

Arboricultural Statement

Portway Bridleway, Upper Heyford

On behalf Heyford Park Estates Ltd

11th June 2018

Prepared by: Michael Paginton TechArborA

**BS5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION AND CONSTRUCTION –
RECOMMENDATIONS'**

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REVISIONS:

Date	Rev	Description	Initials
11.06.18	-	Draft Issue	MGP
12.06.18	-	Final Issue following client review	MGP

1 INTRODUCTION

- 1.1 LandArb Solutions Ltd have been instructed by Heyford Park Estates Ltd to prepare an Arboricultural Statement to accompany an application to discharge a planning obligation for a proposed new bridleway to the western end of the runway on the flying field, RAF Upper Heyford.
- 1.2 The scope of the assessment was to visit the site and to re-survey relevant trees, in accordance with BS5837:2012 '*Trees in relation to design, demolition and construction – recommendations.*' LandArb Solutions was requested to then assess the potential impact of proposals and present the following information:
- Arboricultural Statement; and
 - Tree Retention/Removal and Protection Plan.

2 REPORT LIMITATIONS

- 2.1 Trees are living organisms as well as self-supporting dynamic structures. Their physiological and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. They have the potential to fail structurally, without prior manifestation of any reasonably observable symptoms. It is therefore not possible to categorically state that any tree is 'safe'.
- 2.2 This report is prepared for planning application purposes only and does not evaluate the degree of risk posed by trees.
- 2.3 It is beyond the scope of this report to comment in relation to structural damage – direct or indirect, existing or potential – that might be associated with vegetation growth, or vegetation-related soil subsidence or heave.
- 2.4 Any management recommendations set out within this report are of an advisory and preliminary nature only and relate to trees within the context of current site use. Any physical alterations to site conditions subsequent to the date of the site survey will have the potential to change/invalidate the findings and recommendations of this report.
- 2.5 The findings and recommendations of this report are limited to a period of 24 months from the date of this report.

3 DOCUMENTS AND INFORMATION RECEIVED

3.1 For the purposes of preparing this Arboricultural Statement LandArb Solutions were provided with the following information:

1. Site wide tree survey and tree survey schedule prepared by Pegasus Group between 2013-2017.
2. Proposed Bridleway Routes, Pegasus Group, Drawing D.0342_51 Sheet 1 Rev C 10.04.2018
3. Proposed Northern Fencing Detail, Pegasus Group, Drawing D.0341_51_Rev C, Sheet 3, dated 9th April 2018.
4. Proposed Fencing Detail, Pegasus Group, Drawing D.0341_51_Rev C, Sheet 4, dated 9th May 2018.

4 DESCRIPTION OF THE SITE AND TREES

Description of the site

- 4.1 The site is located to the western end of the runway on the flying field at former RAF Upper Heyford.
- Post Code OX25 5HF
 - Grid reference: SP 50267 26749
- 4.2 The majority of the site is open and free from woody vegetation and built structures. Trees and woody vegetation are confined to the northern and southern boundaries of the flying field with the interior being void of woody vegetation comprising only of mown grassed areas and hard surfacing relating to the former runway and perimeter roadway.
- 4.3 Beyond the north of the site is an arable field set behind the concrete post and chain link fence which forms the perimeter of the airfield. Set back approximately 5-7m from this fence inside the site area is a mixed species plantation set on an earth embankment (G1023 and G1024). To the east and west of the site (north/south alignment of the proposed bridleway) is the former airfield runway and associated hard surfacing and closely mown grassed areas. The southern part of the site connects to an existing bridleway set behind another chain-link perimeter fence. A mixed species group of trees/tree hedge is set immediately behind the chain-link fence.

Tree Survey

- 4.4 The site area was included within the site wide tree survey carried out by Pegasus Group between 2013-2017.
- 4.5 Relevant survey items to proposals identified in the previous site wide tree survey include H1018 (Category B), G1023 (Category C) and G1024 (Category B).
- 4.6 G1023 and G1024 are located to the northern part of the site and south of the Airfield perimeter chain-link fence. G1024 and eastern part of G1023 are located on a manmade earth embankment. Both groups comprise mixed species tree planting consisting of early mature lime, pine, cherry and Swedish whitebeam.

- 4.7 LandArb Solutions undertook a re-survey of the site area on 6th June 2018. The re-survey reviewed the accuracy of the previous survey information, note any changes and provide an updated schedule of data where relevant. The re-survey was carried out in accordance within BS.5837:2012. The location of existing trees is shown on the Tree Retention/Removal and Protection Plan in Appendix 3 and survey data is set out within Appendix 2.
- 4.8 Select photographs of the site are shown below and on the following pages:



Photoview 1: View looking east towards G1024 in the background. To the right of frame is G1023 and left of frame existing chain-link fence to be replaced with 1.5m wooden post and rail.



Photoview 2: View looking north towards the existing chain-link perimeter fence with the western edge of G1023 to right of frame.



Photoview 3: View looking west along the chain-link perimeter fence with G1023 to the left of frame.



Photoview 4: View looking east towards G1024 where the new southern chain-link fence alignment and access to the earth embankment is proposed.



Photoview 5: View looking west from the earth embankment along the proposed alignment of the southern chain-link fence within G1024 towards the location of viewpoint 4 outside of the group beyond.



Photoview 6: View looking west from the eastern side of H1018 towards the elder bush growing in front of the proposed connection to the existing bridleway at the southern part of the site.



Photoview 7: View looking north west within H1018. The proposed bridleway connection point can be seen in the lighter area to the right of frame.



Photoview 8: View looking south west towards the eastern edge of the northern end of H1018. The tree visible to the right of frame is an early/mature to mature sycamore growing along the existing chain-link fence line. The proposed connection to the existing bridleway will come in just west of the northern side of this tree, indicated by the blue line.

5 STATUTORY TREE PROTECTION

- 5.1 The site is located within the RAF Upper Heyford Conservation Area.
- 5.2 It must therefore be noted that the trees that are located within the Conservation Area are subject to statutory protection. Notwithstanding specific exemptions and in general terms, a Conservation Area prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees or woodlands without the prior consent of the local planning authority.
- 5.3 Penalties for contravention of a Conservation Area tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £25,000 if convicted in a Magistrates' Court, or an unlimited fine if the matter is determined by the Crown Court.
- 5.4 Any proposed tree works that are planned to be carried out on site must be carried out in accordance with the statutory controls outlined.

6 DEVELOPMENT PROPOSALS AND IMPACT ASSESSMENT

Description of Proposals

- 6.1 Proposals are to create a new hard surfaced bridleway that runs on a north/south alignment to provide a connection between an existing offsite bridleway (388/1/10) to the north of the site to another offsite bridleway (388/1/20) to the south of the site.
- 6.2 Proposals for a new bridleway will comprises a 2.5m wide Cowell gravel path flanked to the north and west by a 1.5m timber post and rail fence and 2.4m chain link fence on concrete posts to the south and east of the proposed path. The fence alignments have been designed to allow for grass strips of varying widths to be retained between the proposed path and fences.
- 6.3 Details of the proposed bridleway is shown on Pegasus Drawing D.0342_51 Rev C in Appendix 1.
- 6.4 These proposals and their relationship with existing trees on site are shown on the Tree Retention/Removal and Protection Plan in Appendix 3.

Arboricultural Impact Assessment

- 6.5 With reference to BS5837:2012 '*Trees in relation to design, demolition and construction*', this AIA evaluates the direct and indirect effects of proposals on the site's arboricultural resource. With reference to BS5837:2012, the AIA includes the following information:

- Tree Retention/Removal and Protection Plan (Appendix 3); and
- a description of the potential impact of proposals (Appendix 4 and 6.6-6.19 below).

Removal of existing structures

- 6.6 No existing structures or hard surfaces are proposed to be removed from within the RPA of retained trees.

- 6.7 In terms of removal of existing structures, it is noted that the existing chain-link fence to the north of G1023 is to be removed and replaced with wooden post and rail fence. However, this is located away from retained trees.

Installation of new 2.5m gravel path

- 6.8 Proposals for a new bridleway include construction of a 2.5m wide gravel path. The majority of the route is located away from retained trees. Part of this pathway will run north of G1023. It is proposed this path will be set 1m from the existing perimeter fence with a 3m area of grass to the south between the path and proposed new chain link fence along the frontage with G1023. In this context, no new hard surfacing is to be constructed within the RPA of any retained tree and no tree works are required to implement the proposed gravel path. It is therefore considered that proposals for a gravel path are acceptable from an arboricultural perspective.

Installation of new fencing

- 6.9 Proposals seek to install two types of new fencing to run either side of the proposed new bridleway. These include a 1.5m tall wooden post and rail fence and 2.4m high chain-link security fencing on concrete posts.
- 6.10 The alignment of the proposed 1.5m high wooden post and rail fence is located away from retained trees and will replace in part existing chain-link fence to the north of the site before forming and defining the western boundary of the proposed bridleway on its north/south alignment. In this context no impacts are envisaged from construction of the post and rail fencing in relation to retained trees.
- 6.11 The proposed bridleway route plan shows that a new 2.4m tall chain-link fence with concrete posts will be installed to define and form the eastern boundary of the bridleway. As shown on the Tree Retention/Removal and Protection plan it is proposed to construct part of the chain-link fence to the north of G1023. The chain link is to be constructed within the gap between G1023 and the existing perimeter fencing, set back from the existing perimeter fence by 6.5m. As shown in view point 1, there is sufficient space available to enable chain-link fencing to be constructed to the

north of G1023 without requiring any tree removal. The current gap between the canopy edge and perimeter fence is approximately 7m, although this does drop to approximately 5m in some locations. In this context, some minor canopy pruning in the form of a lateral reduction will need to be undertaken along the northern side of G1023 where required to ensure at least a 0.5m clearance of the proposed chain link to allow for its erection. It is considered that this would be acceptable from an arboricultural perspective and unlikely to give rise to significant effects on the trees within the group.

- 6.12 The proposed new chain-link fence is shown to cut through G1024 in two locations. This is to enable public access to the top of the embankment, which is immediately to the east of the canopy spread of G1024, to allow public views across the flying fields. The alignment of the fencing through G1024 is likely to require a small number of stems to be removed and canopy pruning to enable construction and clearance of fencing (see Photoview 5) Given the nature of proposals there is flexibility to align the fencing around existing trees and avoid stem removal as far as possible.
- 6.13 Proposals also identify a viewing platform on the earth embankment within G1024. It should be noted that this is shown on the Proposed Bridleway Plan to indicate proposed access to the top of the earth embankment for views across the flying field but will not involve the construction of any built form. However, to allow unobstructed public access an informal pathway through G1024 would be needed. During the site visit it was observed that where the alignment of the southern part of the proposed chain-link fences runs through G1024, subject to canopy lifting of trees on the edges of this group an informal access to the embankment can be made (see photoview 5). Other informal paths could also be created within G1024 provided the canopies of trees on the edges of the group were lifted to allow passage.
- 6.14 In order to connect the proposed bridleway with the existing bridleway to the south of the site a section of the existing chain-link fencing on the north side of H1018 will need

to be removed. In addition, existing elder stems to the front of the existing fencing (see photoview 6) will require removal.

- 6.15 As shown in photoview 7 trees within H1018 are located on the boundaries of the bridleway and existing chain-link fencing. There is a multi-stemmed sycamore shown in photoview 8 on the eastern aide of H1018. The proposed new chain-link fencing is to connect with existing fencing in this location. It is likely some lower canopy pruning could be required as part of the construction process, however the tree would not need to be removed.

Summary of Tree Removal and pruning works

- 6.16 In light of the above, to implement proposals the following tree works will be required:

- Selective stem removal and canopy pruning of nearby retained trees to allow chain-link fencing to be installed in two locations through G1024 as shown on the Tree Retention/Removal and Protection Plan. Pruning works to retained trees to ensure at least 0.5m clearance either side of fencing alignment.
- Canopy lifting to eastern and western side to ensure at least 2.4m clearance to allow for passage through G1024 to access earth embankment to view the lying field.
- Lateral reduction to G1023 on its northern and western side to allow for chain-link fencing to be installed with at least 0.5m of clearance.
- Elder stems to be removed from the frontage of H1018 where the proposed bridleway will connect with the existing. Overhanging branches from neighbouring trees to be pruned to ensure clearance.

- 6.17 Paragraph: 134 Reference ID: 36-134-20140306 of the Planning Practice guidance advises that an Authority may treat a planning application for development in a conservation area that includes tree works as a S211 notice where it is clearly stated that it should be considered as such. This application and tree works outlined within this report should be considered as a S211 notification of tree works within a Conservation Area.

Summary of impacts

- 6.18 In light of the above assessment it can be seen that:

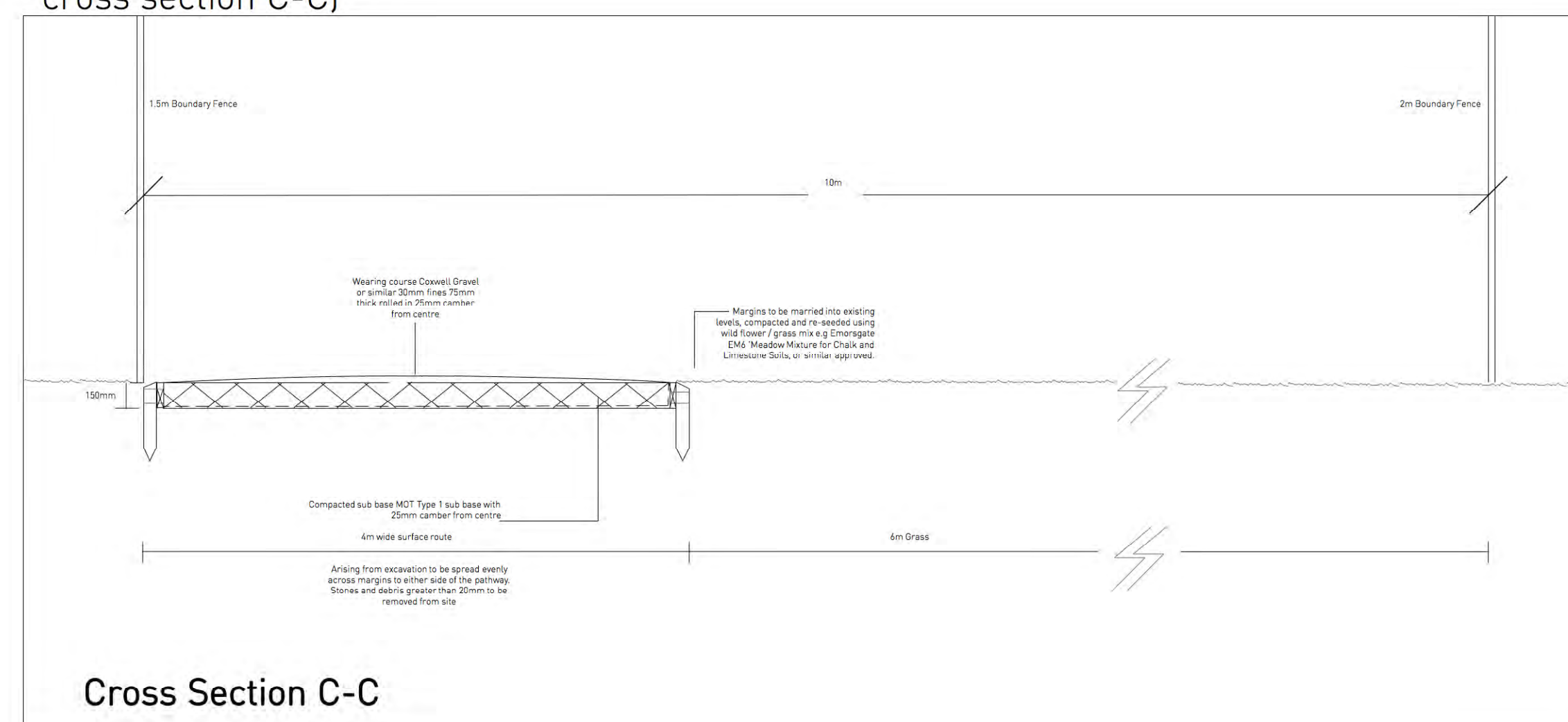
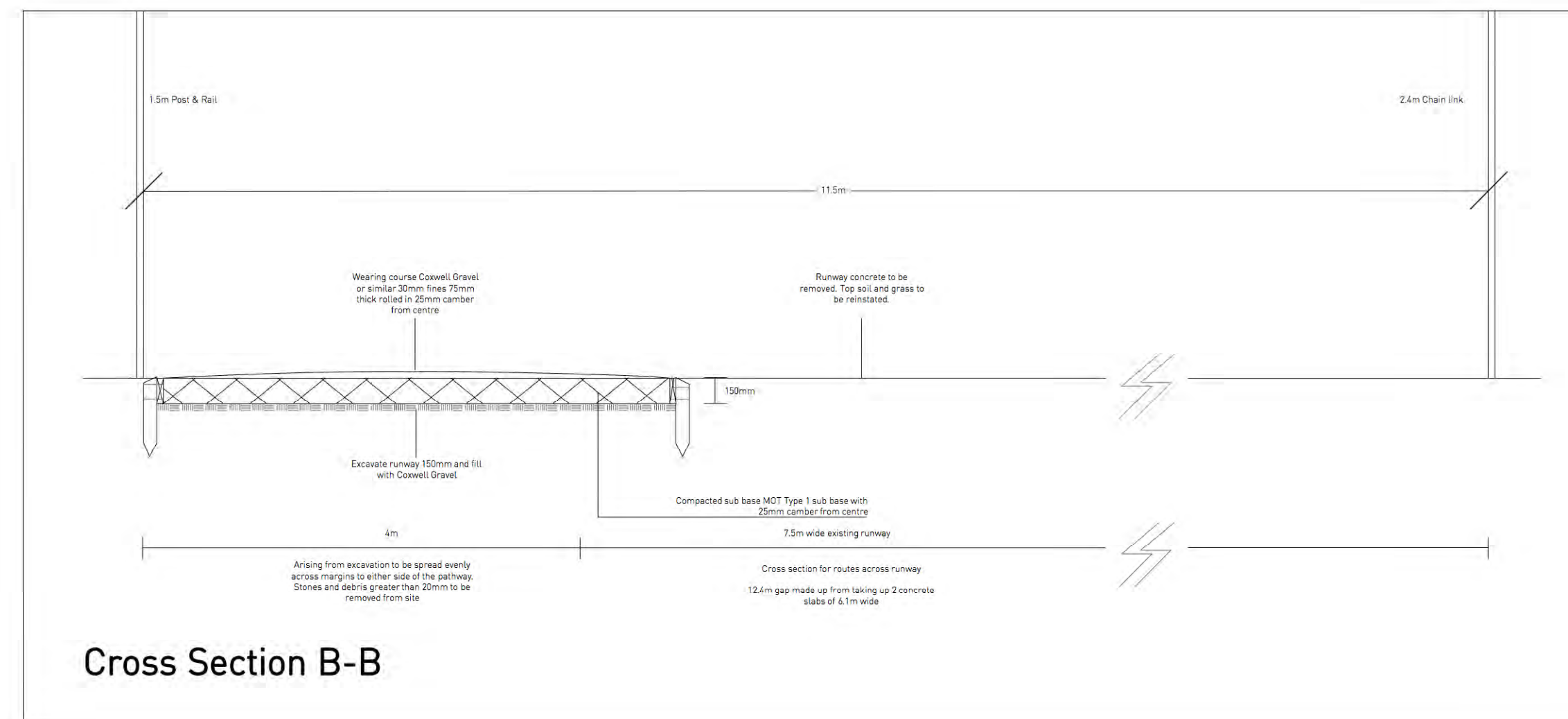
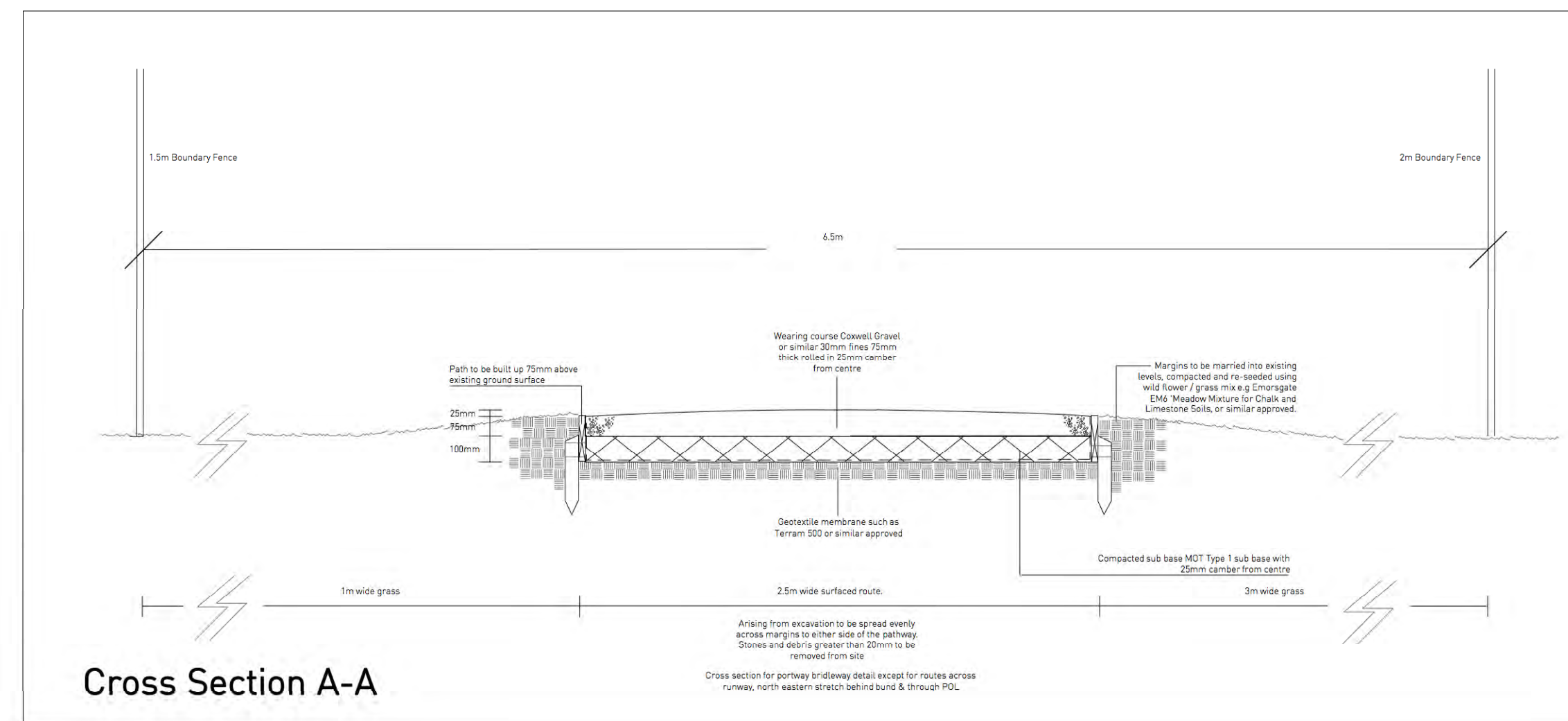
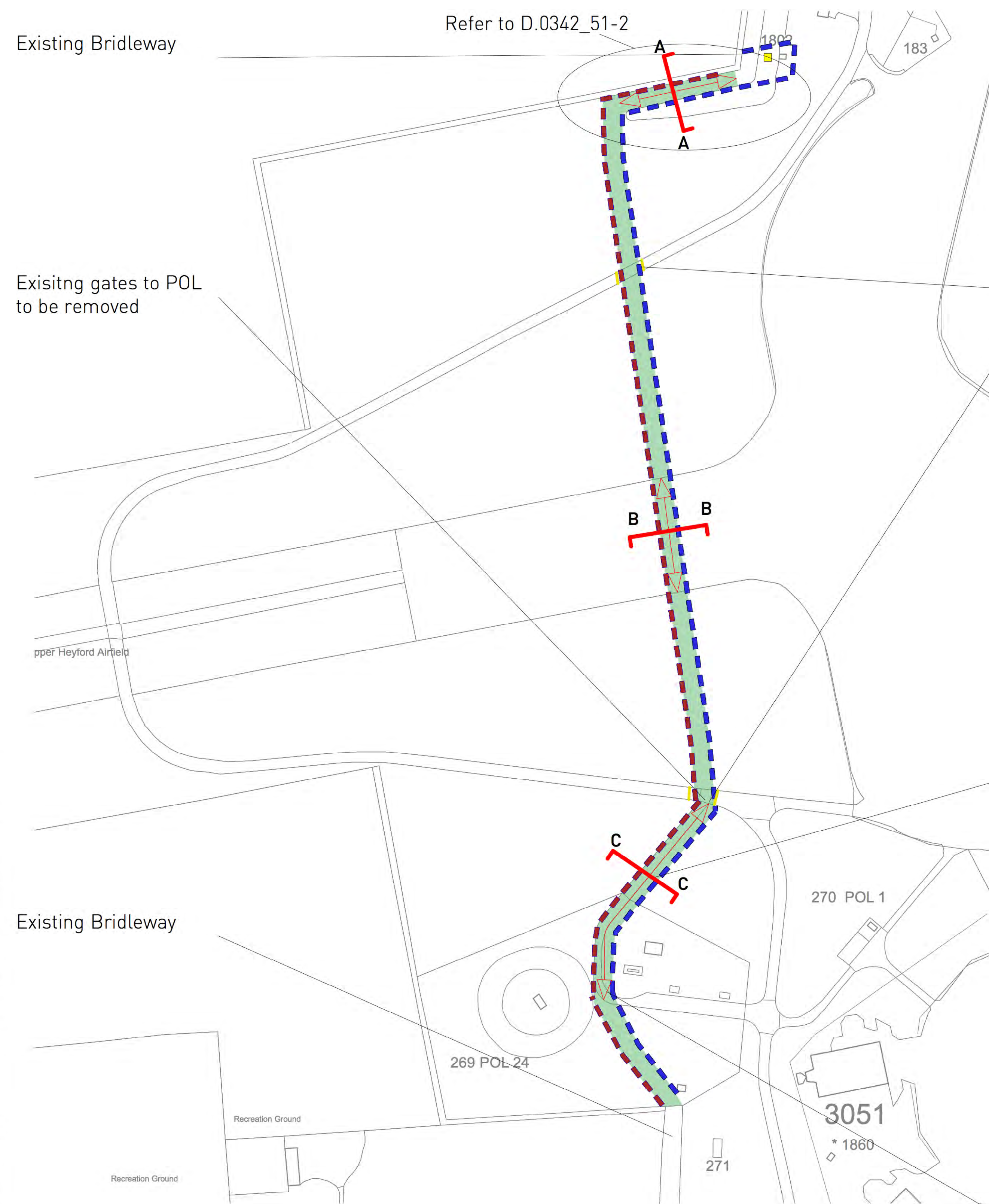
- The proposed gravel path and 1.5m post and rail fence will be located outside of all RPAs and will not require any tree works.
- The northern canopies of G1023 will require lateral reductions in some location to allow for the construction of a 2.4m chain-link fence and allow for 0.5m clearance as a minimum.
- Canopy pruning, and selective stem removal will be required in two locations in relation to G1024 to enable chain-link fence construction.
- Further canopy pruning/lifting within G1024 will be required to allow passage through G1024 to allow public access to the top of the earth embankment for views across the flying fields.





6.19 Overall it is considered that proposals are acceptable from an arboricultural perspective. Although canopy pruning, and some selective stem removal will be required in relation to chain-link fence installation, the integrity of H1018, G1023 and G1024 can be successfully retained and proposals can be implemented without unacceptable adverse impacts to existing trees.

7 TREE PROTECTION

- 7.1 A Tree Retention / Removal and Protection Plan is attached in Appendix 3.
- 7.2 The Tree Retention/Removal and Protection Plan demonstrates the feasibility of protecting retained trees during construction.
- 7.3 The following growing methods/principles should be employed to reduce potential impacts to retained trees:
- Selective stem removal and canopy pruning in relation to H1018, G1023 and G1024 should be undertaken in accordance with BS.3998:2010 by a suitably competent and qualified contractor/arborist.
 - The exact alignment of the proposed chain-link through G1024 should be determined and marked out on site with inputs from the project arboriculturist to minimise the number of stem removals/pruning that will be necessary.
 - The proposed chain-link fence should be installed along northern side of G1023 and temporary tree protection fencing installed on western side of G1024 prior to gravel pathway construction and removal of existing perimeter chain-link fence at northern part of the site to act as tree protection fencing. If the proposed chain-link fence cannot be installed prior to other construction works, temporary tree protection fencing should be installed in its place until it is ready to be installed.
 - Postholes for the concrete chain-link fence posts along the northern side of G1023 and within G1024 should be excavated by hand. Where roots are discovered 25mm or below these are to be pruned back to the excavation using a sharp cutting tool. Roots over 25mm or large fibrous groups are to be retained and alternative post hole locations chosen. All postholes are to be lined with an impermeable membrane prior to any concrete or cement pouring.
 - No materials or machinery is to enter any RPA of retained trees. No mixing of concrete or cement should occur within any RPA.
 - Should it become apparent that additional tree removal/pruning may be required that has not been identified within this report or any diversion required from prescribed protection measures, advice should be sought from the project arboriculturist and Local Authority should be notified.

APPENDIX 1: PROPOSED BRIDLEWAYS ROUTES PLAN



- ### KEY
- | | |
|---|--|
|  | Portway Bridleway Link |
|  | 2.4m High Chain Link on Concrete Posts |
|  | 1.5m Wooden 4 Bar Post & Rail |
|  | 4m wide gates across perimeter road |

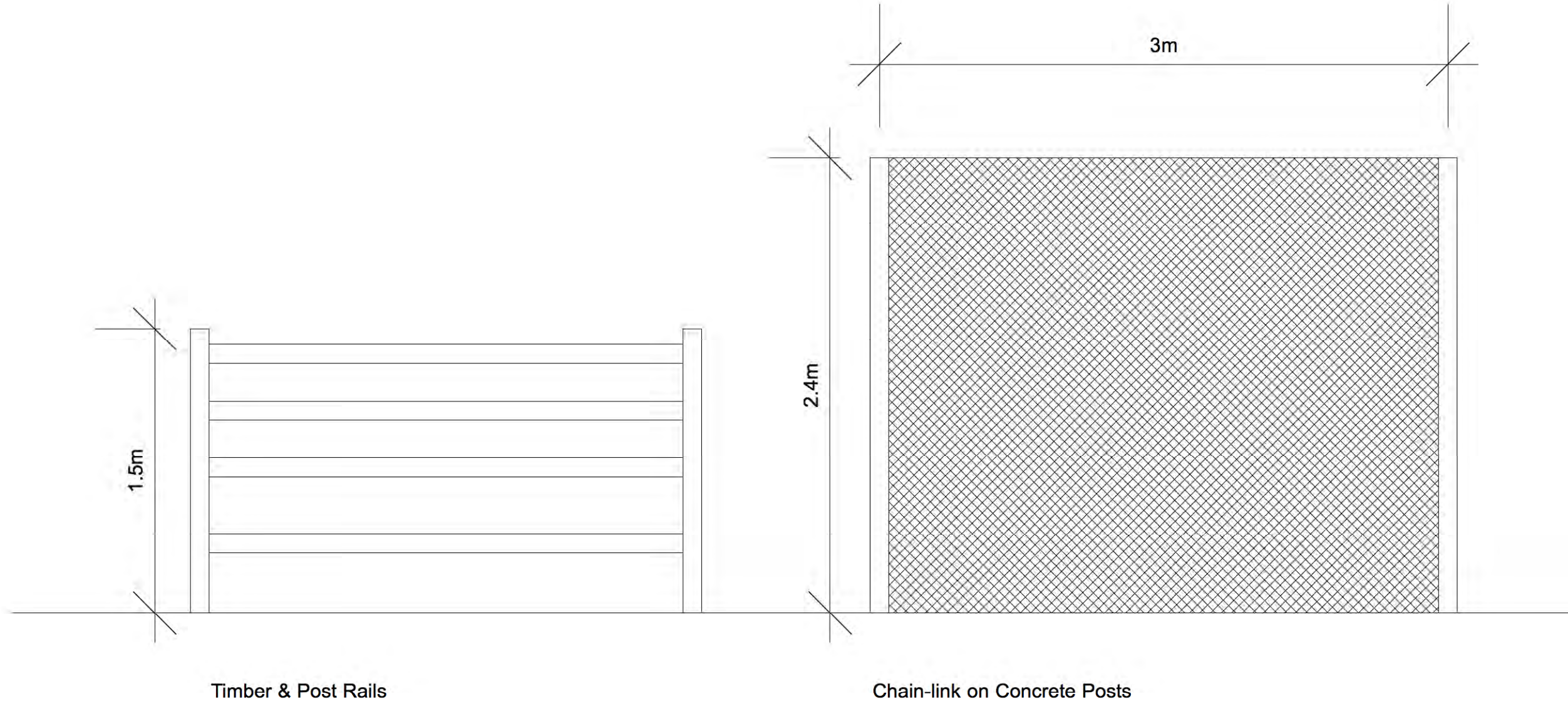
➤ 4M wide gates across perimeter of road

Existing road through POL to be filled with Coxwell Gravel to form anti-slip surface flush with adjoining grassland (refere to cross section C-C)

- Existing fencing through POL to be removed & replaced

Heyford Park - Proposed Bridleways Routes

Pegasus
Design

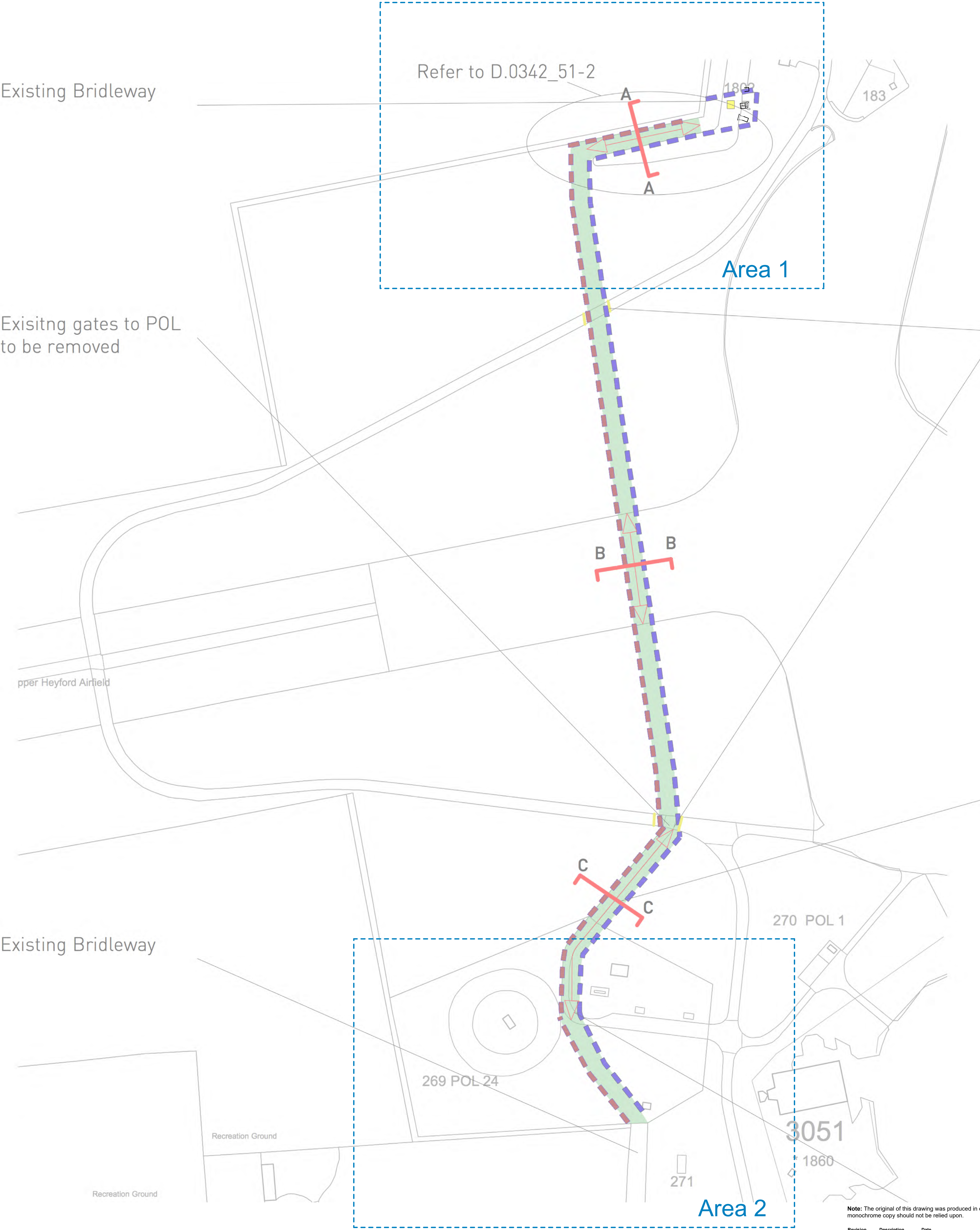


HEYFORD PARK - PROPOSED FENCING DETAIL

APPENDIX 2: TREE SURVEY SCHEDULE

Date: Original Survey by Pegasus 2013-2017. Resurvey by Landarb Solutions 10.06.18		Site: Portway Bridleway Upper Heyford										Surveyor: MP		Client: Dorchester Group				Job no: 680						
Ref number	Species	Height	Esti mat e	Stem dia	Es tim ate	Spread						Esti mat e	Crown clearance height				Life stage	General observations Physiological and structural condition. Preliminary management recommendations	Structural Condition	Physiological Condition	ULE	Quality grading	RPA radius	RPA area
						N	Esti mat e	S	Estimate	E	Esti mate		W	1st branch	Estim ate	1st branch direction								
H1018	Elder, hawthorn, horse chestnut, sycamore, blackthorn	7	-	200	-	N						N/A	-	N/A	0	-	M	Unmanaged tree hedge, some dead trees, thinning in places, varying heights from, 4-8m. Running along boundary with Airfield. Chainlink fence on concrete posts within. Southern section comprises of vegetation either side of bridleway.	Fair	Fair	20+	B2	2.4	18.1
G1023	Swedish white beam, lime, cherry, pine	9	-	300	-	As on plan						N/A	-	N/A	0	-	EM	Mixed species planted group. Stems generally semi/early mature to 300mm with some smaller stems below 200mm within. Western end single row, eastern side of group three stems deep.	Good	Good	20+	C2	3.6	40.7
G1024	Swedish white beam, lime, cherry, black pine	10	-	400	-	As on plan						N/A	-	N/A	0	-	EM	Group of early mature trees set on western side of earth embankment, minor dead branches, many trees have suppressed canopies typical of woodland planting. Stems between 300-400mm in diameter although self set growth within with stems below 200mm. COLlective moderate quality, although when viewed as individuals many would be considered to be of low quality with some being of moderate quality. Bank to south of stems. Heights range from 8-10m. Canopy of trees on outside of group reach the floor. Consider thinning.	Fair	Good	20+	B2	5.4	91.6

APPENDIX 3: TREE RETENTION/REMOVAL AND PROTECTION PLAN

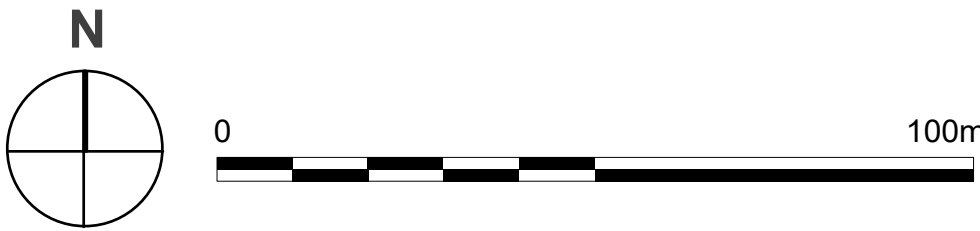


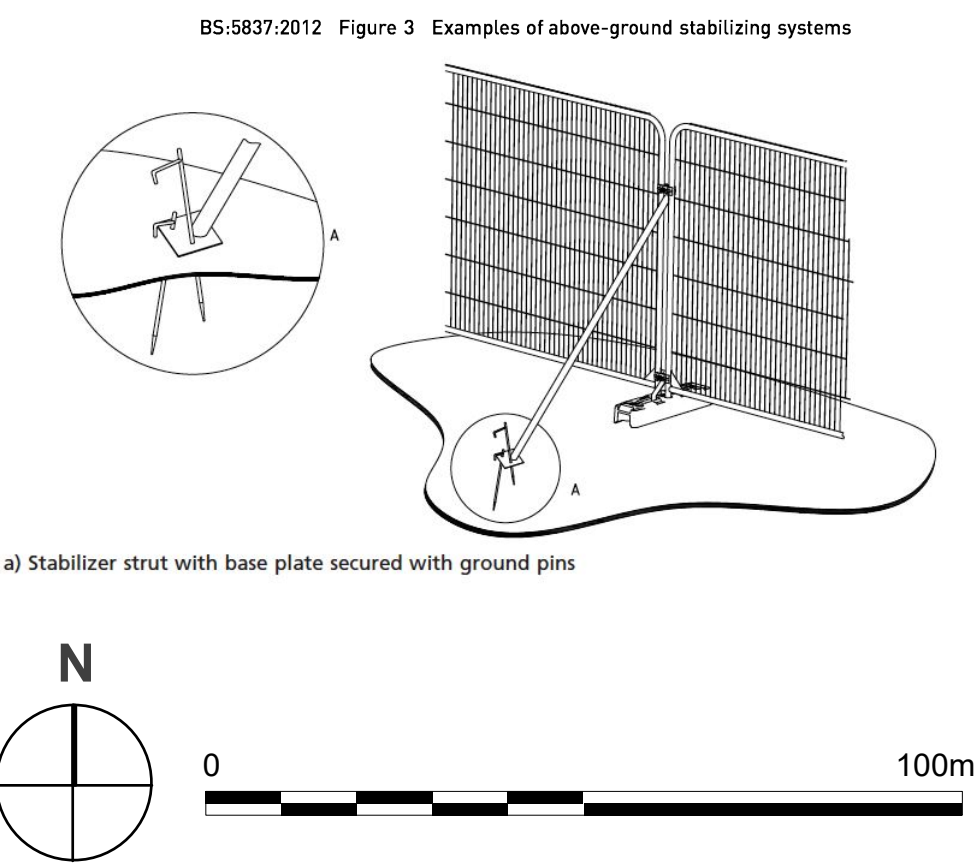
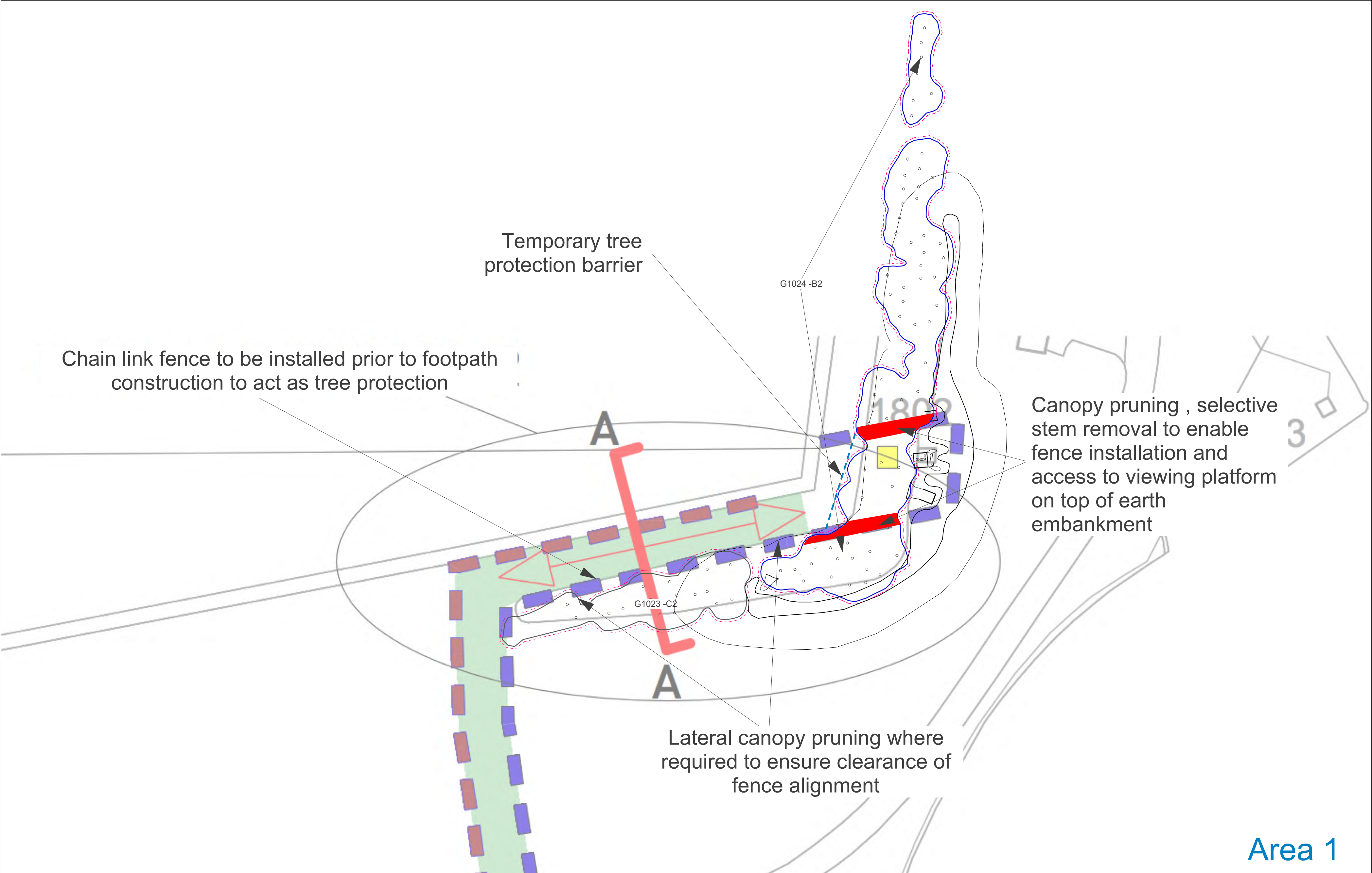
Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

Revision	Description	Date
-	First issue	7/6/18

LANDARB SOLUTIONS

Client: Dorchester Group		
Project: Portway Bridleway, Upper Heyford		
Description: Tree Retention, Loss and Protection Plan - Sheet 1 of 2		
Status: For Planning		
Scale: 1:1000 @A1	Drawn I Checked DP MP	Date: 07/06/2018
Job Number: LAS/03	Drawing Number: 01	Revision: -





KEY BS 5837 : 2012 Categories

- Tree Category A - High Quality
- A Category - Hedgerow, Group, Woodland
- Tree Category B - Moderate Quality
- B Category - Hedgerow, Group, Woodland
- Tree Category C - Low Quality
- C Category - Hedgerow, Group, Woodland

- Tree Category U - Unsuitable for Retention
- Root Protection Area to BS:5837:2012
- Shrub Mass / Offsite Tree
- Tree to be Removed
- Tree Protection Barrier to BS:5837:2012

Note: The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

Revision	Description	Date
-	First issue	7/6/18

LANDARB SOLUTIONS

Client:
Dorchester Group

Project:
Portway Bridleway, Upper Heyford

Description:
Tree Retention, Loss and Protection Plan - Sheet 2 of 2

Status:
For Planning

Scale: 1:1000 @A1	Drawn I Checked DP MP	Date: 07/06/2018
Job Number: LAS/03	Drawing Number: 01	Revision: -

APPENDIX 4: AIA SCHEDULE

		Arboricultural Impact Assessment Significance Matrix					
		Level of Impact					
		High	Medium	Low	Slight	None	
		e.g. removal required to facilitate development. Excessive root severance. Excessive above ground pruning. Hedgerows: >50% loss of overall length.	e.g root damage, soil compaction or above ground impacts tree management works unacceptable in terms of BS3998:2010. Hedgerows: >25% loss of overall length.	e.g. minor fine root loss, installation of no dig surfacing, temporary ground protection. Moderate tree works within the parameters of BS3998:2010. Hedgerows: 5-10% loss of overall length.	e.g.very minor works within root protection areas for example the installation of lightweight fencing or soft landscaping. Hedgerows: <5% loss of overall length.	E.g. trees located at a significant distance from development and construction activities.	
BS5837:2012 Quality Assessment Category	A	Major	Major	Moderate	Minor	None	Significance of effect
	B	Major	Moderate	Minor	Insignificant	None	
	C	Moderate	Minor	Insignificant	Insignificant	None	
	U	Minor	Minor	Insignificant	Insignificant	None	
		Significance of effect					

Significance of effect - definitions	
Major	Removal/acute damage to structural integrity/vitality/appearance of a high quality arboricultural feature. Depending on circumstances, may result in the loss of all/greater majority of public visual amenity value. Mitigation planting unlikely to be effective except in the long term (40+ years).
Moderate	In the case of damage: unlikely to give rise to tree death but likely to noticeably reduce vitality and deterioration of appearance in the short and medium term, with corresponding reduction in public visual amenity value where relevant. Tree removals that can be effectively mitigated in the medium term (20-40 years). For example notable crown dieback, foliage discolouration, low leaf density, or tree management works unacceptable in terms of BS3998:2010.
Minor	Short-term damage with limited distribution that can be reasonably compensated for by new growth. Unlikely to result in observable symptoms of damage in relation to structural integrity/vitality/appearance. No obvious impact on public visual amenity. Tree removals that can be mitigated in the short-term (10-20 years)
Insignificant	Minimal damage in very small amounts. No obvious impact on public visual amenity.
None	No impact to above or below ground components of tree reasonably anticipated.

Arboricultural Impact Schedule

Site: Portway Bridleway

Ref:RFP-945

No	Species	Quality	Arboricultural effects (direct and indirect) of proposed design - description	Unadjusted scale of effect	Unadjusted significance of effect (scale effects x quality)	Recommended mitigation	Adjusted scale of effect following mitigation	Adjusted significance of effect (adj .scale effects x quality)	Tree removal required
H1018	Elder, hawthorn, horse chestnut, sycamore, blackthorn	B2	Majority of vegetation located away from main area of development. Removal of several elder stems to connect into existing bridleway required along with minor pruning where required to enable removal of section of existing chainlink fencing.	Slight	Insignificant	Pruning/stem removal to be carried out in accordance with BS.3998: 2010.	Slight	Insignificant	Retain
G1023	Swedish white beam, lime, cherry, pine	C2	Chainlink fence to run along northern side of tree group requireing minor canopy pruning to ensure at least 0.5m clearance of fence line. Potential impacts from contruction activities.	Low	Insignificant	Pruing works to be carried out in accordance with BS3998:2010. Chainlink fence to be installed prior to new hard surfaced bridleway to act as tree protection fencing. Where this is not possible, temporary tree protection fencing in accordacne with BS5837: 2012 should be installed in its place.	Low	Insignificant	Retain
G1024	Swedish white beam, lime, cherry, black pine	B2	Selective stem removal and canopy pruning/lifting in two location to enable installation of chainlink fencing and access to top of embankment. Potential impacts from construction activities.	Medium	Moderate	Tree works to be carried out in accordacne with BS: 3998: 2010. Fence installtion to be carried out in accordacne with methods prescried withn this Arboricultural Statement. Temporary tree protection fencing to be installed on western side during hardsurfaced bridelway construction to deter encroachment.	Low	Minor	Retain