The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

N

LEGEND

- Site Boundary
- Ancient Woodland #
- Existing Woodlands, Copses and Tree Belts ^
- Existing Scrub ^
- Existing Water Courses and Features ^
- Contours/Spot Heights (Metres AOD) ^
- Public Rights of Way *
- National Trails # / Long Distance Walks ^
- Sustrans Cycle Route +
- Listed Buildings ~
- Conservation Area #/##
- Scheduled Monument ~
- National Parks #
- Sites of Special Scientific Interest #
- Special Area of Conservation #
- Port and Energy Related Development (Policy SP2) *
- Milford Haven Landscape of Outstanding Interest~

Sources:
^ OS Mapping
# Natural England GIS Data Set
~ Historic England National Monument Record GIS Data Set
* Pembrokeshire (Sir Benfro) Council Definitive Map
+ Sustrans National Cycle Network GIS Data
++ Department of Transport Cycle Network Model
^^ Department for Communities and Local Government GIS Data
<District Council> Local Plan Proposals Map Adopted

Data collated for constraints and analysis mapping is based on publicly available sources at the time of preparation inserted using the British National Grid and may itself not be accurate. Barton Willmore shall not be liable for the accuracy of data derived from external sources.

FIGURE 1

Project
Dragon LNG Solar Farm, Milford Haven

Drawing Title
Site Context Plan

Date	Scale	Drawn by	Check by
13.09.2021	1:10,000 @A1 1:20,000 @A3	ML	JM
Project No	Drawing No		Revision
33264	LN-LP-01		-

0 100 200 300 400m

BARTON WILLMORE

Town Planning • Master Planning & Urban Design • Architecture • Landscape Planning & Design • Infrastructure & Environmental Planning • Heritage • Graphic Communication • Communications & Engagement • Development Economics

bartonwillmore.co.uk

Offices at Birmingham Bristol Cambridge Cardiff Ebbsfleet Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

LEGEND

N

Site Boundary

Existing Water Courses and Features ^

Contours/Spot Heights (Metres AOD) ^

Ridgelines

Elevation (m AOD)

- 70 to 75
- 65 to 70
- 60 to 65
- 55 to 60
- 50 to 55
- 45 to 50
- 40 to 45
- 35 to 40
- 30 to 35
- 25 to 30
- 20 to 25
- 15 to 20
- 10 to 15
- 5 to 10
- 0 to 5
- -5 to 0
- -10 to -5

Sources:
^ OS Mapping

Data collated for constraints and analysis mapping is based on publicly available sources at the time of preparation inserted using the British National Grid and may itself not be accurate. Barton Willmore shall not be liable for the accuracy of data derived from external sources.

FIGURE 2

Project
Dragon LNG Solar Farm, Milford Haven

Drawing Title
Topographical Features Plan

Date	Scale	Drawn by	Check by
13.09.2021	1:10,000 @A1 1:20,000 @A3	ML	JM
Project No	**Drawing No**		**Revision**
33264	LN-LP-02		-

0 100 200 300 400m

BARTON WILLMORE

Town Planning ● Master Planning & Urban Design ● Architecture ● Landscape Planning & Design ● Infrastructure & Environmental Planning ● Heritage ● Graphic Communication ● Communications & Engagement ● Development Economics

bartonwillmore.co.uk

Offices at Birmingham Bristol Cambridge Cardiff Ebbsfleet Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

J:\33000\33264 - Dragon LNG Solar Farm\A4 - Drawings & Registers\Landscape\33264 LN-LP-02 Topography Plan.dwg - A1

The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

LEGEND

N

Site Boundary

Existing Water Courses and Features ^

Contours/Spot Heights (Metres AOD) ^

National Character Area (NCA) Profiles #

South Pembrokeshire Coast

Milford Haven

Pembrokeshire County Council Landscape Character Types ~

LCA 7- Angle Peninsula

LCA 9- Johnston Lowlands

LCA 10- The Haven North

LCA 16- Southern Haven Developed

LCA 22- Milford Haven

LCA 23- Southern Haven Industrial Fringe

LCA 24- Southern Haven Mudflats

LCA 25- Hundleton and Lancey

Sources:
^ OS Mapping
# Natural England GIS Data Set
~ Historic England National Monument Record GIS Data Set
* Pembrokeshire (Sir Benfro) Council Definitive Map
+ Sustrans National Cycle Network GIS Data
++ Department of Transport Cycle Network Model
^^ Department for Communities and Local Government GIS Data
<District Council> Local Plan Proposals Map Adopted

Data collated for constraints and analysis mapping is based on publicly available sources at the time of preparation inserted using the British National Grid and may itself not be accurate. Barton Willmore shall not be liable for the accuracy of data derived from external sources.

FIGURE 3

Project
Dragon LNG Solar Farm, Milford Haven

Drawing Title
Landscape Character Plan

Date	Scale	Drawn by	Check by
13.09.2021	1:10,000 @A1 1:20,000 @A3	PM	JM
Project No	Drawing No		Revision
33264	LN-LP-03		-

0 200 400 600m

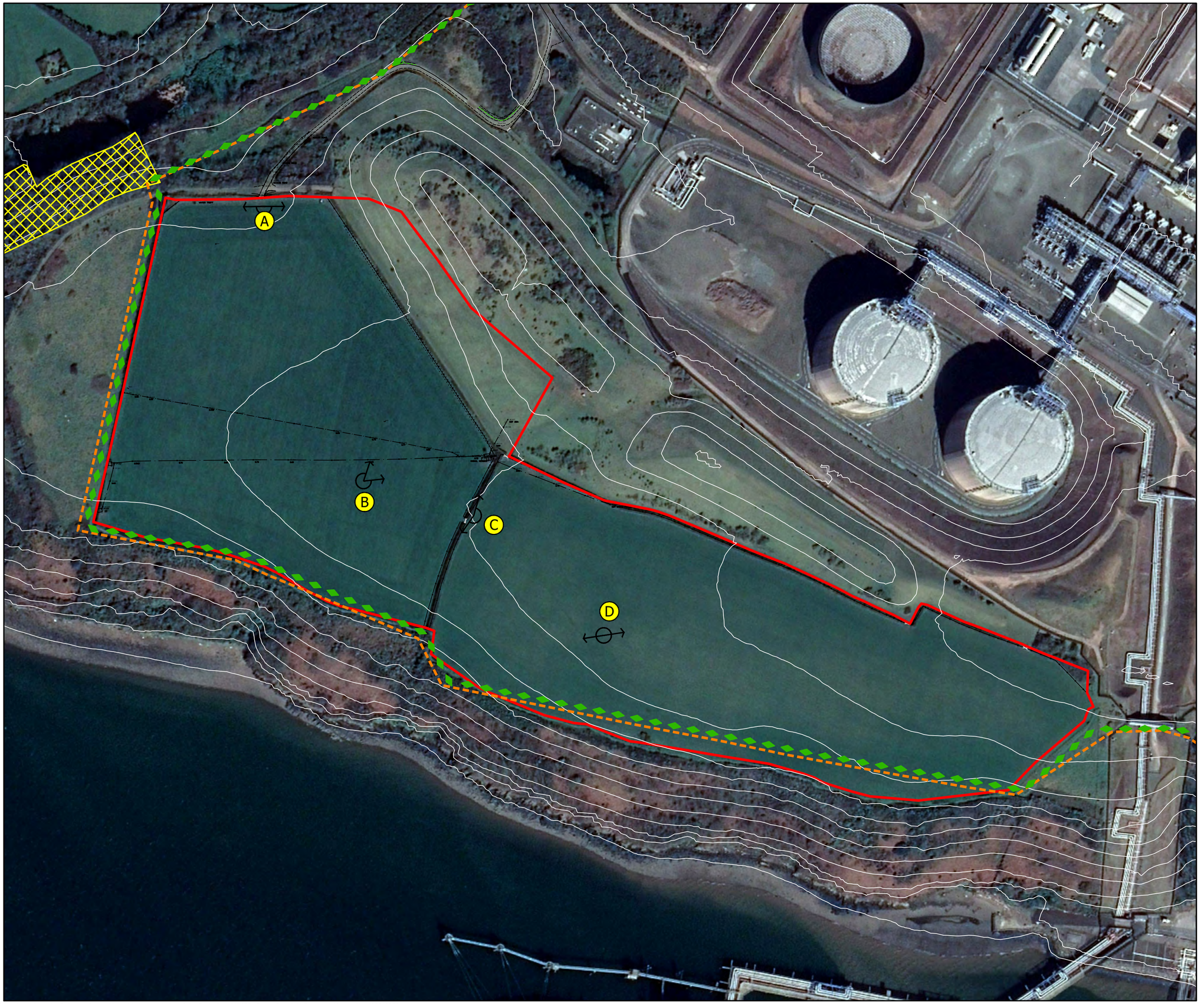
BARTON WILLMORE

Town Planning • Master Planning & Urban Design • Architecture • Landscape Planning & Design • Infrastructure & Environmental Planning • Heritage • Graphic Communication • Communications & Engagement • Development Economics

bartonwillmore.co.uk

Offices at Birmingham Bristol Cambridge Cardiff Ebbsfleet Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

J:\33000\33264 - Dragon LNG Solar Farm\A4 - Drawings & Registers\Landscape\33264 LN-LP-03 Landscape Character Plan.dwg - A1



The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

LEGEND

N

- Site Boundary
- Contours/Spot Heights (Metres AOD) ^ (110m)
- Ancient Woodland #
- Public Rights of Way * (No.)
- National Trails # / Long Distance Walks ^
- Location of Photographic Viewpoints (Site Appraisal Photographs: A-D)

FIGURE 4

Project
Dragon LNG Solar Farm, Milford Haven

Drawing Title
Site Appraisal Plan

Date	Scale	Drawn by	Check by
13.09.2021	1:2,000 @A2	ML	JM

Project No	Drawing No	Revision
33264	LN-LP-05	-

0 20 40 50 80 100m

BARTON WILLMORE

Town Planning • Master Planning & Urban Design • Architecture • Landscape Planning & Design • Infrastructure & Environmental Planning • Heritage • Graphic Communication • Communications & Engagement • Development Economics

bartonwillmore.co.uk

Offices at Birmingham Bristol Cambridge Cardiff Ebbsfleet Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

J:\33000\33264 - Dragon LNG Solar Farm\A4 - Drawings & Registers\Landscape\33264 LN-LP-03 Site Appraisal Plan.dwg - A2

The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

LEGEND

- Site Boundary
- Existing Woodlands, Copses and Tree Belts ^
- Existing Scrub ^
- Existing Water Courses and Features ^
- Contours/Spot Heights (Metres AOD) ^
- Public Rights of Way *
- National Trails # / Long Distance Walks ^
- Sustrans Cycle Route +
- Listed Buildings ~
- Conservation Area #/##
- National Parks #
- Location of Photographic Viewpoints (Site Context Photographs: 1-14)

Zone of Theoretical Visibility (ZTV)

- Most Visible
- Least Visible

Notes:
The Zone of Theoretical Visibility (ZTV) provides an approximate portrayal of the greatest possible extent of visibility of the Proposed Development, on the basis of a digital ground model (DTM). The extent and nature of specific views towards the Proposed Development is to be verified through fieldwork to take account of other visual barriers, such as existing buildings, woodland, trees and infrastructure.

- The ZTV is produced using the specialised software package Key-Terra Firma which is an AutoCAD based application.
- The ZTV is produced by calculating the 'line of sight' from target points to analysis end.

L:\Resources\KTF\ZTV Schematic-A3.jpg

Parameters:

- The study area for the ZTV is 7.0 x 5.5 km; (1:10,000 @A1)
- The ZTV accounts for ground topography on the basis of a model made from Natural Resources Wales Lidar data in the form of 3D points data on a 2m grid, re-interpolated to a 5m grid;
- The ZTV does not account for any other features, including infrastructure, woodland, trees and hedgerows, and existing built forms;
- The ZTV is based on 60 targets across the proposed panels at a height of 3m above existing ground level;
- The ZTV portrays the extent of visibility of the Proposed Development on the basis of if a target point is visible within a given 20m grid square.

Sources:
^ OS Mapping
# Natural Resources Wales GIS Data Set
* Pembrokeshire (Sir Benfro) Council Definitive Map
+ Sustrans National Cycle Network GIS Data

Data collated for constraints and analysis mapping is based on publicly available sources at the time of preparation inserted using the British National Grid and may itself not be accurate. Barton Willmore shall not be liable for the accuracy of data derived from external sources.

FIGURE 5

Project
Dragon LNG Solar Farm, Milford Haven

Drawing Title
Visual Appraisal Plan

Date	Scale	Drawn by	Check by
06.10.2021	1:10,000 @A1 1:20,000 @A3	ML	JM
Project No	**Drawing No**		**Revision**
33264	LN-LP-04		-

0 100 200 300 400m

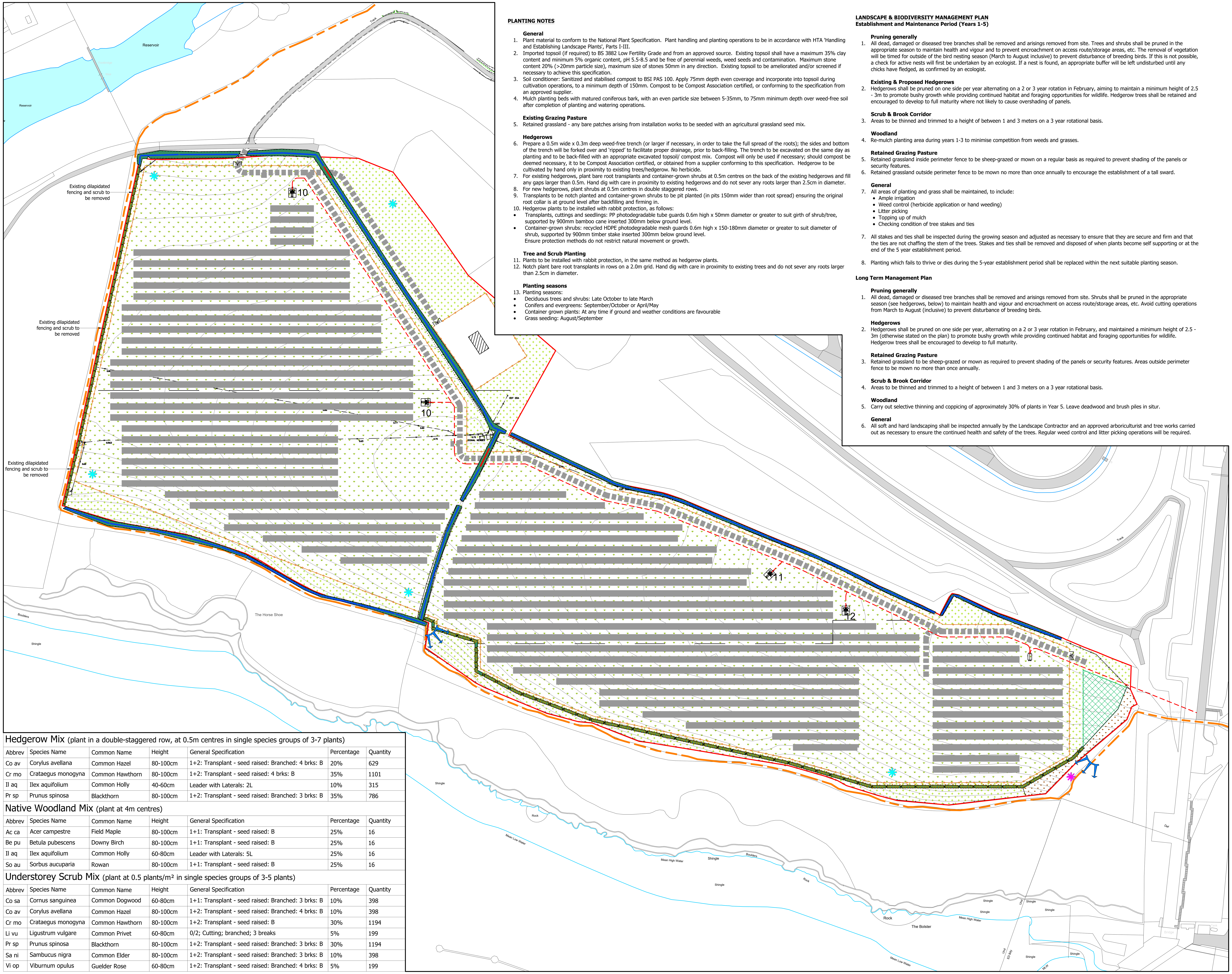
BARTON WILLMORE

Town Planning • Master Planning & Urban Design • Architecture • Landscape Planning & Design • Infrastructure & Environmental Planning • Heritage • Graphic Communication • Communications & Engagement • Development Economics

bartonwillmore.co.uk

Offices at Birmingham Bristol Cambridge Cardiff Ebbsfleet Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

J:\33000\33264 - Dragon LNG Solar Farm\A4 - Drawings & Registers\Landscape\33264 LN-LP-04 Visual Appraisal Plan.dwg - A1



PLANTING NOTES

General

1. Plant material to conform to the National Plant Specification. Plant handling and planting operations to be in accordance with HTA 'Handling and Establishing Landscape Plants', Parts I-III.
2. Imported topsoil (if required) to BS 3882 Low Fertility Grade and from an approved source. Existing topsoil shall have a maximum 35% clay content and minimum 5% organic content, pH 5.5-8.5 and be free of perennial weeds, weed seeds and contamination. Maximum stone content 20% (>20mm particle size), maximum size of stones 50mm in any direction. Existing topsoil to be ameliorated and/or screened if necessary to achieve this specification.
3. Soil conditioner: Sanitized and stabilised compost to BSI PAS 100. Apply 75mm depth even coverage and incorporate into topsoil during cultivation operations, to a minimum depth of 150mm. Compost to be Compost Association certified, or conforming to the specification from an approved supplier.
4. Mulch planting beds with matured coniferous bark, with an even particle size between 5-35mm, to 75mm minimum depth over weed-free soil after completion of planting and watering operations.

Existing Grazing Pasture

5. Retained grassland - any bare patches arising from installation works to be seeded with an agricultural grassland seed mix.

Hedgerows

6. Prepare a 0.5m wide x 0.3m deep weed-free trench (or larger if necessary, in order to take the full spread of the roots); the sides and bottom of the trench will be forked over and 'ripped' to facilitate proper drainage, prior to back-filling. The trench to be excavated on the same day as planting and to be back-filled with an appropriate excavated topsoil/ compost mix. Compost will only be used if necessary; should compost be deemed necessary, it to be Compost Association certified, or obtained from a supplier conforming to this specification. Hedgerow to be cultivated by hand only in proximity to existing trees/hedgerow. No herbicide.
7. For existing hedgerows, plant bare root transplants and container-grown shrubs at 0.5m centres on the back of the existing hedgerows and fill any gaps larger than 0.5m. Hand dig with care in proximity to existing hedgerows and do not sever any roots larger than 2.5cm in diameter.
8. For new hedgerows, plant shrubs at 0.5m centres in double staggered rows.
9. Transplants to be notch planted and container-grown shrubs to be pit planted (in pits 150mm wider than root spread) ensuring the original root collar is at ground level after backfilling and firming in.
10. Hedgerow plants to be installed with rabbit protection, as follows:
- Transplants, cuttings and seedlings: PP photodegradable tube guards 0.6m high x 50mm diameter or greater to suit girth of shrub/tree, supported by 900mm bamboo cane inserted 300mm below ground level.
- Container-grown shrubs: recycled HDPE photodegradable mesh guards 0.6m high x 150-180mm diameter or greater to suit diameter of shrub, supported by 900mm timber stake inserted 300mm below ground level.
  Ensure protection methods do not restrict natural movement or growth.

Tree and Scrub Planting

11. Plants to be installed with rabbit protection, in the same method as hedgerow plants.
12. Notch plant bare root transplants in rows on a 2.0m grid. Hand dig with care in proximity to existing trees and do not sever any roots larger than 2.5cm in diameter.

Planting seasons

13. Planting seasons:
- Deciduous trees and shrubs: Late October to late March
- Conifers and evergreens: September/October or April/May
- Container grown plants: At any time if ground and weather conditions are favourable
- Grass seeding: August/September

LANDSCAPE & BIODIVERSITY MANAGEMENT PLAN
Establishment and Maintenance Period (Years 1-5)

Pruning generally

1. All dead, damaged or diseased tree branches shall be removed and arisings removed from site. Trees and shrubs shall be pruned in the appropriate season to maintain health and vigour and to prevent encroachment on access route/storage areas, etc. The removal of vegetation will be timed for outside of the bird nesting season (March to August inclusive) to prevent disturbance of breeding birds. If this is not possible, a check for active nests will first be undertaken by an ecologist. If a nest is found, an appropriate buffer will be left undisturbed until any chicks have fledged, as confirmed by an ecologist.

Existing & Proposed Hedgerows

2. Hedgerows shall be pruned on one side per year alternating on a 2 or 3 year rotation in February, aiming to maintain a minimum height of 2.5 - 3m to promote bushy growth while providing continued habitat and foraging opportunities for wildlife. Hedgerow trees shall be retained and encouraged to develop to full maturity where not likely to cause overshading of panels.

Scrub & Brook Corridor

3. Areas to be thinned and trimmed to a height of between 1 and 3 meters on a 3 year rotational basis.

Woodland

4. Re-mulch planting area during years 1-3 to minimise competition from weeds and grasses.

Retained Grazing Pasture

5. Retained grassland inside perimeter fence to be sheep-grazed or mown on a regular basis as required to prevent shading of the panels or security features.
6. Retained grassland outside perimeter fence to be mown no more than once annually to encourage the establishment of a tall sward.

General

7. All areas of planting and grass shall be maintained, to include:
- Ample irrigation
- Weed control (herbicide application or hand weeding)
- Litter picking
- Topping up of mulch
- Checking condition of tree stakes and ties

7. All stakes and ties shall be inspected during the growing season and adjusted as necessary to ensure that they are secure and firm and that the ties are not chaffing the stem of the trees. Stakes and ties shall be removed and disposed of when plants become self supporting or at the end of the 5 year establishment period.

8. Planting which fails to thrive or dies during the 5-year establishment period shall be replaced within the next suitable planting season.

Long Term Management Plan

Pruning generally

1. All dead, damaged or diseased tree branches shall be removed and arisings removed from site. Shrubs shall be pruned in the appropriate season (see hedgerows, below) to maintain health and vigour and encroachment on access route/storage areas, etc. Avoid cutting operations from March to August (inclusive) to prevent disturbance of breeding birds.

Hedgerows

2. Hedgerows shall be pruned on one side per year, alternating on a 2 or 3 year rotation in February, and maintained a minimum height of 2.5 - 3m (otherwise stated on the plan) to promote bushy growth while providing continued habitat and foraging opportunities for wildlife. Hedgerow trees shall be encouraged to develop to full maturity.

Retained Grazing Pasture

3. Retained grassland to be sheep-grazed or mown as required to prevent shading of the panels or security features. Areas outside perimeter fence to be mown no more than once annually.

Scrub & Brook Corridor

4. Areas to be thinned and trimmed to a height of between 1 and 3 meters on a 3 year rotational basis.

Woodland

5. Carry out selective thinning and coppicing of approximately 30% of plants in Year 5. Leave deadwood and brush piles in situr.

General

6. All soft and hard landscaping shall be inspected annually by the Landscape Contractor and an approved arboriculturist and tree works carried out as necessary to ensure the continued health and safety of the trees. Regular weed control and litter picking operations will be required.

Hedgerow Mix (plant in a double-staggered row, at 0.5m centres in single species groups of 3-7 plants)

Abbrev	Species Name	Common Name	Height	General Specification	Percentage	Quantity
Co av	Corylus avellana	Common Hazel	80-100cm	1+2: Transplant - seed raised: Branched: 4 brks: B	20%	629
Cr mo	Crataegus monogyna	Common Hawthorn	80-100cm	1+2: Transplant - seed raised: 4 brks: B	35%	1101
Il aq	Ilex aquifolium	Common Holly	40-60cm	Leader with Laterals: 2L	10%	315
Pr sp	Prunus spinosa	Blackthorn	80-100cm	1+2: Transplant - seed raised: Branched: 3 brks: B	35%	786

Native Woodland Mix (plant at 4m centres)

Abbrev	Species Name	Common Name	Height	General Specification	Percentage	Quantity
Ac ca	Acer campestre	Field Maple	80-100cm	1+1: Transplant - seed raised: B	25%	16
Be pu	Betula pubescens	Downy Birch	80-100cm	1+1: Transplant - seed raised: B	25%	16
Il aq	Ilex aquifolium	Common Holly	60-80cm	Leader with Laterals: 5L	25%	16
So au	Sorbus aucuparia	Rowan	80-100cm	1+1: Transplant - seed raised: B	25%	16

Understorey Scrub Mix (plant at 0.5 plants/m² in single species groups of 3-5 plants)

Abbrev	Species Name	Common Name	Height	General Specification	Percentage	Quantity
Co sa	Cornus sanguinea	Common Dogwood	60-80cm	1+1: Transplant - seed raised: Branched: 3 brks: B	10%	398
Co av	Corylus avellana	Common Hazel	80-100cm	1+2: Transplant - seed raised: Branched: 4 brks: B	10%	398
Cr mo	Crataegus monogyna	Common Hawthorn	80-100cm	1+2: Transplant - seed raised: B	30%	1194
Li vu	Ligustrum vulgare	Common Privet	60-80cm	0/2; Cutting; branched; 3 breaks	5%	199
Pr sp	Prunus spinosa	Blackthorn	80-100cm	1+2: Transplant - seed raised: Branched: 3 brks: B	30%	1194
Sa ni	Sambucus nigra	Common Elder	80-100cm	1+2: Transplant - seed raised: Branched: 3 brks: B	10%	398
Vi op	Viburnum opulus	Guelder Rose	60-80cm	1+2: Transplant - seed raised: Branched: 4 brks: B	5%	199

The scaling of this drawing cannot be assured

Revision	Date	Drn	Ckd
-	-	-	-

LEGEND

N

- Site Boundary
- Existing Water Courses and Water Features ^
- Contours/Spot Heights (Metres AOD) ^
- Public Rights of Way / Pembrokeshire Coast Path
- Key Views
- Existing Interpretation Boards to be Replaced (details to be agreed)
- Proposed locations for reptile hibernacula (details below)
- Existing Hedgerow to be Retained (and managed to a minimum height of 2.5 - 3m)
- Existing Hedgerow to be Removed
- Proposed Hedgerow (to be maintained to a minimum height of 2.5 - 3m)
- Proposed Native Woodland Planting
- Existing Grassland within proposed perimeter fence to be Retained as Grazing Pasture or mown on a regular basis
- Existing grassland outside perimeter fence to be allowed to grow to a tall sward and cut no more than once annually
- Proposed General-purpose Meadow Mixture Emorsgate EM1 (to be cut annually)
- Proposed Security Fence
- Proposed Access Route
- Proposed Solar Panels

Specification for Reptile Hibernacula

- Minimum size to be 4m by 2m and 1m deep, ideally larger.
- Location in a sunny position, orientated so that the longer dimension faces south, in tussocky grassland.
- Construction methods:
  - Remove the turf from the footprint of the hibernaculum and set aside.
  - On well-drained soil excavate to a depth of approximately 50 cm and set aside spoil (this is unnecessary on poorly drained soils).
  - Fill the footprint or pit with core material. Materials likely to retain moisture are preferable, such as cut timber, brash and grubbed up tree roots. Other material such as inert hardcore, bricks, rocks, and building rubble may also be used. Materials that will decompose should not be placed beneath heavy components such as bricks or rocks, to reduce the risk of collapse.
  - Pack the larger spaces within the core materials with wood chippings, loose topsoil or spoil.
  - Cover the hibernaculum with the turves removed from the footprint, leaving openings to allow reptiles to access fill material.

FIGURE 6

Project
Dragon LNG Solar Farm
Milford Haven

Drawing Title
Landscape Strategy Plan

Date	Scale	Drawn by	Check by
20.10.2021	1:1,250 @A1 1:2,500 @A3	ML	JM

Project No	Drawing No	Revision
33264	LN-LP-10	A

0 10 20 30 40 50m

BARTON WILLMORE

Town Planning • Master Planning & Urban Design • Architecture • Landscape Planning & Design • Infrastructure & Environmental Planning • Heritage • Graphic Communication • Communications & Engagement • Development Economics

bartonwillmore.co.uk

ISO 9001 Quality Management

Offices at Birmingham Bristol Cambridge Cardiff Ebbsfleet Edinburgh Glasgow Leeds London Manchester Newcastle Reading Southampton

J:\33000\33264 - Dragon LNG Solar Farm\A4 - Drawings & Registers\Landscape\33264 LN-LP-10 Landscape Strategy Plan.dwg - A1