement 8 of the draft DCO.
Indicative number of emergency vehicle rendevous locations		2	
Minimum area of each emergency vehicle rendevous location (m2)		250	
CONTAINERS OR SIMILAR STRUCTURES TO HOUSE SPARE PARTS AND MATERIALS REQUIRED FOR THE DAY TO DAY OPERATION OF THE ENERGY STORAGE FACILITY AND EMERGENCY EQUIPMENT			
Indicative number of containers		4	N/A
Indicative dimensions of containers or similar structures	Length (mm)	5400	
	Width (mm)	2294	
	Height (mm)	2237	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
SECURITY & LIGHTING INCLUDING CAMERAS, POLES AND FENCING			
Indicative number of lighting points		50	No lighting will be permanently operated

Indicative lighting specification		100W LED down-facing PIR activated flood lights @ 120	No lighting will be permanently operated.
Acoustic fencing attenuation (dB)		10	Noise emissions from the BESS experienced in nearby amenity areas (the Public Right of Way (PROW)) will be designed as low as practicable as to not exceed 50 dB LAeq,T with an upper value of 55 dB LAeq,T (guidance levels from BS8233:2014 for external amenity areas).
Maximum Height of Acoustic Fencing (m)		4.5	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).
CCTV POLES			
Indicative number of BESS CCTV Poles		15	N/A
Maximum height of BESS CCTV Poles (m)		5	No component of the BESS, except the CCTV towers will exceed 4.5m in height AGL (existing levels).

Work No. 3 Longfield Substation Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
Longfield Substation (overarching parameters)			
Maximum Extents	Length (m)	162.5	The Longfield Substation will be located within the area marked as Work No. 3 on the Works Plans [EN010118/APP/2.2].
	Width (m)	100.5	
	Area (ha)	1.63	
Maximum Foundation Depth of Plant (m)		2	Where any components of Longfield Substation will utilise concrete pad foundations, these will have a depth of no greater than 2m.
Longfield Substation Plant External Finishes		Metallic parts natural zinc finish; other parts white or grey	The enclosures forming part of the BESS will be white or light grey or green in colour.
Key Components			
Indicative number of 400 / 33 kV transformers		3	N/A
Indicative 400 / 33 kV transformer Dimensions	Length (mm)	14600	
	Width (mm)	8600	
	Height (mm)	9545	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Maximum Height of Air Insulated Switchgear (m)		13	
Indicative number of earthing transformers		6	N/A
Indicative earthing transformer Dimensions	Length (mm)	2500	
	Width (mm)	2000	
	Height (mm)	2750	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Indicative number of 400 kV High Frequency filter structure		3	N/A
Indicative 400 kV High Frequency filter structure Dimen	Length (mm)	3000	
	Width (mm)	3000	
	Height (mm)	7800	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Indicative number of 400 kV Reactors structure		3	N/A
Indicative 400 kV Reactor Dimensions	Diameter (mm)	2600	
	Height (mm)	5000	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Indicative number of 400 kV Resistor banks		3	N/A
Indicative 400 kV Resistor banks Dimensions	Length (mm)	3700	
	Width (mm)	2000	
	Height (mm)	5750	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Indicative number of PV & BESS 33 kV switchroom building		4	N/A
Indicative PV & BESS 33 kV switchroom building Dimens	Length (mm)	18165	
	Width (mm)	5950	
	Height (mm)	3500	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Indicative number of 33 kV reactive power compensation equipment		4	N/A
Indicative 33 kV reactive power compensation equipmer	Length (mm)	12000	
	Width (mm)	3000	
	Height (mm)	3500	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Indicative number of 33 kV harmonic filter		4	N/A
Indicative 33 kV harmonic filter Dimensions	Length (mm)	12000	
	Width (mm)	3000	
	Height (mm)	3500	The components of the Longfield Substation will be a maximum of 13m in height AGL (existing levels).
Number of Site Office buildings within Longfield Substation		1	The dimensions of any building (i.e., a structure with a roof and walls) forming part of the Longfield Substation will be limited to a maximum footprint of 540m2 (e.g., 27m by 14m) with a maximum height of 7.1m AGL (existing levels).
Indicative Site Office building Dimensions	Length (mm)	27000	
	Width (mm)	14000	
	Height (mm)	7100	
Indicative external finish of Site Office building		Steelframe with cladding RAL to suit.	N/A

Work No. 4 Cable Route Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
Cable Route (overarching parameters)			
Number of 400kV circuits		1	The Grid Connection Route will comprise one 400kV cable circuit.
Conducting cores forming the 400kV circuit		3	N/A
Indicative length of cable (km)		2.6	The Grid Connection Route from the Longfield Substation (Work No. 3) to the Bulls Lodge Substation Extension (Work No. 5) will be located within the area marked Work No. 4 on the Works Plans [EN010118/APP/2.2].
Indicative number of Joint Pits		5	N/A
Indicative Joint Pit Dimensions	Width (mm)	2500	
	Depth (mm)	2700	
	Length (mm)	10000	
Operation and Maintenance Corridor Width (m)		10	N/A
Number of watercourse crossings		3	The Grid Connection Route requires three watercourse crossings of Boreham Brook. These will be installed using horizontal directional drilling (HDD) beneath the watercourse, thus maintaining the 10m buffer and avoiding trenching or disturbance of the watercourse bed and banks. The cables would be a minimum of 1.5m below the bed of any watercourse in order to prevent risk of any scour exposing the cable.
Trench Detail			
Indicative Cable Trench Dimensions	Width (mm)	1900	The 400kV cable trench will be up to 3m deep and 3m wide (except where other separation is required to avoid existing services).
	Depth (mm)	1250	
Number of trenches		1	N/A
Duct surround		C25/30 concrete	
Number of 400kV Cable Ducts		3	
Indicative Diameter of 400kV Cable Ducts (mm)		200	
Number of Comms Ducts		2	
Indicative Diameter of Comms Ducts (mm)		125	

Work No. 5 Bulls Lodge Substation Substation Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
Bulls Lodge Substation Extension (overarching parameters)			
External Colour		Shall be agreed to suit local planning restrictions	N/A
An electricity switching station with indoor gas insulated switchgear			
GIS Building Dimensions	Length (m)	61	The footprint of the main substation building in Work No. 5A(i) (i.e., a structure with a roof and walls) forming part of the Bulls Lodge Substation Extension will be limited to a maximum footprint of 1,750m2 (e.g. 65m by 27m).
	Width (m)	24	
	Height (m)	15	The components of the Bulls Lodge Substation Extension will be a maximum of 15m in height from above finished ground level.
Maximum Switchgear and gantry height (m)		14	
Key Components			
Access road width (m)		5	N/A
Entrance from private road design		Tarmac with kerbs; of impervious construction laid to falls.	
Internal roadways and footpaths		Tarmac for access; concrete footpaths for maintenance; of impervious construction laid to falls.	
Car parking		Tarmac/asphalt; of impervious construction	
(v) lighting columns and lighting;		The minimum lighting requirements are as follows: Maintained average illuminance 6.0 lux; Maintained minimum point illuminance: 2.5 lux. These requirements apply to all substation perimeter fencing, gates, access roads, verges, footpaths, designated walkways and areas occupied by plant or other equipment (whether in service or not) contained by the substation perimeter fencing. Lighting will be controlled by switching and will generally be switched off during the night during normal operation. Number of lighting columns will be confirmed in detailed design and is a function of the final substation layout.	Lighting will be controlled by switching and will generally be switched off during the night during normal operation. Lighting will be designed with directable light output to minimise light pollution except at access gates to facilitate safe entry at night. The installation will be designed to minimise visual intrusion outside the main substation periphery.
Fencing Design		Palisade or mesh fencing made from steel including an electric pulse fence system installed to the rear (internal) face of the security fence. Wooden fence at land boundary	The permanent security fencing around the Bulls Lodge Substation Extension will not exceed 2.5m in height above finished ground level. The electric pulse fence system will extend a maximum of 3.5m above finished ground level.
Maximum Fence Height		Overall height of fencing shall be 2.4m above base level. Height of the electric pulse system shall be 3.4m above base level.	
Indicative length of fencing (m)		400m of new perimeter fencing (excludes wooden fence at land boundary)	
(vii) drainage;		Surface water drainage, SuDS pond if required	N/A
(viii) new connections from pylons 4VB061A and 4VB061B including pylon modifications;		Two sets (one per circuit) of three-phase OHL conductor bundles. Each bundle will have 3 conductors. New connections for two circuits	
Work No. 5B			
(i) Temporary overhead line alterations including two new temporary pylons and realignment of the existing 400kV overhead line.		Steel lattice towers and single circuit three-phase conductor system Two towers with max height of 41m	N/A

Work No. 6 Works Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
Electrical Cables			
Typical underground cable trench dimensions (33kV)	Width (mm)	1500	~~The maximum underground cable trench dimensions will be up to 0.8m wide and up to 1.5m below existing ground level or ditch bottom (except where other separation is required to avoid existing services, or where trenches converge at connections).~~ For High Voltage cables, the maximum underground cable trench dimensions will be up to 1.5m wide and up to 1.5m below existing ground level or ditch bottom (except where other separation is required to avoid existing services, or where trenches converge at connections).
	Depth (mm)	1500	
Indicative length of AC Cables from Transformers to Longfield Substation	Length (m)	100000	N/A
Indicative cross section of AC Cables from Transformers to Longfield Substation	Cross Sectional Area (mm2)	630 33kV Alu single core cable	N/A
Fencing			
Deer fencing around Solar PV Arrays	Height (m)	2.5	Fencing around the Solar PV Array Work Areas will not exceed 2.5 m in height AGL (existing levels).
	Length (m)	37,335	Fencing around the Solar PV Array Work Areas will be a “deer fence” design, with wooden post supports and metal stock fencing.
	Depth of posts (m)	1	Fence posts will be installed to a maximum depth of 1m below ground level (BGL).
Palisade fencing around the BESS Compound, Longfield Substation and permanent office, warehouse and plant storage building	Height (m)	2.75	Steel palisade security fencing with a maximum height of 2.75m AGL (existing levels) will be installed to prevent public access to the BESS Compound (Work No. 2), Longfield Substation (Work No. 3) and the compound adjacent to the permanent office, warehouse and plant storage building (Work No. 8).
	Length (m)	2030	
	Depth of posts (m)	1	Fence posts will be installed to a maximum depth of 1m below ground level (BGL).
Security and CCTV			
CCTV Towers	Height (m)	5	CCTV towers will not exceed 5m in height.
	Depth of posts (m)	2	N/A
	Distance between cameras (m)	80-200	N/A
Lighting	Specification	PIR or manually operated. 50W, approximately 5000 lumens	No lighting will be permanently operated. If required, any visible lighting will be operated by a manual switch or by a motion detection system.
Lighting - indicative number of luminaires	Site Entrance	4	Potentially visible operational lighting will not be located within 100m of residential properties.
	BoSS Locations	2	
	Longfield Substation Entrance	4	
	Substation Parking Area	8	
	Substation Control Room	8	
	Substation HV Area	50	
	BESS	300	
	O&M Building Entrances	8	
	O&M Building Parking	8	
	O&M Building Refuge	2	
Indicative Number of Weather Stations / Pyranometers		8 weather station locations, each comprised of: - 1 in plane pyranometer - 1 inclined pyranometer - Module temperature sensor - Anemometer - Wind direction sensor	CCTV poles, CCTV feed or weather stations will be a minimum of 30m from National Grid OHL towers to prevent potential Transient faults.
Landscaping and Biodiversity	See Outline Landscape and Ecology Management Plan [EN010118/APP/7.13]		
Tracks			
New and upgraded tracks	Approximate Total Length (km)	20.5	Up to 21km of permanent access tracks will be constructed within Work No. 6 including new and upgraded tracks.
	Length of Primary Tracks (km)	6.4	
	Length of Secondary Tracks (km)	13.1	
	Length of BESS and Longfield Substation Tracks (km)	1.0	
	Width of Tracks (m)	4 to 6	Access tracks will have a running width of up to 6m.
	Depth of Tracks (mm)	600	N/A
footpath diversions	See Outline Public Rights of Way Management Plan [EN010118/APP/6.2]		
SuDS	See the SuDS Strategy [EN010118/APP/6.2]		
Overhead Line Diversion			
Existing Route	Length (m)	765	The existing 11 kV overhead line in PDA 28 and 29 will be removed and replaced with an underground 11kV cable via as direct a route as practicable allowing for existing and Scheme infrastructure. These works will be undertaken within Work No. 6 .
Proposed Diverted Route	Length (m)	810	

Work No. 8 Office, Warehouse and Plant Storage Building Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
A warehouse building for the storage of spare parts and plant			
Warehouse building dimensions	Maximum Length (m)	36	The permanent office, warehouse and plant storage building will occupy a maximum footprint of 540 m2 within Work No 8 [EN010118/APP/2.2].
	Maximum Width (m)	15	
	Maximum Height	7.1	The permanent office, warehouse and plant storage building will be a maximum height of 7.1m (above ground level).
Warehouse building external finish		To fit with local agricultural vernacular	N/A
External storage area	Maximum Length (m)	27	Any external waste storage will be located within a fenced compound adjoining the permanent office, warehouse and plant storage building within Work No. 8.
	Maximum Width (m)	15	

Work No. 10 Habitat Management Areas Concept Design Parameters			
Parameter	**Secondary Parameter**	**Value**	**Applicable Design Principle**
Specific habitat management areas	Total Area (hectares)	55.8	A minimum of 55.8ha of habitat management areas will be located as marked as Work No. 10 on the Works Plan [EN010118/APP/2.2].