2. REFER TO SITE CLEARANCE DRAWINGS 60509148-SHT-30-0000-CT-0201 TO 0208 FOR DETAILS OF VEGETATION TO BE RETAINED OR REMOVED AND TRANS-LOCATED HEDGES.

MANUAL OF CONTRACT DOCUMENTS FOR HIGHWAY WORKS.

- 3. REFER TO ARBORICULTURAL REPORT DOCUMENT 60509148-LDRP-00002 FOR DETAILS OF ALL RETAINED
- TREES AND TREE PROTECTION REQUIREMENTS. 4. WHERE RETAINED TREES ARE LOCATED CLOSE TO A PROPOSED CUT SLOPE THEIR STABILITY AND LONG
- 5. REFER TO FENCING DRAWINGS 60509148-SHT-30-0000-CT-0301 TO 0308 FOR DETAILS OF HIGHWAY FENCING, 12. WHERE AREAS OF PROPOSED SOFT LANDSCAPE TREATMENT COINCIDE WITH AREAS OF ABANDONED WALLS AND ACOUSTIC BARRIERS.
- 6. REFER TO EARTHWORKS DRAWINGS 60509148-SHT-30-0000-CT-0621 TO 0627.
- 7. REFER TO ECOLOGICAL ASSESSMENT AND MITIGATION FOR DETAILS OF 'DEAD HEDGE'.

TERM VIABILITY SHOULD BE ASSESSED BY A SUITABLY QUALIFIED ARBORICULTURIST.

- 1. ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE CONTRACT SPECIFICATION AND THE 8. ALL PROPOSED PLANTING AREAS ARE TO BE CULTIVATED AS PER SPECIFICATION 3004 AND APPENDIX 30/4.
  - WHERE EXISTING TREE CANOPY EXTEND OVER AREAS OF PROPOSED GRASS, SOIL PREPARATION WILL BE UNDERTAKEN WITH REGARD TO THE PRESENCE OF TREE ROOTS.
  - 10. FINAL LANDSCAPE MITIGATION DESIGN WILL BE SUBJECT TO AMENDMENTS TO RESPOND TO FINAL SITE
  - 11. FOR SHRUB AND INTERMITTENT TREE PLANTING AREAS THE LARGER STOCK, I.E., THOSE IDENTIFIED AS TREES WITHIN THE SCHEDULES WILL ACCOUNT FOR 20% OF THE TOTAL NUMBER OF PLANTS WITHIN EACH INDIVIDUAL PLANTING AREAS.
  - CARRIAGEWAY, WHERE POSSIBLE TOP SOIL AND SUB SOIL PROFILES ARE TO BE REINSTATED TO MATCH THE SURROUNDING SOIL HORIZONS, WITH THE FOLLOWING MINIMUM TOP SOIL DEPTHS
  - SEEDED AREAS 100 mm
  - PLANTED AREAS (EXCLUDING TREES) 300 mm
  - PLANTED AREAS (INCLUDING TREES) 300 mm

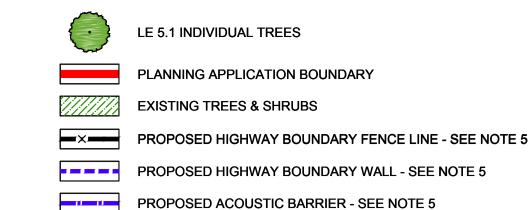
LE 1.1 AMENITY GRASS AREAS LE 1.3 SPECIES RICH GRASSLAND LE 1.6 OPEN GRASSLAND LE 2.4 LINEAR TREES AND SHRUBS LE 2.4.1 LINEAR TREE AND SHRUB MIX 2 LE 2.5 SHRUBS WITH INTERMITTENT TREES LE 2.6 SHRUBS

**LE 4.2 NATIVE HEDGEROW** 

LE 4.2.1 TRANSLOCATED NATIVE HEDGEROW

LE 4.2.2 NATIVE HEDGEROW - AMENITY MIXTURE

LE 4.4 NATIVE HEDGEROW WITH TREES



PROPOSED 'DEAD HEDGEROW' ECOLOGICAL FEATURE



NORTHERN

CLIENT WELSH GOVERNMENT



Llywodraeth Cymru Welsh Government

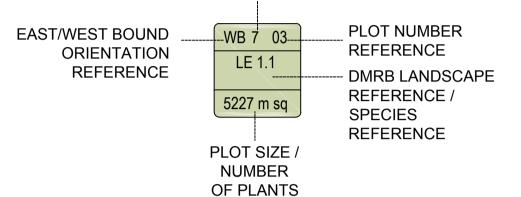
### CONSULTANT

**AECOM** 1 CALLAGHAN SQUARE CARDIFF CF10 5BT TEL: (029) 20674600 FAX: (029) 20674699

SAFETY. HEALTH AND ENVIRONMENTAL INFORMATION pecific residual risks (Reference shall also be made to the or Hazards Refer to Document: Safety in Design - Designers

## LABELLING FORMAT

SHEET NUMBER REFERENCE



## LE1.1 - AMENITY GRASS SEED MIX/ LE1.6 OPEN GRASSLAND

### Sowing rate of 35g/m<sup>2</sup>

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<b>5</b> )
)
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)
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)
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# LE1.3 - SPECIES RICH GRASSLAND

Sowing rate of 5g/m²	
Species	Percentage
	(%)
Wild Flowers	
Achillea millefolium	0.5
Achillea ptarmica	0.2
Betonica officinalis - (Stachys officinalis)	1
Centaurea nigra	2.5
Filipendula ulmaria	2
Galium verum	1.5
Geum rivale	0.4
Leucanthemum vulgare	0.6
Lotus pedunculatus	0.8
Plantago lanceolata	1
Primula veris	0.2
Prunella vulgaris	1.5
Ranunculus acris	2.5
Rhinanthus minor	1.5
Rumex acetosa	1.5
Sanguisorba officinalis	1
Silene flos-cuculi - (Lychnis flos-cuculi)	0.2
Succisa pratensis	0.6
Vicia cracca	0.5
Grasses	
Agrostis capillaris	10
Alopecurus pratensis	2
Anthoxanthum odoratum	2
Briza media	1
Cynosurus cristatus	32
Deschampsia cespitosa	1
Festuca rubra	24
Hordeum secalinum	1
Schedonorus pratensis - (Festuca pratensis)	7

### NOTES

TO BS5837:2012.

THE SPECIES WILL INCLUDE (BUT WILL NOT NECESSARILY BE RESTRICTED TO) THOSE LISTED.

THE HANDLING OF PLANTS TO BE IN ACCORDANCE WITH NATIONAL PLANT SPECIFICATION 'HANDLING AND ESTABLISHING LANDSCAPE PLANTS'.

ALL PLANTS AND PLANTING OPERATIONS ARE TO COMPLY WITH THE REQUIREMENTS AND RECOMMENDATIONS OF ALL CURRENT RELEVANT BRITISH STANDARD SPECIFICATION INCLUDING:

- BS 3936-1:1992. NURSERY STOCK. SPECIFICATION FOR TREES AND SHRUBS
- BS 3882: 2015 SPECIFICATION FOR TOPSOIL AND REQUIREMENTS FOR USE (INCORPORATING CORRIGENDUM NO.1)
- BS 4428:1989. CODE OF PRACTICE FOR GENERAL LANDSCAPE OPERATIONS (EXCLUDING HARD SURFACES) (AMD 6784)
- BS 5837: 2012 TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION RECOMMENDATIONS
- BS 7370-3:1991. GROUNDS MAINTENANCE. RECOMMENDATIONS FOR MAINTENANCE OF AMENITY AND FUNCTIONAL TURF (OTHER THAN SPORTS TURF)
- BS 8545: 2014 TREES: FROM NURSERY TO INDEPENDENCE IN THE LANDSCAPE RECOMMENDATIONS
- BS 8601:2013 SPECIFICATION FOR SUBSOIL AND REQUIREMENTS

ALL PLANTING SPECIFIED SHOULD USE EXISTING GOOD QUALITY SITE WON TOPSOIL AND/OR IMPORTED, CLEAN/INERT HORTICULTURAL AMELIORANTS FROM SUSTAINABLE SOURCES. ALL PLANTING TO BE CARRIED OUT IN OPTIMAL PLANTING PERIOD OCTOBER THROUGH UNTIL MARCH AND DURING APPROPRIATE CLIMATIC CONDITIONS. WHERE POSSIBLE, WHILST ALLOWING CONSTRUCTION ACTIVITIES, EXISTING TREES WITHIN AND ADJACENT TO THE APPLICATION BOUNDARY ARE TO BE RETAINED AND PROTECTED

#### LE2.4 - LINEAR TREES AND SHRUBS

Species	Percentage (%)	Height (cm)	Number of times	Root Condition	Density	Form
		, ,	transplanted			
Alnus glutinosa	15	60-80	1+1	BR	2 m centres	Transplant
Betula pendula	7.5	40-60	1+1	BR	2 m centres	Transplant
Corylus avellana	7.5	40-60	1+1	BR	2 m centres	Transplant
Crataegus monogyna	2.5	40-60	1+1	BR	2 m centres	Transplant
llex aquifolium	5	30-40		C	2 m centres	Leader with laterals
Quercus robur	17.5	60-80	1+1	BR	2 m centres	Transplant
Prunus avium	2.5	40-60	1+1	BR	2 m centres	Transplant
Prunus spinosa	2.5	40-60	1+1	BR	2 m centres	Transplant
Salix cinera	5	60-80	1+1	BR	2 m centres	Transplant
Tilia cordata	2.5	60-80	1+1	BR	2 m centres	Transplant

## LE2.4.1 - LINEAR TREE AND SHRUB MIX 2

Species	Percentage	Height	Number of	Root	Density	Form
	(%)	(cm)	times	Condition		
			transplanted			
Alnus glutinosa	15	40-60	1+1	BR	2 m centres	Transplant
Acer campestre	10	60-80	1+1	BR	2 m centres	Transplant
Betula pendula	5	60-80	1+1	BR	2 m centres	Transplant
Corylus avellana	25	40-60	1+1	BR	2 m centres	Transplant
Crataegus monogyna	25	40-60	1+1	BR	2 m centres	Transplant
Malus sylvestris	5	60-80	1+1	BR	2 m centres	Transplant
Prunus avium	10	40-60	1+1	BR	2 m centres	Transplant
Quercus robur	5	60-80	1+1	BR	2 m centres	Transplant

## LE2.5 - SHRUBS WITH INTERMITTENT TREES

Species	Percentage	Height	Girth	Number of	Root	Pot	Density	Form
	(%)	(cm)	(cm)	times	Condition	Size		
				transplanted		(It)		
Acer campestre	15	30-80		1+1	BR		2 m centres	Transplant
Crataegus monogyna	15	40-60		1+1	BR		2 m centres	Transplant
Corylus avellana	30	40-60		1+1	BR		2 m centres	Transplant
llex aquifolium	5	30-40		1+1	С	1L	2 m centres	Leader with laterals
Prunus spinosa	10	40-60		1+1	BR		2 m centres	Transplant
Malus sylvestris	5	60-80		1+1	BR		2 m centres	Transplant
Rhamnus cathartica	5	40-60		1+1	BR		2 m centres	Transplant
Salix caprea	5	40-60		1+1	BR		2 m centres	Transplant
Sorbus aucuparia	5	60-80		1+1	BR		2 m centres	Transplant
Viburnum lantana	5	40-60		1+1	BR		2 m centres	Transplant
Trees								
Acer campestre	15	250-300	8-10	2x	BR		25 m centres	
Corylus avellana	20	250-300	8-10	2x	BR		25 m centres	
Quercus robur	65	250-300	8-10	2x	BR		25 m centres	

# LE2.6 - SHRUBS

Species	Percentage	Height	Number of	Root	Pot	Density	Form
	(%)	(cm)	times	Condition	Size		
			transplanted		(It)		
Crataegus monogyna	20	40-60	1+1	BR		1.5m centres	Transplant
Corylus avellana	50	40-60	1+1	BR		1.5m centres	Transplant
llex aquifolium	5	30-40	1+1	С	1L	1.5m centres	Leader with laterals
Prunus spinosa	15	40-60	1+1	BR		1.5m centres	Transplant
Rosa canina	10	40-60	1+1	BR		1.5m centres	Transplant

#### LE4.2 - NATIVE HEDGEROW

Species	Percentage (%)	Height (cm)	Number of times transplanted	Root Condition	Density	Form
Acer campestre	15	40-60	1+1	BR	30 cm centres	Transplant
Corylus avellana	15	40-60	1+1	BR	30 cm centres	Transplant
Crataegus monogyna	55	40-60	1+1	BR	30 cm centres	Transplant
Prunus spinosa	5	40-60	1+0	BR	30 cm centres	Transplant
Viburnum opulus	5	40-60	1+1	BR	30 cm centres	Transplant
Viburnum lantana	2	40-60	1+1	BR	30 cm centres	Transplant
Rhamnus cathartica	3	40-60	1+1	BR	30 cm centres	Transplant

## LE4.2.1 - NATIVE HEDGEROW - AMENITY MIXTURE

Species	Percentage (%)	Height (cm)	Number of times transplanted	Root Condition	Density	Form
Acer campestre	15	40-60	1+1	BR	30 cm centres	Transplant
Cornus sanguinea	20	40-60	1+1	BR	30 cm centres	Transplant
Crataegus monogyna	40	40-60	1+1	BR	30 cm centres	Transplant
Ilex aquifolium	10	20-40	-	С	30 cm centres	Transplant
Prunus spinosa	5	40-60	1+1	BR	30 cm centres	Transplant
Viburnum opulus	5	40-60	1+1	BR	30 cm centres	Transplant
Viburnum lantana	5	40-60	1+1	BR	30 cm centres	Transplant

#### LE 4.4 - NATIVE HEDGEROW WITH TREES Native hedgerow as per LE4.2 plus the following trees

Transfer and por LE 112 plant the femouring trees								
Species	Percentage	Height	Girth	Number of	Root			
	(%)	(cm)	(cm)	times	Condition	Form		
				transplanted				
Alnus cordata	10	300-350	12 - 14	2x	CG	Standard		
Quercus robur	70	250-300	12 - 14	2x	CG	Standard		
Tilia cordata	20	300-350	12 - 14	2x	CG	Standard		

LE5.1 - INDIVIDUAL TRE						
Species	Percentage (%)	Height (cm)	Girth (cm)	Number of times transplanted	Root Condition	Form
Alnus cordata Quercus robur Tilia cordata	10 70 20	300-350 250-300 300-350	12 - 14	2x	CG CG CG	Standard Standard Standard

PLANNING SUBMISSION ISSUE

SSUE/REVISION

15-03-2017 PLANNING SUBMISSION ISSUE DATE DESCRIPTION

**KEY PLAN** 

60509148 SHEET TITLE

**PROJECT NUMBER** 

LANDSCAPE PROPOSALS SHEET 8 OF 8 SHEET NUMBER

60509148-SHT-30-0000-CT-3008