



PROPOSED BATTERY ENERGY STORAGE SYSTEM, ADJACENT TO THE CULHAM SCIENCE CENTRE

LANDSCAPE AND VISUAL ASSESSMENT

APPENDIX A: FIGURES APRIL 2024

PART 1

Introduction

This figure package (Appendix A) should be read in conjunction with the landscape and visual impact assessment text document for the proposed Battery Electricity Storage System (BESS) on farmland immediately to the west side of the Culham Science Centre, South Oxfordshire. The landscape and visual impact assessment forms part of the Environmental Impact Assessment for the proposed development. The application site boundary is shown on **Figures 1 and 2**.

The methodology is set out in Appendix B and this includes the criteria for determining significance.

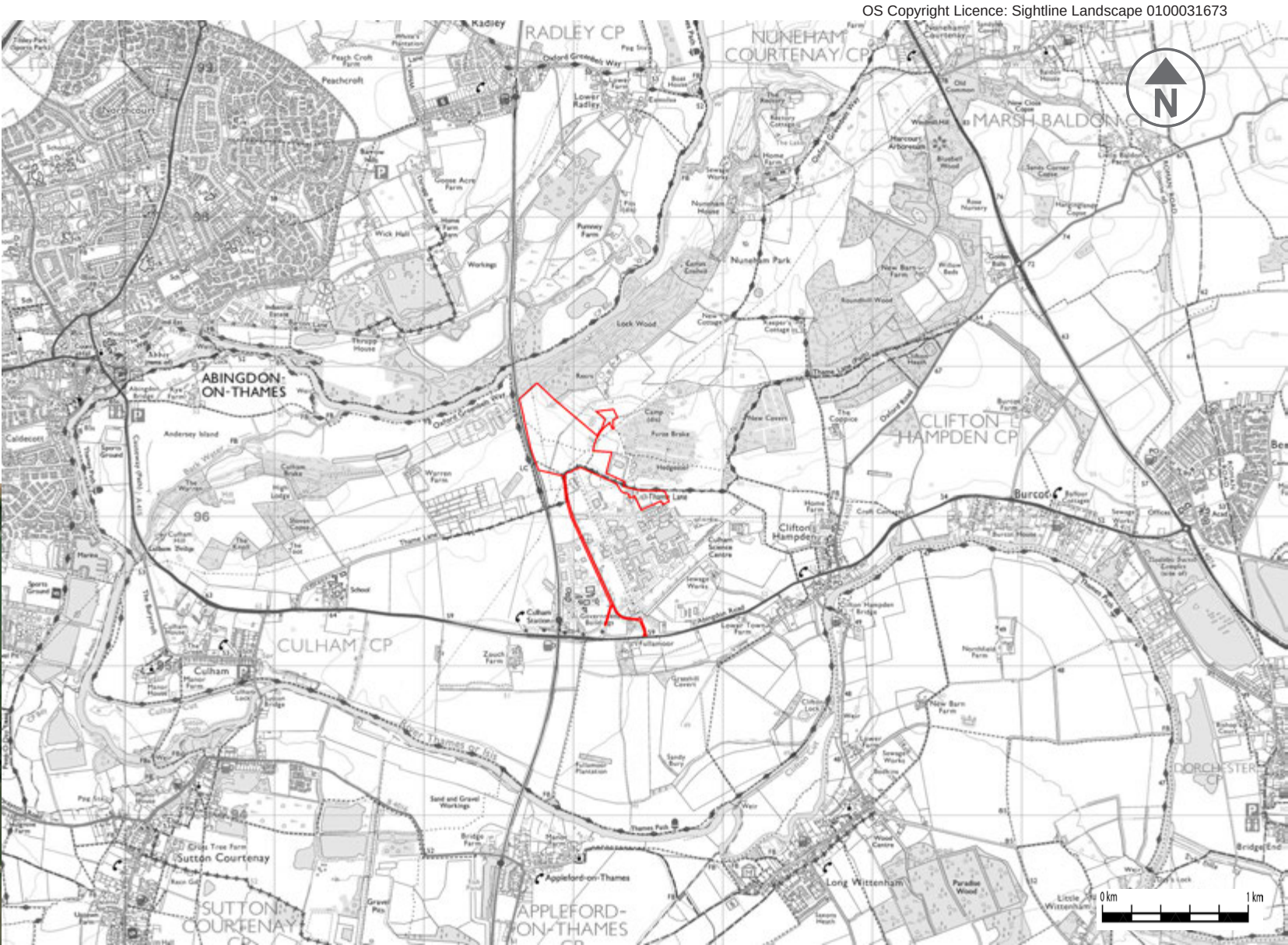
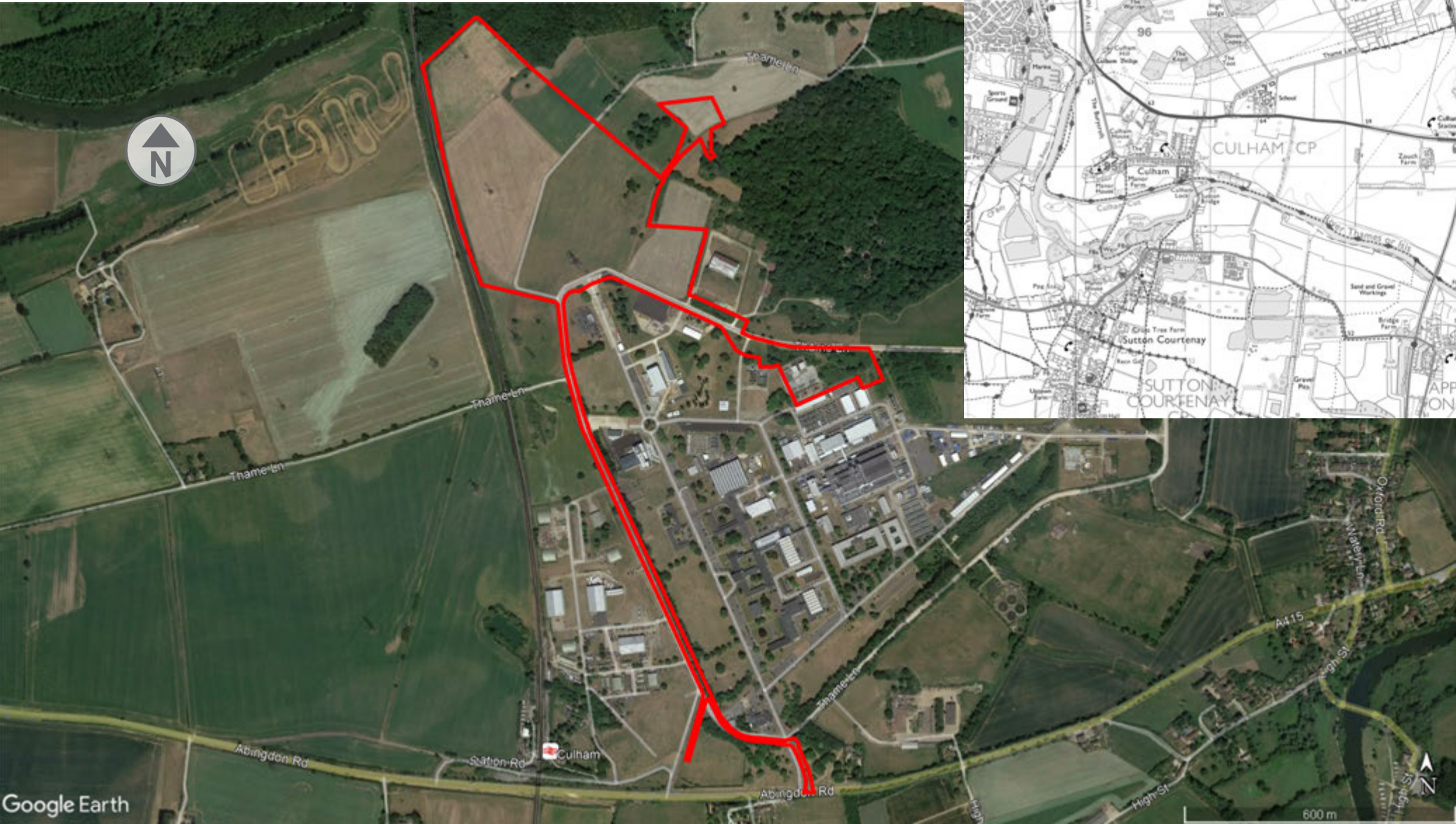


Figure 1: Location Plan

Figure 2: Aerial Plan

Figure 3: Designations

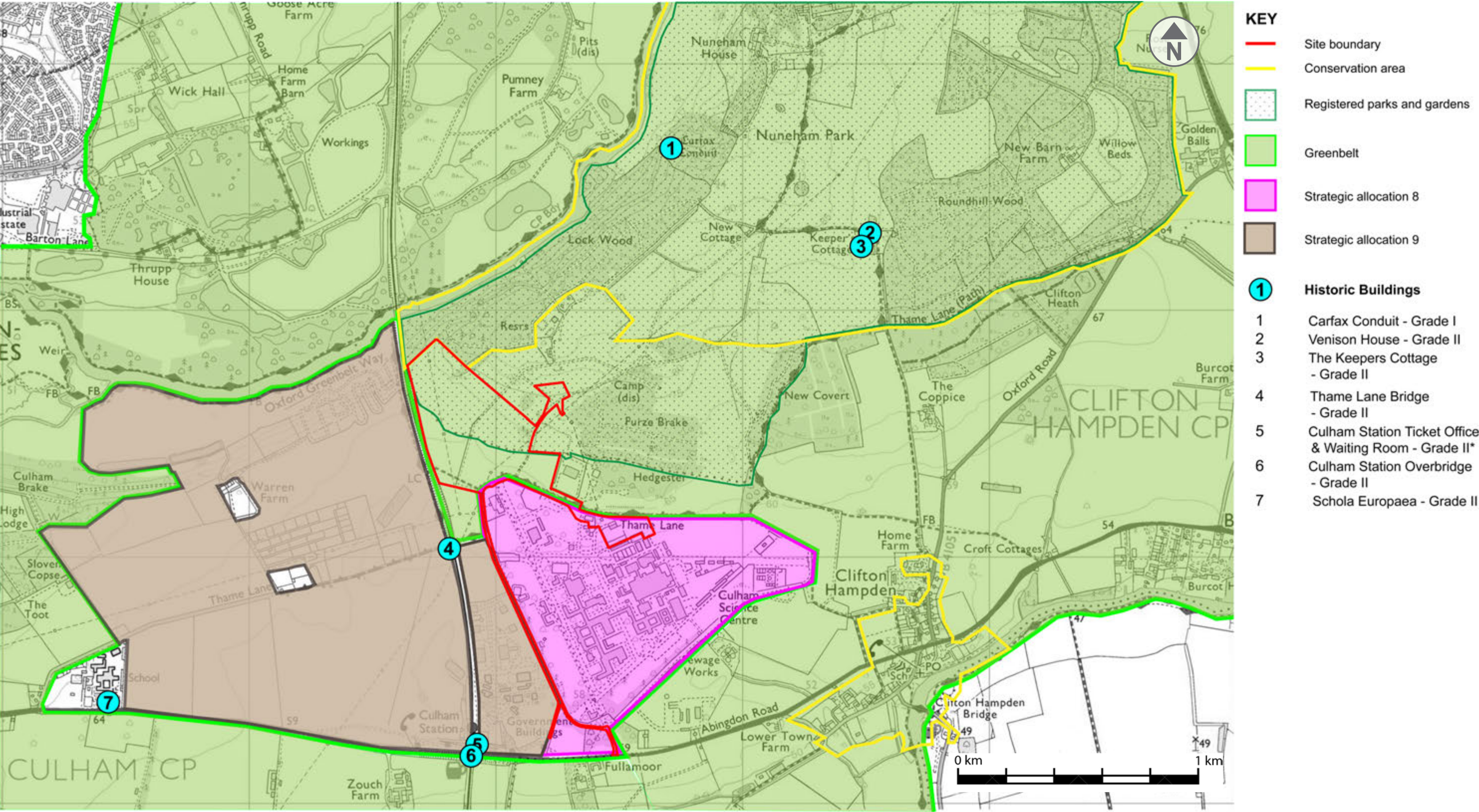
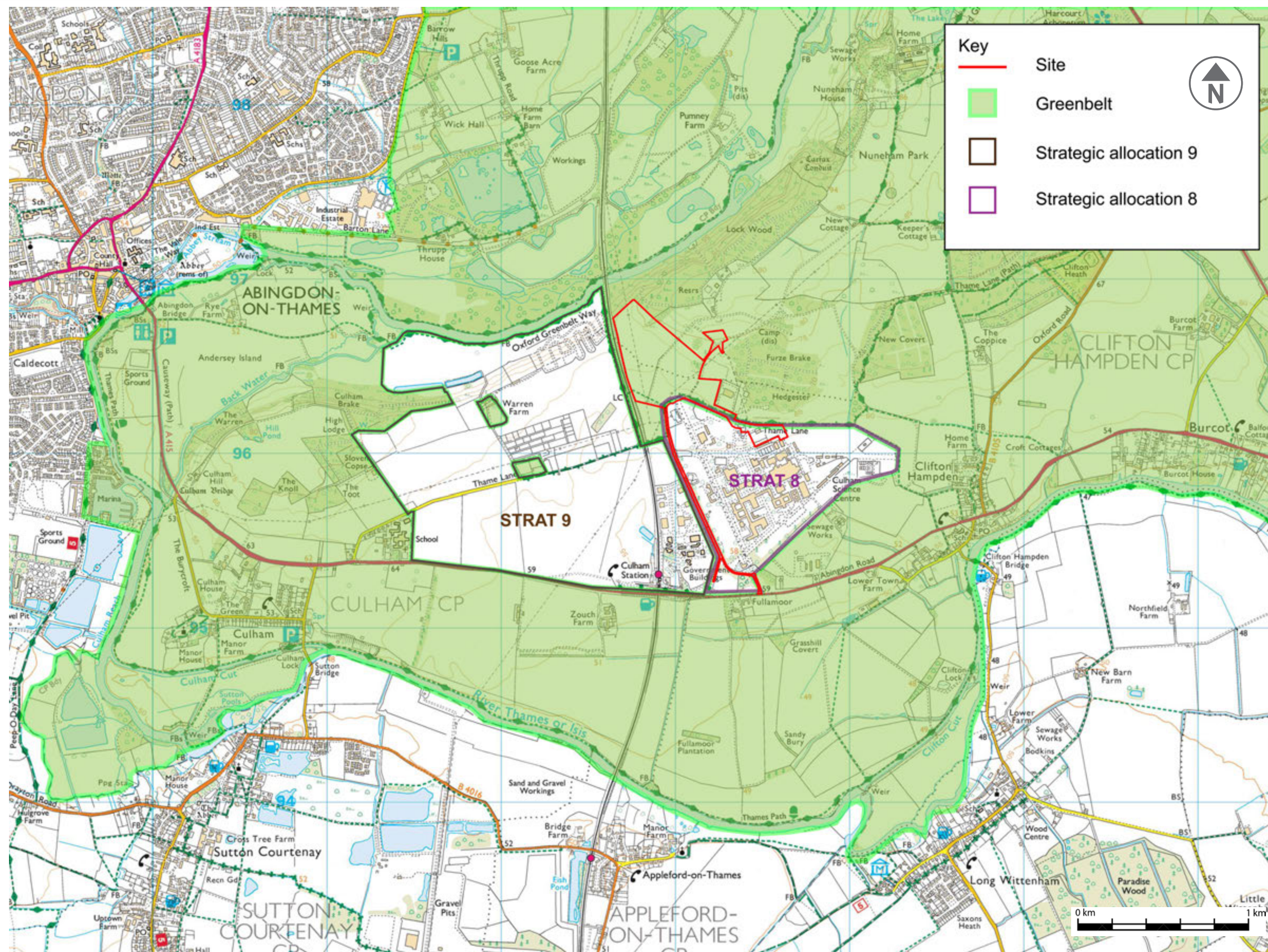


Figure 4: Greenbelt - Expanded View



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Figure 5: Topographical plan of the wider area around the Site

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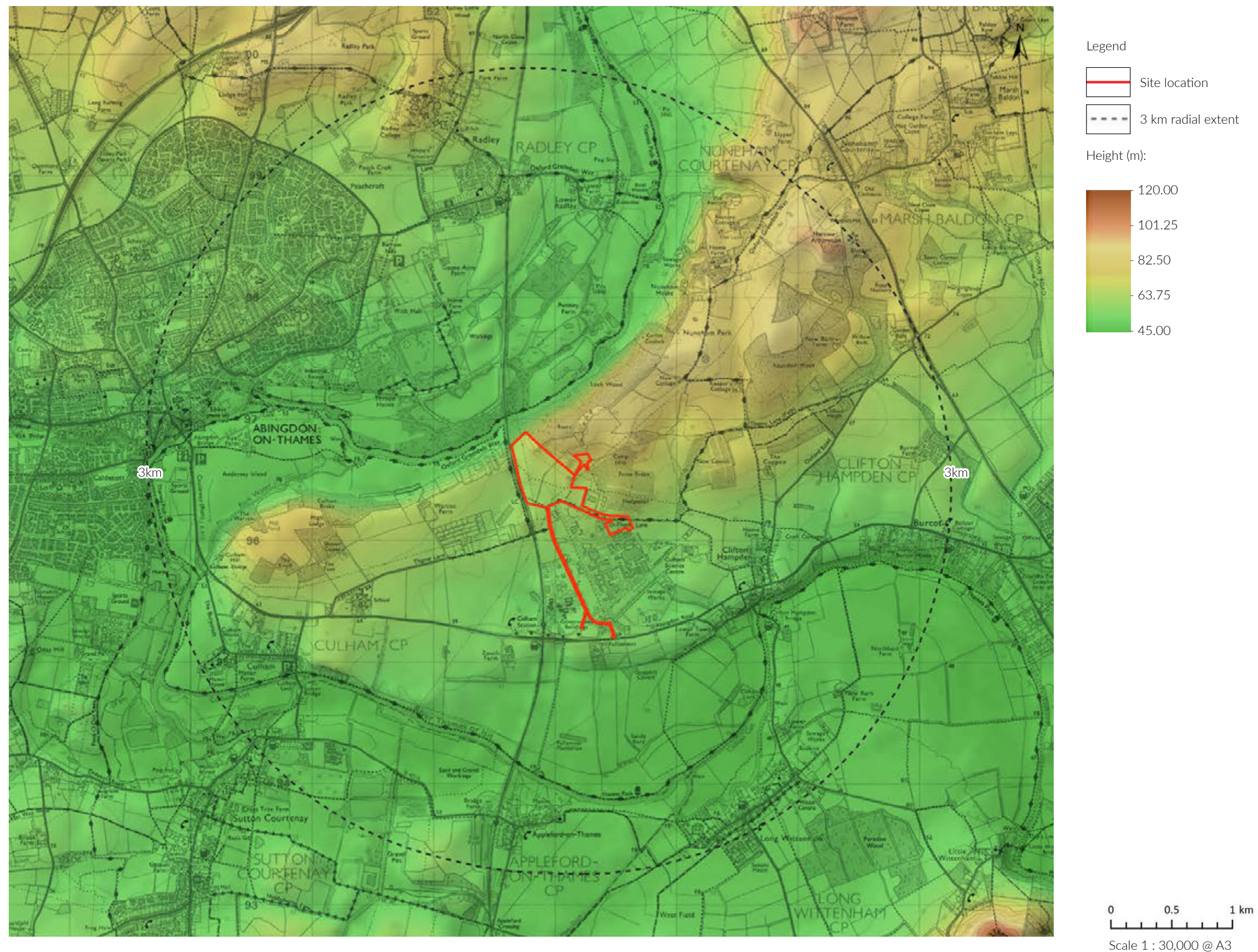


Figure 6: Topographical plan of the Site

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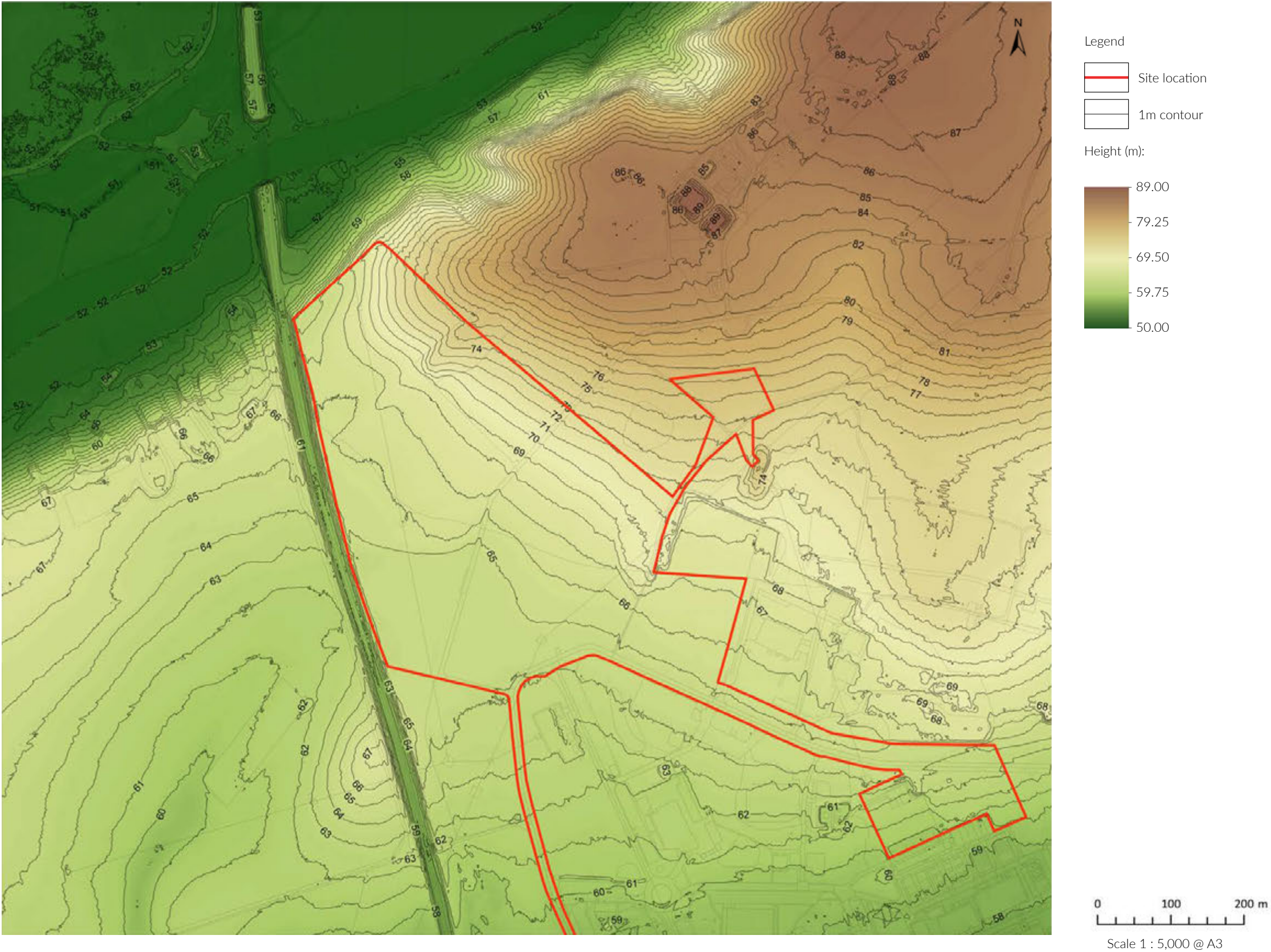
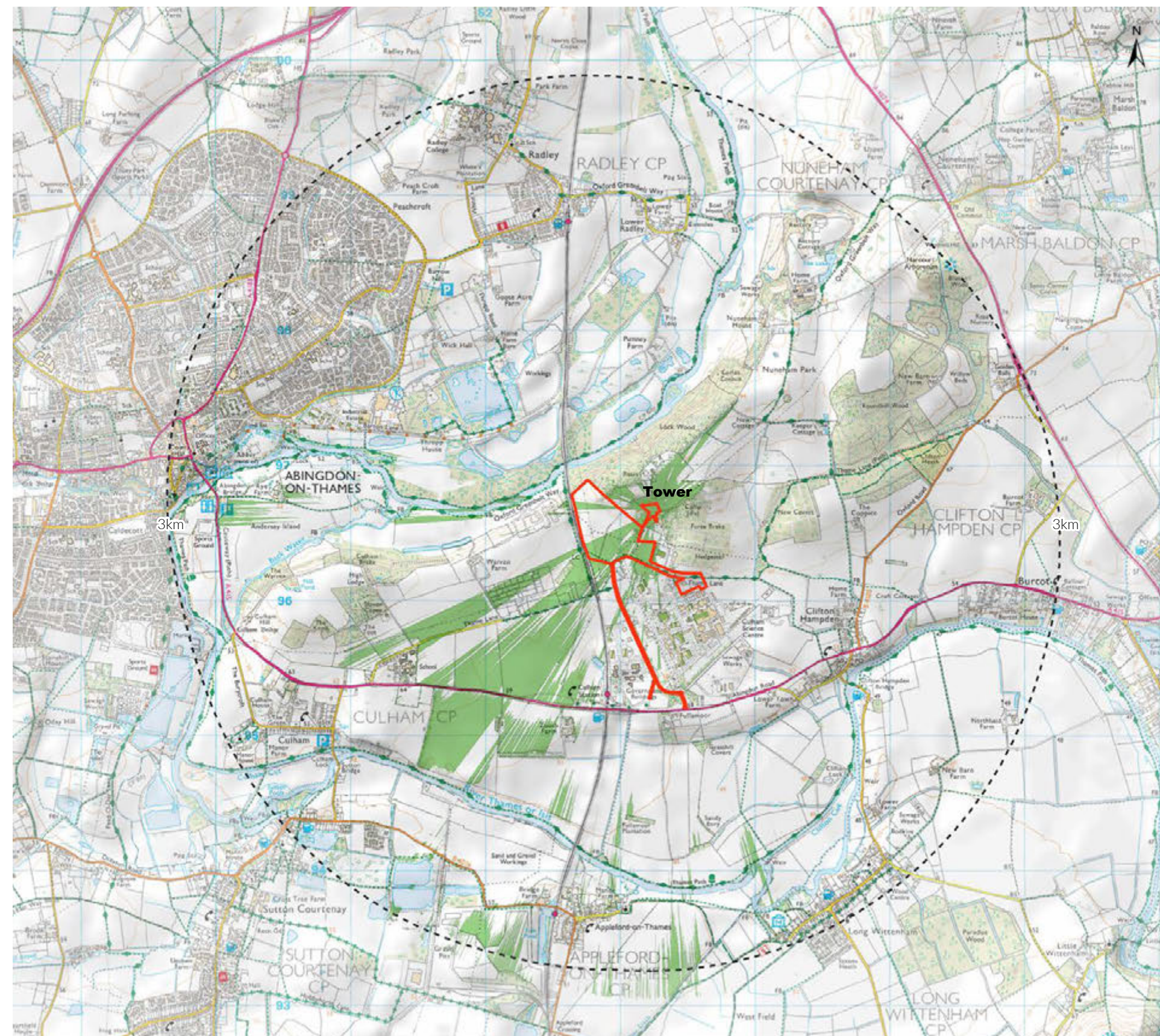


Figure 7: Zone of Theoretical Visibility (ZTV) of the proposed connection tower

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Legend

-  Site location
-  3 km radial extent
-  Zone of Theoretical Visibility

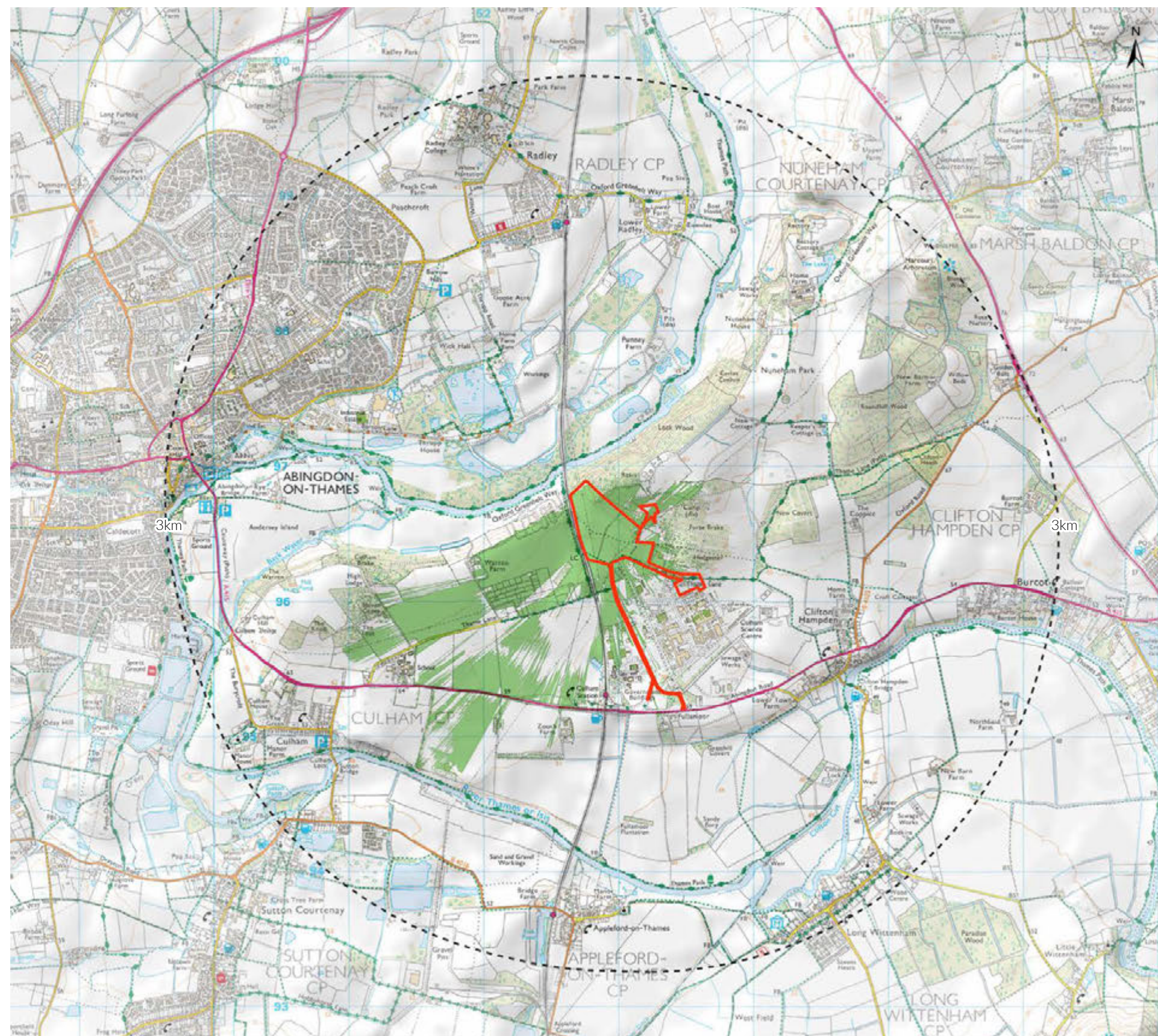
The ZTV is generated from a receptor height of 1.6m (average eye level) and a receiver height of 15m AOD (maximum tower height).

The ZTV is based on OS Pano 50m DTM (Digital Terrain Model). This is a 'bare earth' terrain which is calculated on topography alone. Some changes within the landscape may have occurred since the DTM and ZTV was created. This ZTV also includes Earth's curvature.

0 0.5 1 km
Scale 1 : 30,000 @ A3

Figure 8: Zone of Theoretical Visibility of the Batteries

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Legend

-  Site location
-  3 km radial extent
-  Zone of Theoretical Visibility

The ZTV is generated from a receptor height of 1.6m (average eye level) and a receiver height of 3m AOD (maximum battery height). Multiple targets were placed within the site to best represent points that may be visible.

This ZTV is based on 1m LiDAR 'First Return' DSM (Digital Surface Model) terrain data which includes intervening features such as existing trees/vegetation and buildings in the landscape. Some changes within the landscape may have occurred since the DSM data and ZTV was created. Data source; data.gov.uk. This ZTV also includes Earth's curvature.

0 0.5 1 km
Scale 1 : 30,000 @ A3

Figure 9: Internal Viewpoint Locations

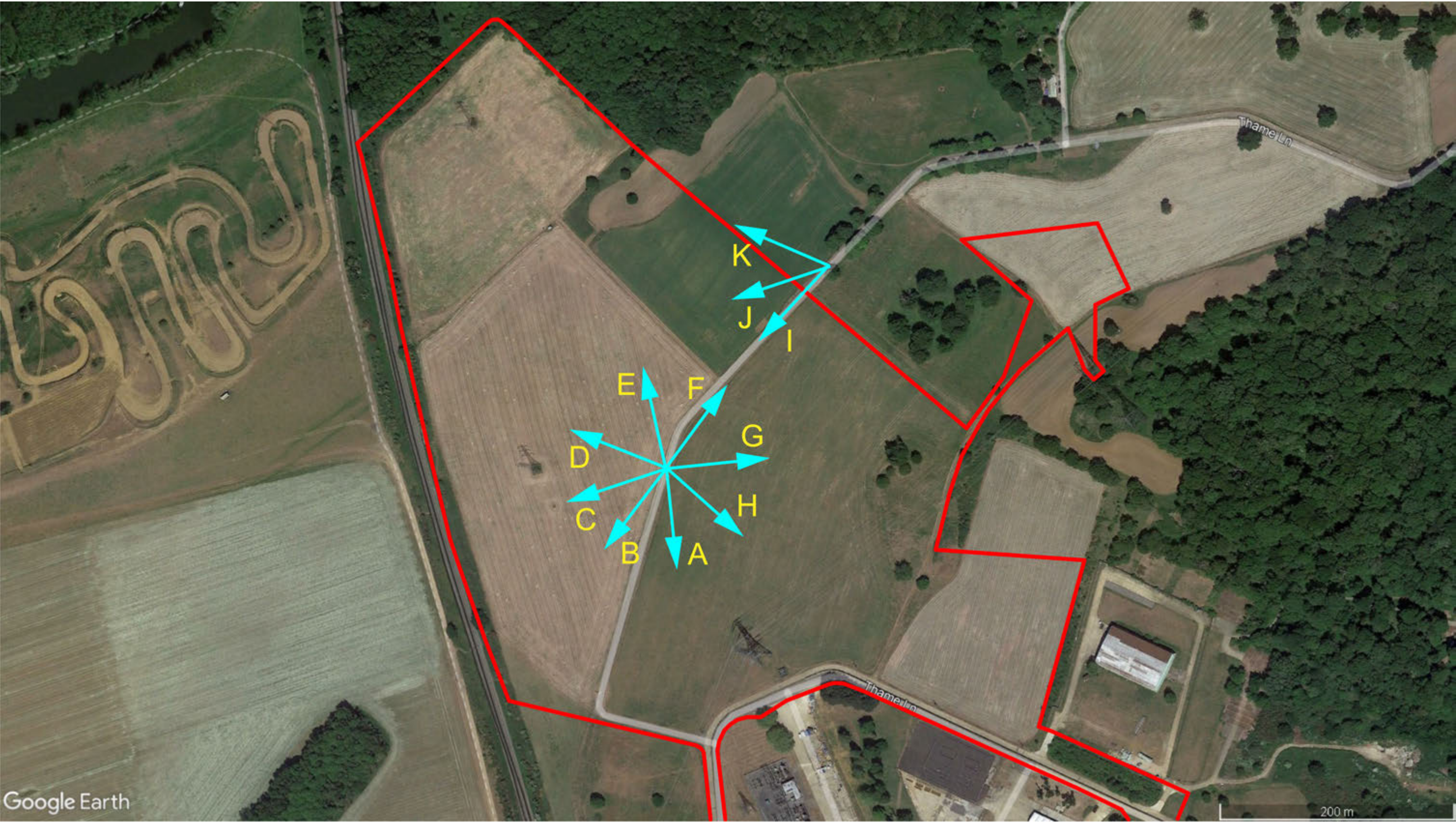
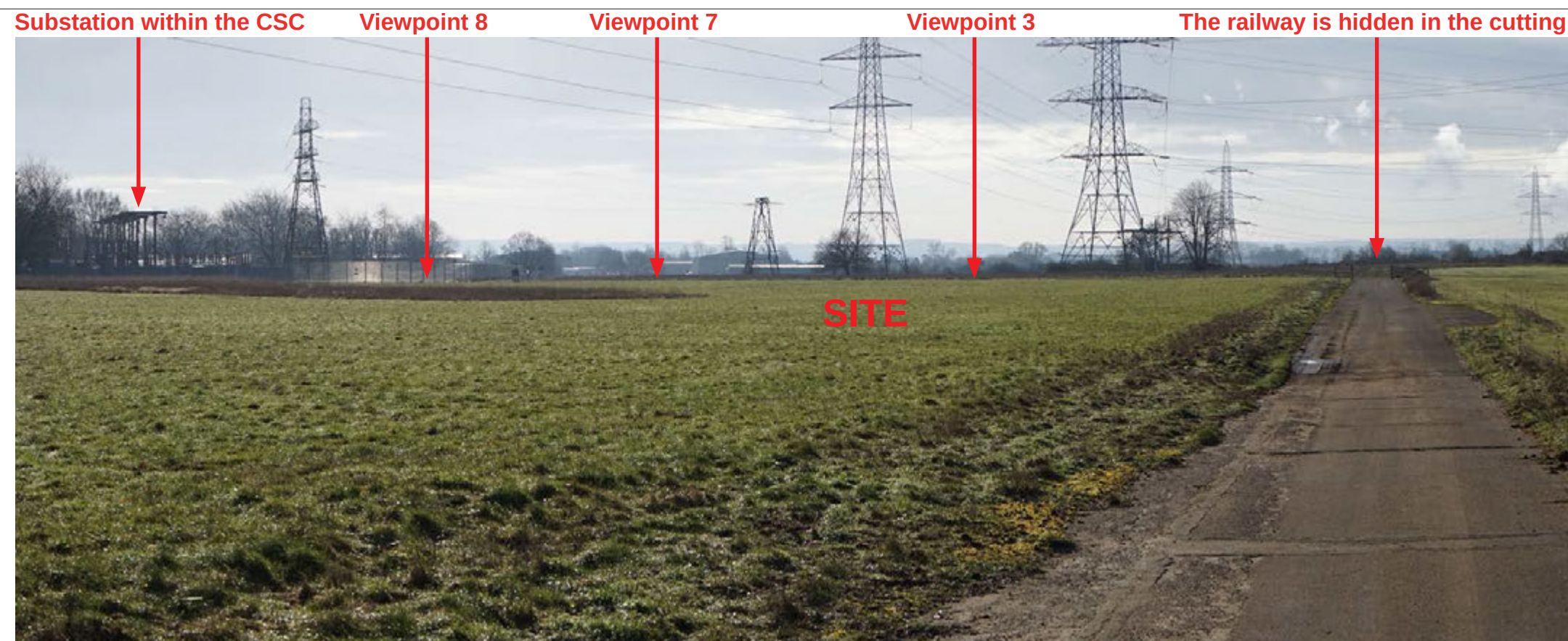


Figure 10.1: Internal viewpoints A & B



Photograph A

This is the first panoramic photograph of a series taken from within the centre of the Site on the boundary between the Registered Park and Garden and the proposed location for the electrical infrastructure. This view is looking south, illustrating the visual influence of the CSC and the overhead transmission lines and towers. Beyond the Site the land falls away and so views back to the Site from this area are very limited. Vires will be further constrained as STRAT9 on the south side of the CSC is built out. The railway is not a prominent feature of the landscape since it passes in cutting, which also prevents passengers seeing the Site as they pass.

Photograph B

Looking southwest towards Warren Farm (the STRAT9 allocation). Views of the Site from further south of the farmland are blocked by Culham Brake and Sloven Copse. Views from the south will be further contained as STRAT9 is built out. The railway is not a prominent feature of the landscape since it passes in cutting, which also prevents passengers seeing the Site as they pass.

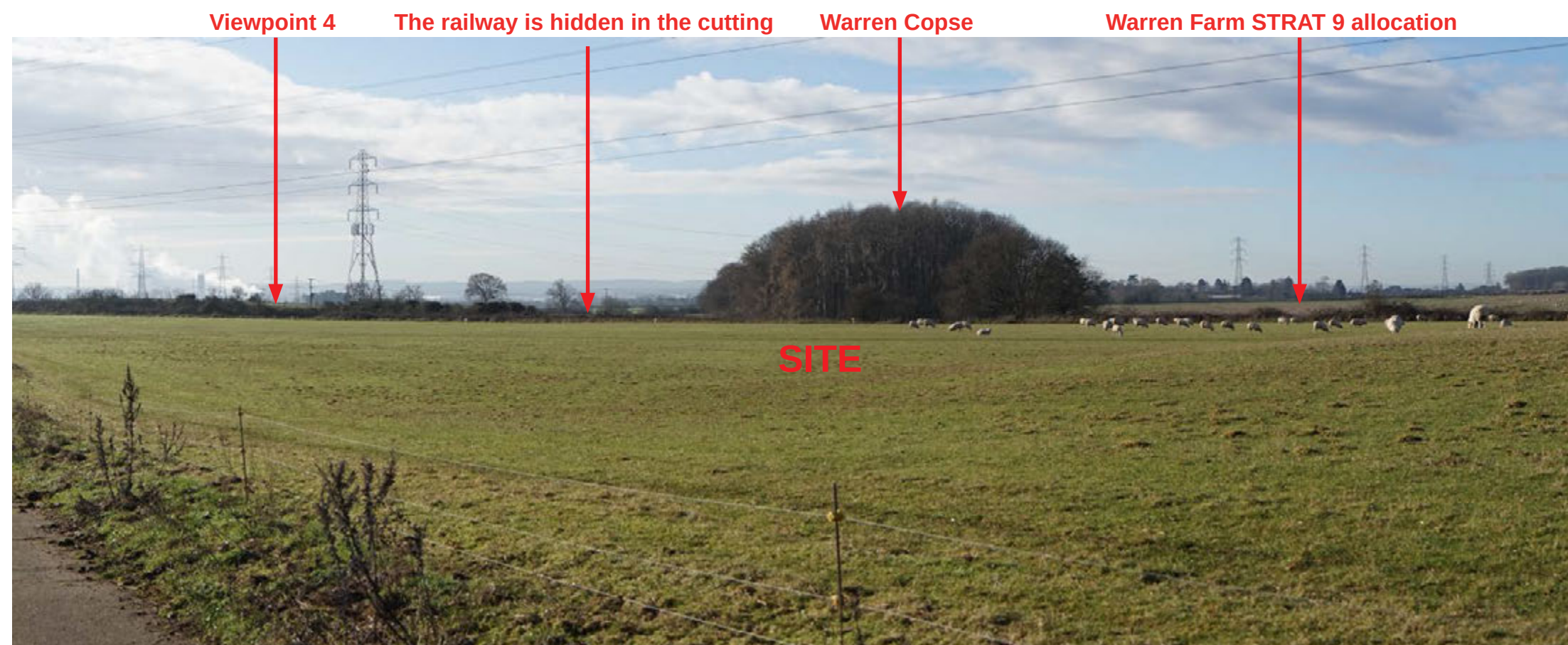


Figure 10.2: Internal viewpoints C & D

Warren Farm STRAT 9 allocation



Photograph C

Looking west over Warren Farm, again illustrating how the woodland on the skyline limits the visibility of the Site to Warren Farm. The farm has been removed from the Green Belt. The overhead transmission line is an intrusive element within the view.

Photograph D

Looking northwest illustrating the lack of sensitive receptors because the land drops away down to the Thames valley and Abingdon. The overhead transmission line is an intrusive element within the view.

Viewpoint 6

Railway hidden in cutting

Viewpoint 19 down in the Thames Valley

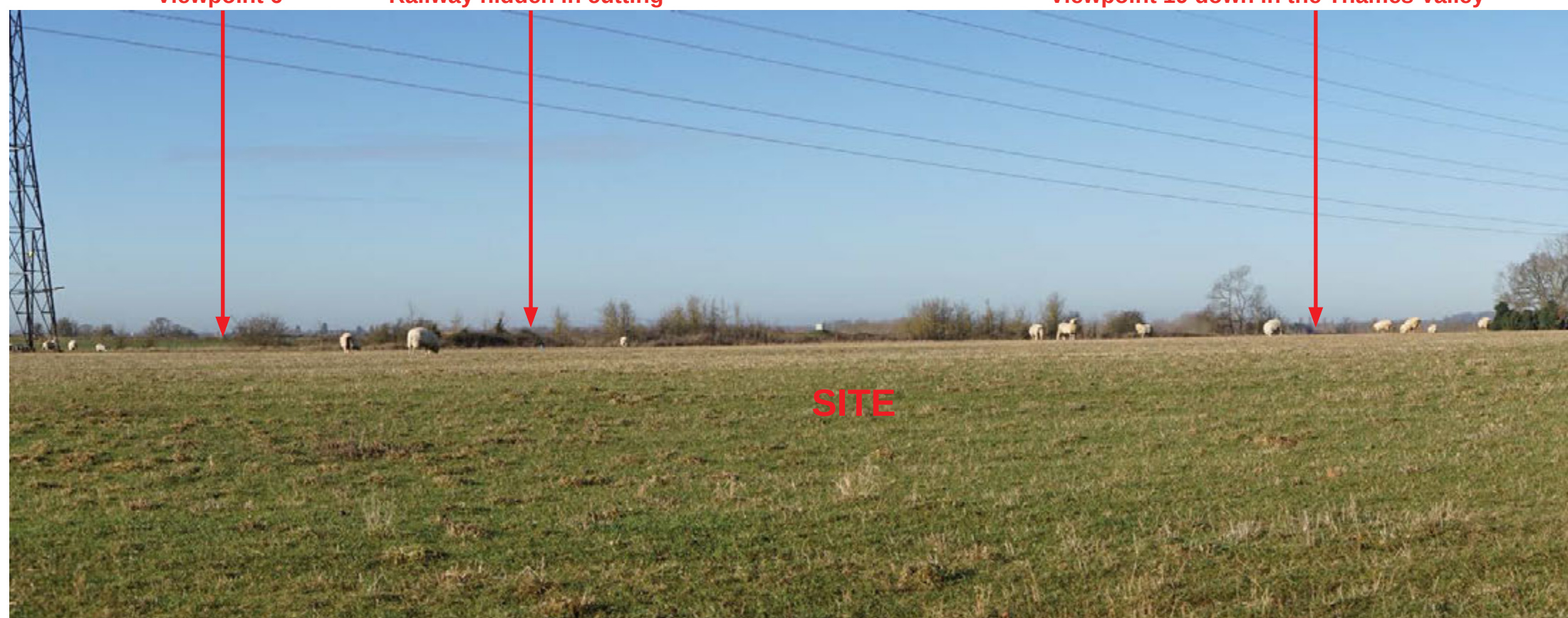
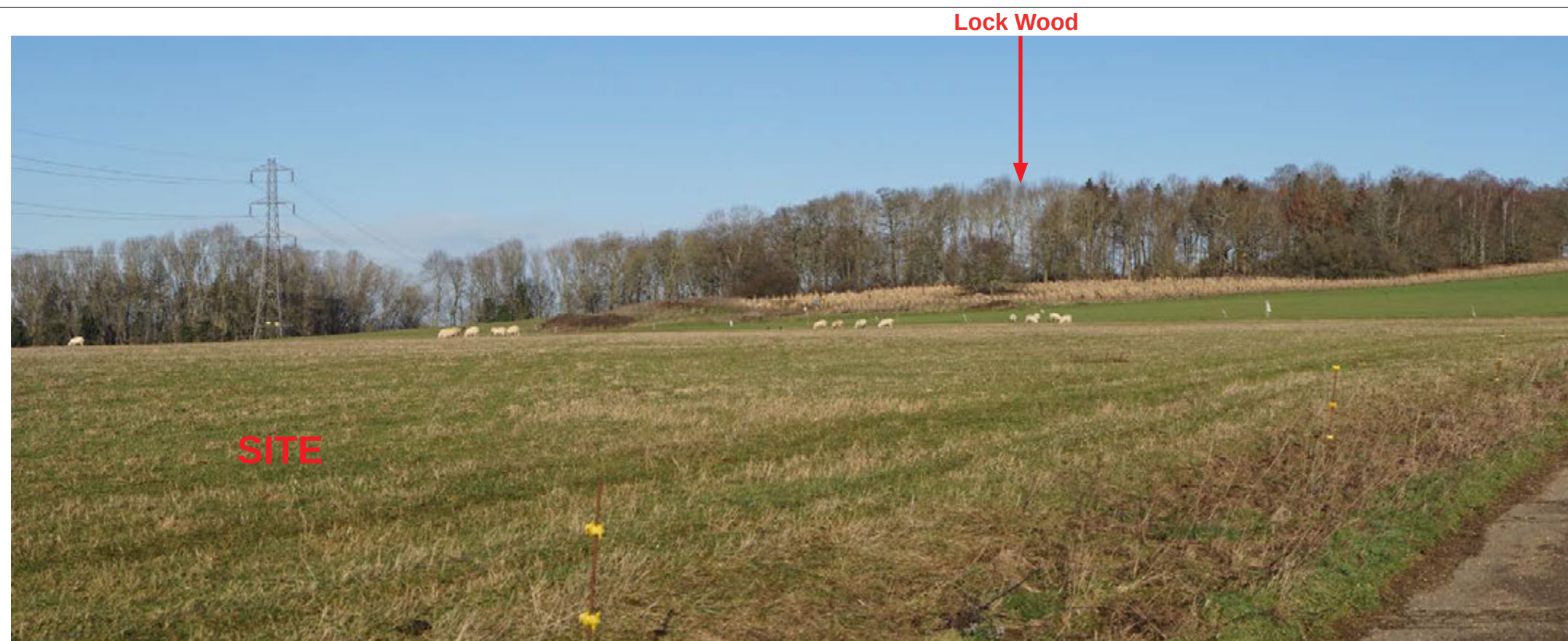


Figure 10.2: Internal viewpoints E



Photograph E

Looking north over the Registered Park and Garden, illustrating the visual enclosure afforded by Lock Wood.

Photograph F

Looking northeast over the Registered Park and Garden, illustrating the visual enclosure afforded by the trees on the skyline, limiting the potential visual influence of the Proposed Development over the remainder of the parkland. The dwelling by the underground reservoir is not visible. It is screened by evergreen and deciduous tree cover.



Figure 10.1: Internal viewpoints G & H

Viewpoint 17 behind the trees



Photograph G

Looking east, illustrating the visual enclosure provided by Furze Brake and the visually detracting overhead transmission lines and towers.

Photograph H

Looking southeast towards the CSC, which visually encloses the Site from land further east.

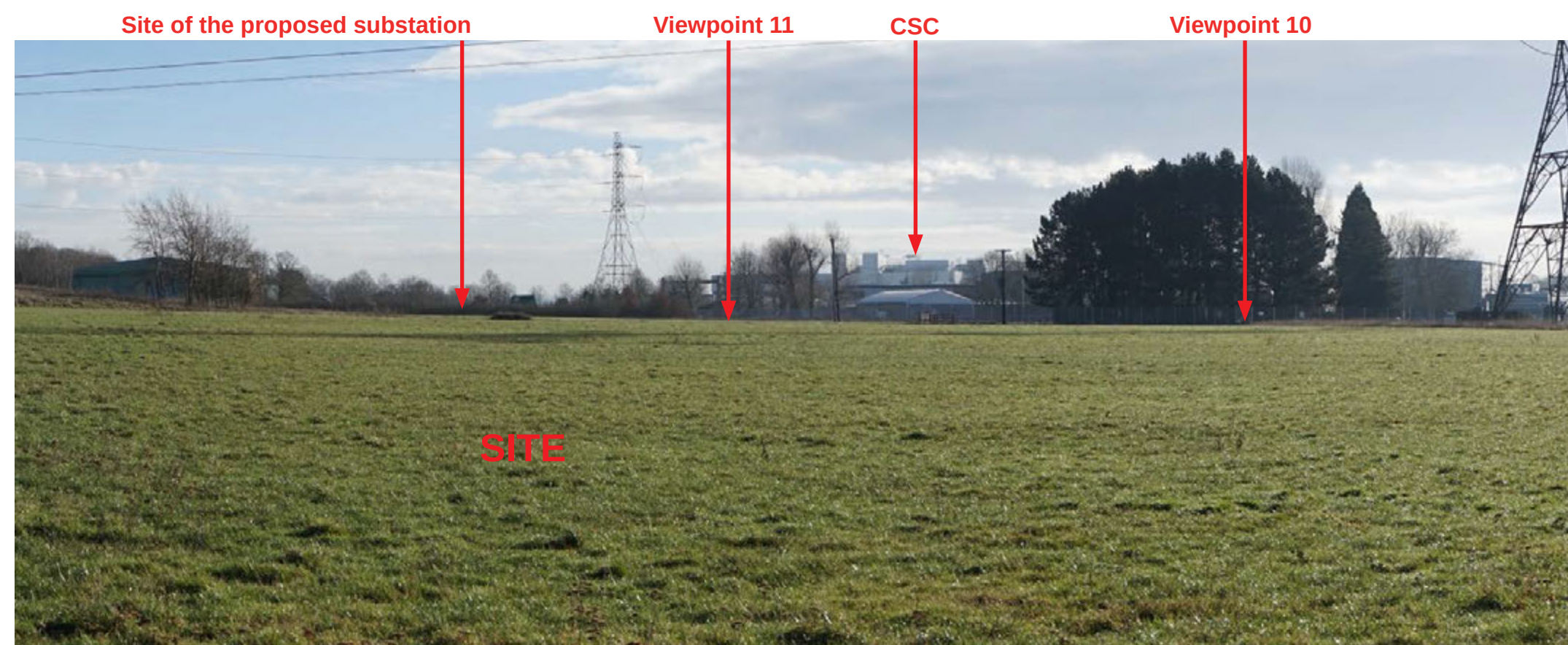
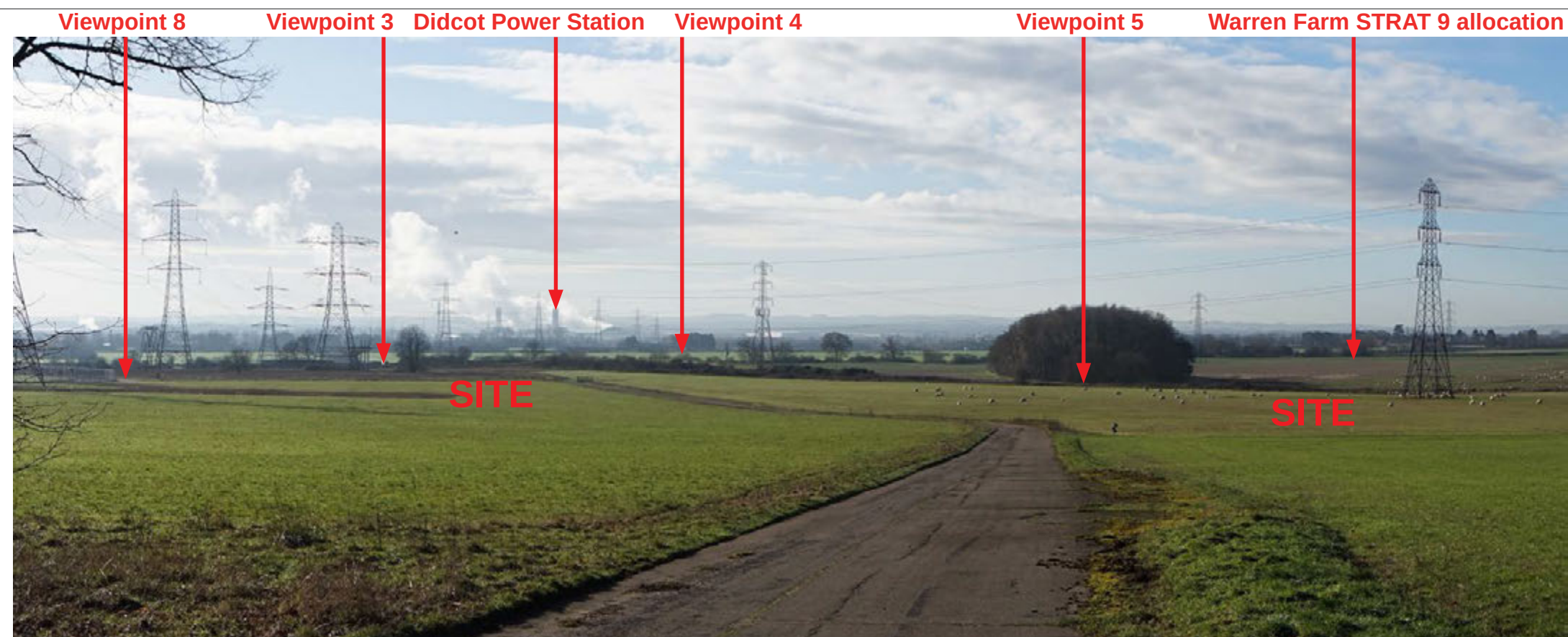


Figure 10.1: Internal viewpoints I & J



Photograph I

This is a view from the northeast edge of the Site looking southeast illustrating how the setting of this part of the parkland is adversely affected by the overhead transmission line and Didcot Power Station. It will be further adversely affected as STRAT9 is built out and while the Proposed Development at the base of the slope will also have a cumulative adverse effect on its setting, it also presents an opportunity to restore the setting of the parkland, screening it from the existing, allocated and proposed developments.

Photograph J

A continuation of Panorama I, looking east over Warren Farm (STRAT9) and the Thames Valley. Without mitigation any development within STRAT9 will be clearly visible.

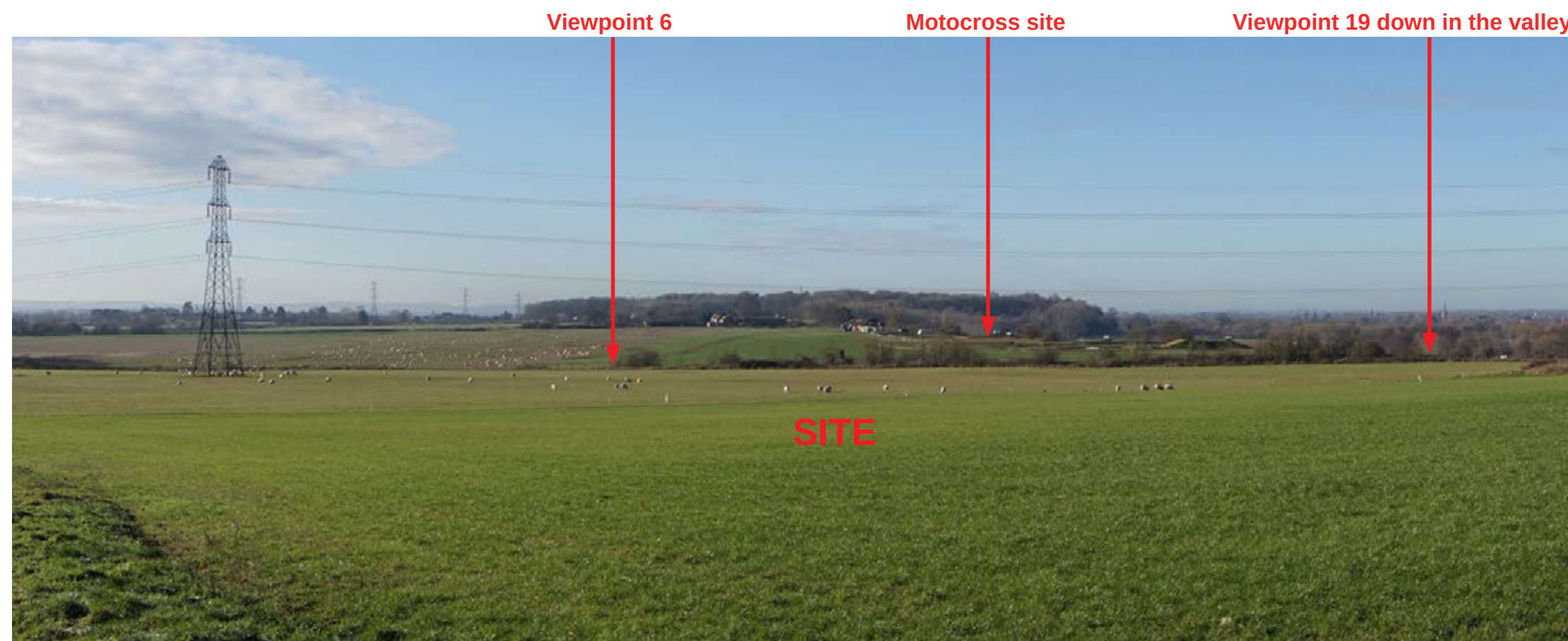


Figure 10.1: Internal viewpoint K & L

Viewpoint 19 down in the valley

Lock Wood



Photograph K

A continuation of Panorama J, looking northeast, illustrating the enclosure provided by Lock Wood.

Photograph L

Looking northeast towards the site of the proposed connection tower.

Site of the proposed connection tower

The tower will connect into this tower



Figure 11: Landscape Character

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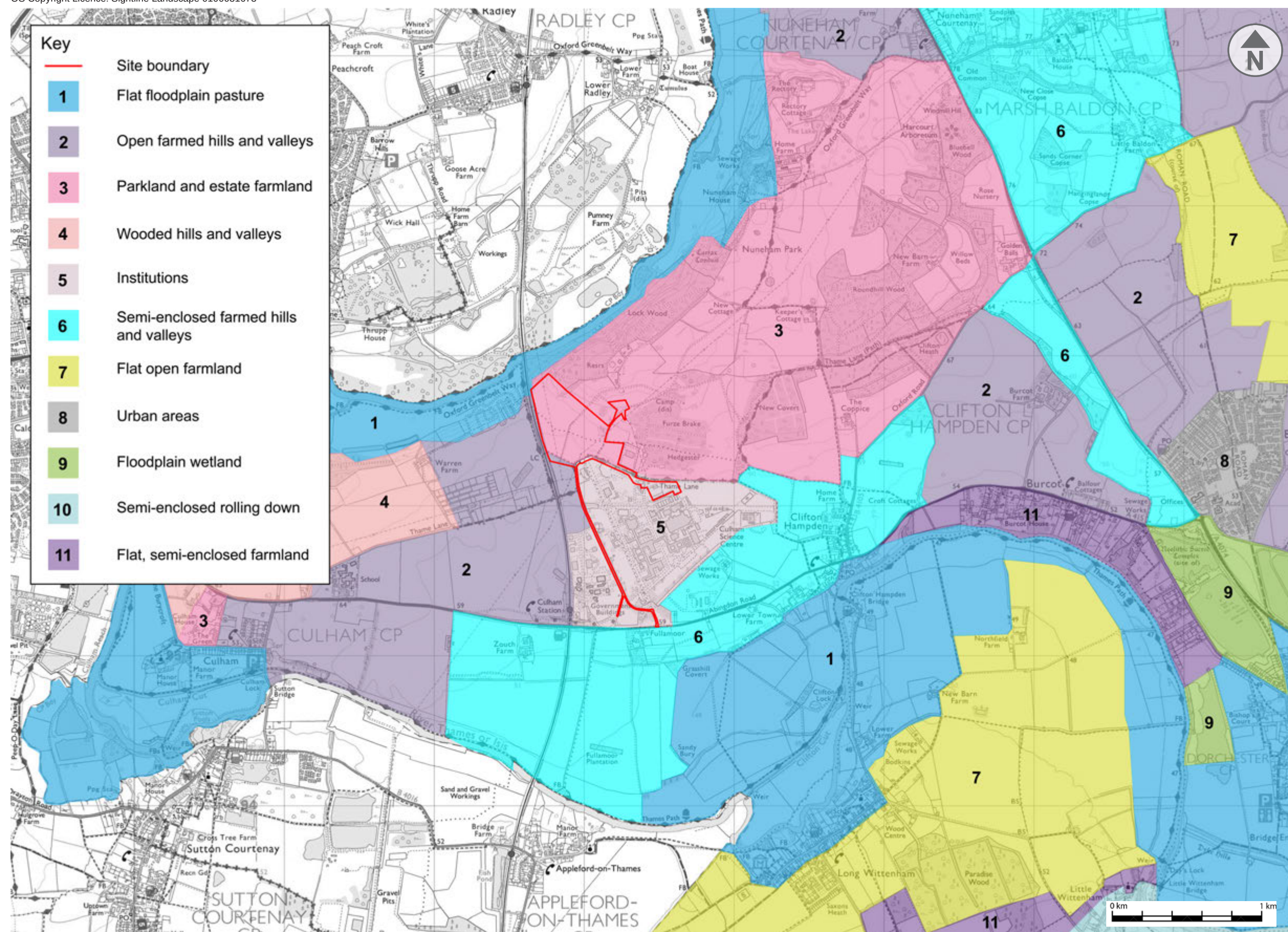


Figure 12: Historical Map Overlay 1883

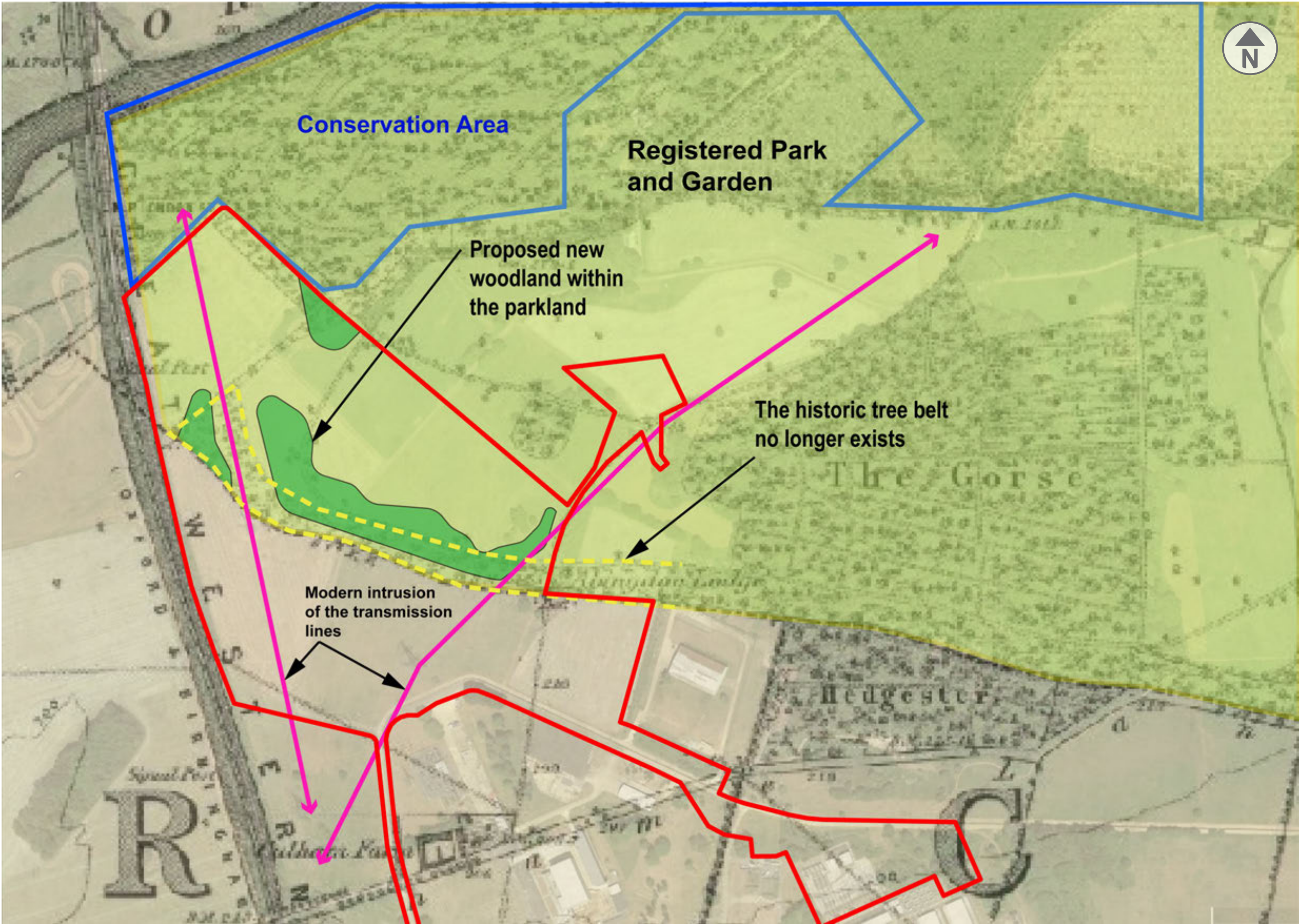


Figure 13: Masterplan

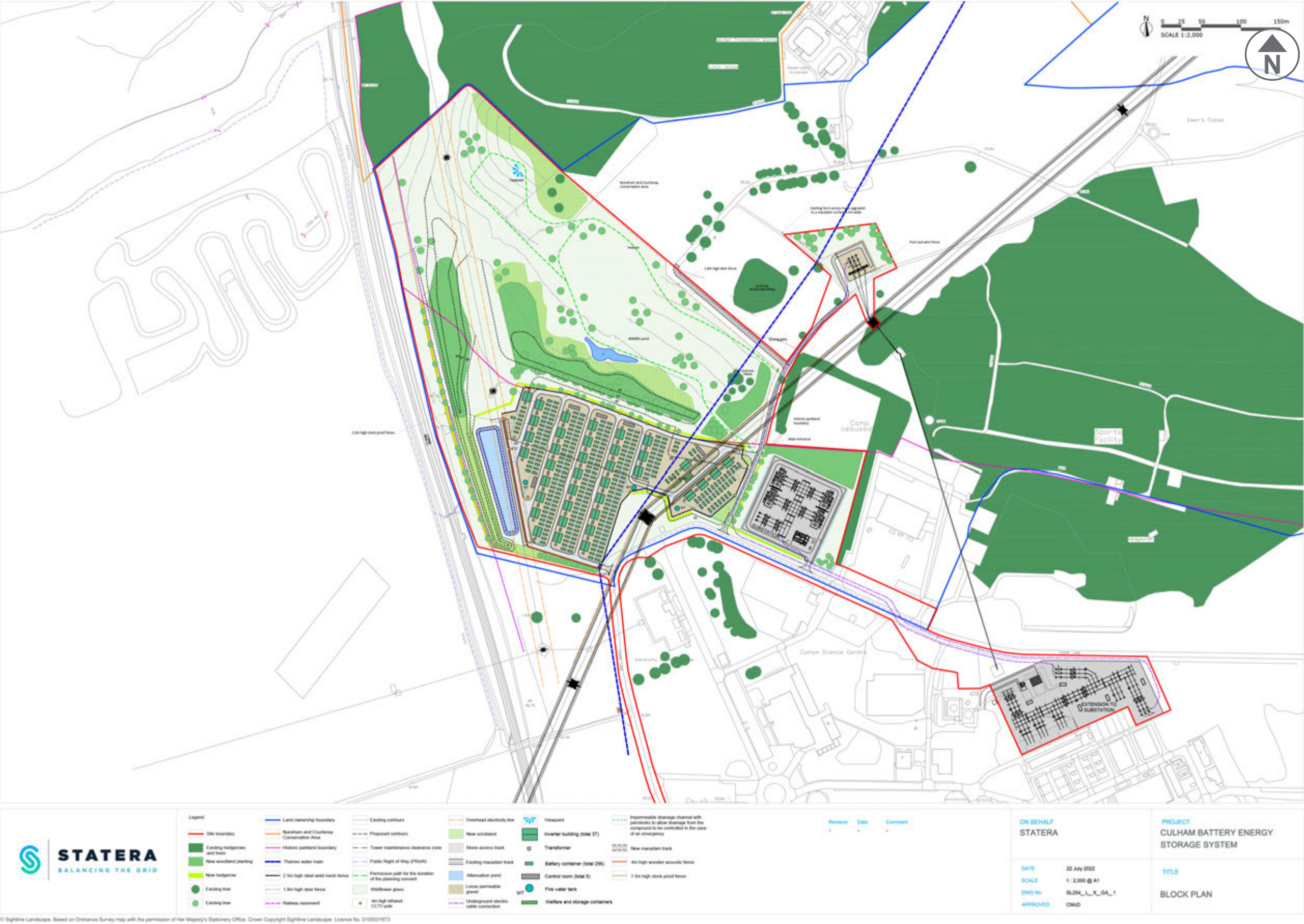
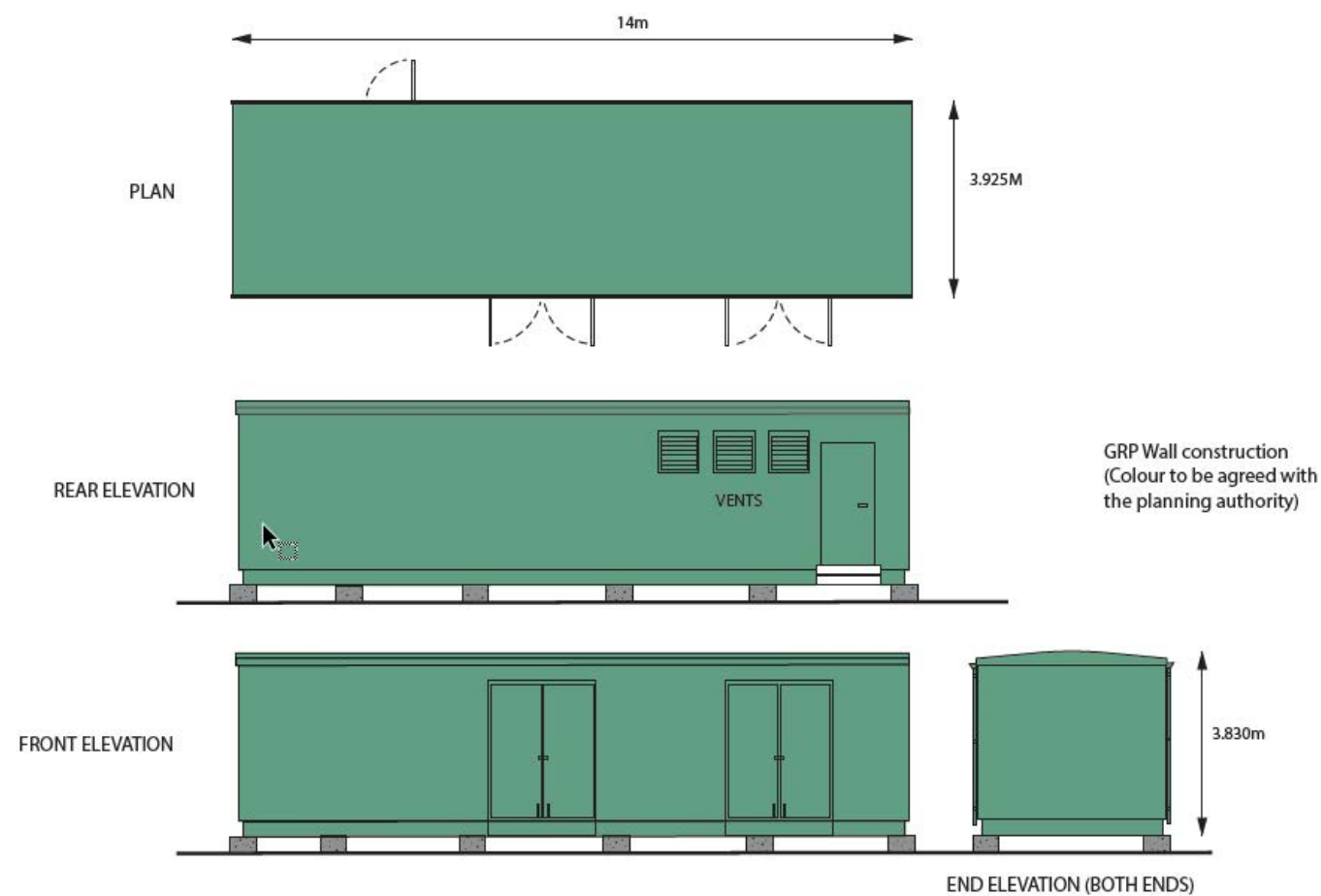


Figure 14.1: Indicative Elevations



Control Room

Corrugated steel clad building
finished in a recessive green
with a folded metal roof,
matt zinc finish. Exact colour
finishes to be agreed with
the planning authority.

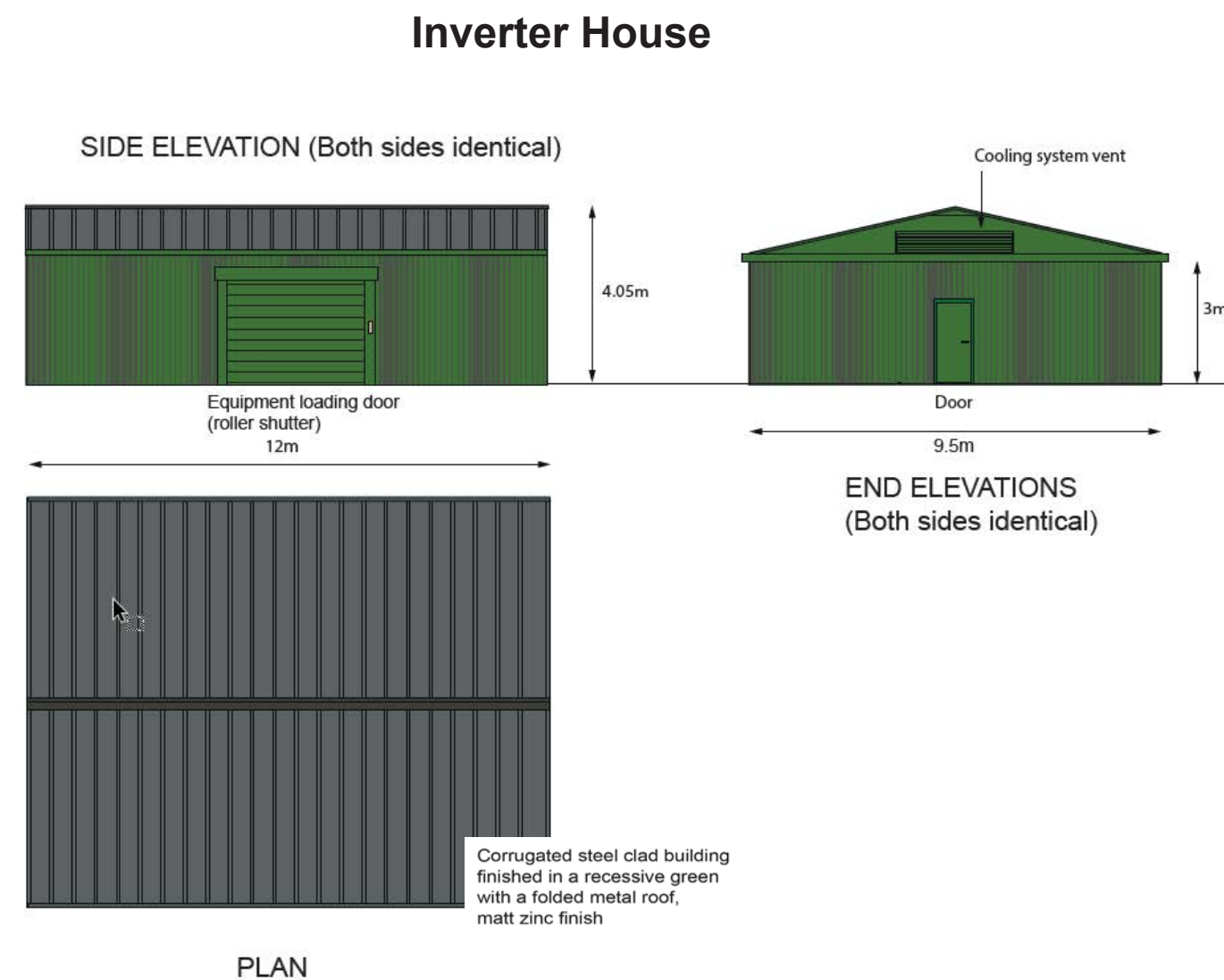
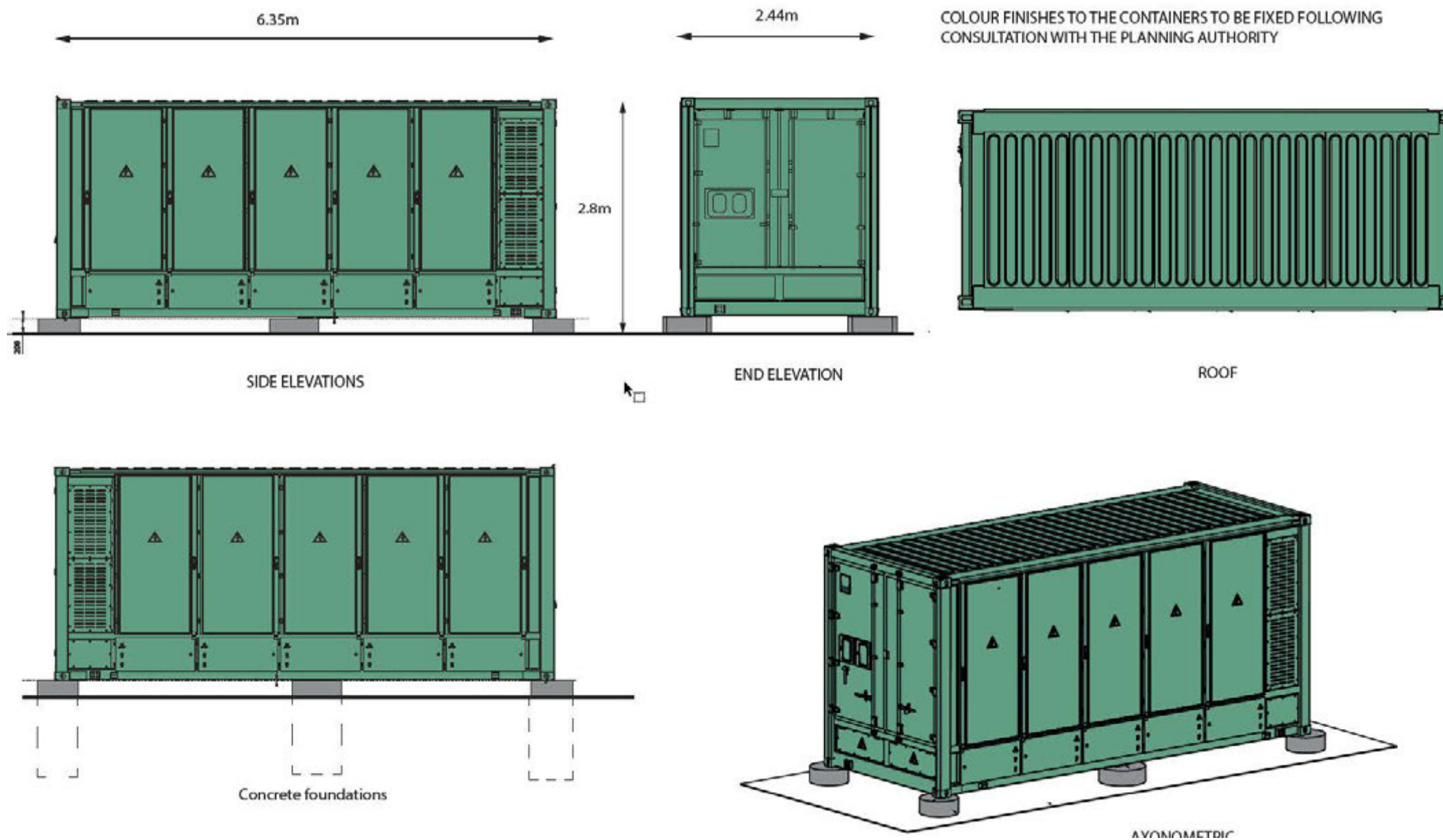
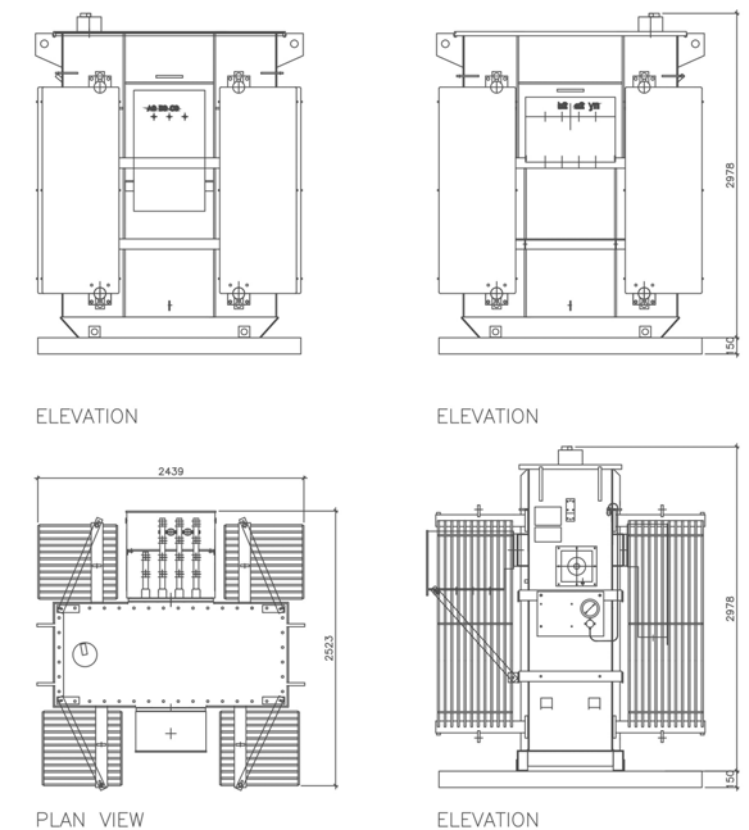


Figure 14.2: Indicative Elevations



Battery Container

Transformer





PROPOSED BATTERY ENERGY STORAGE SYSTEM, ADJACENT TO THE CULHAM SCIENCE CENTRE

LANDSCAPE AND VISUAL ASSESSMENT

APPENDIX A: FIGURES APRIL 2024

PART 2

Figure 15: Localised External Viewpoint Locations

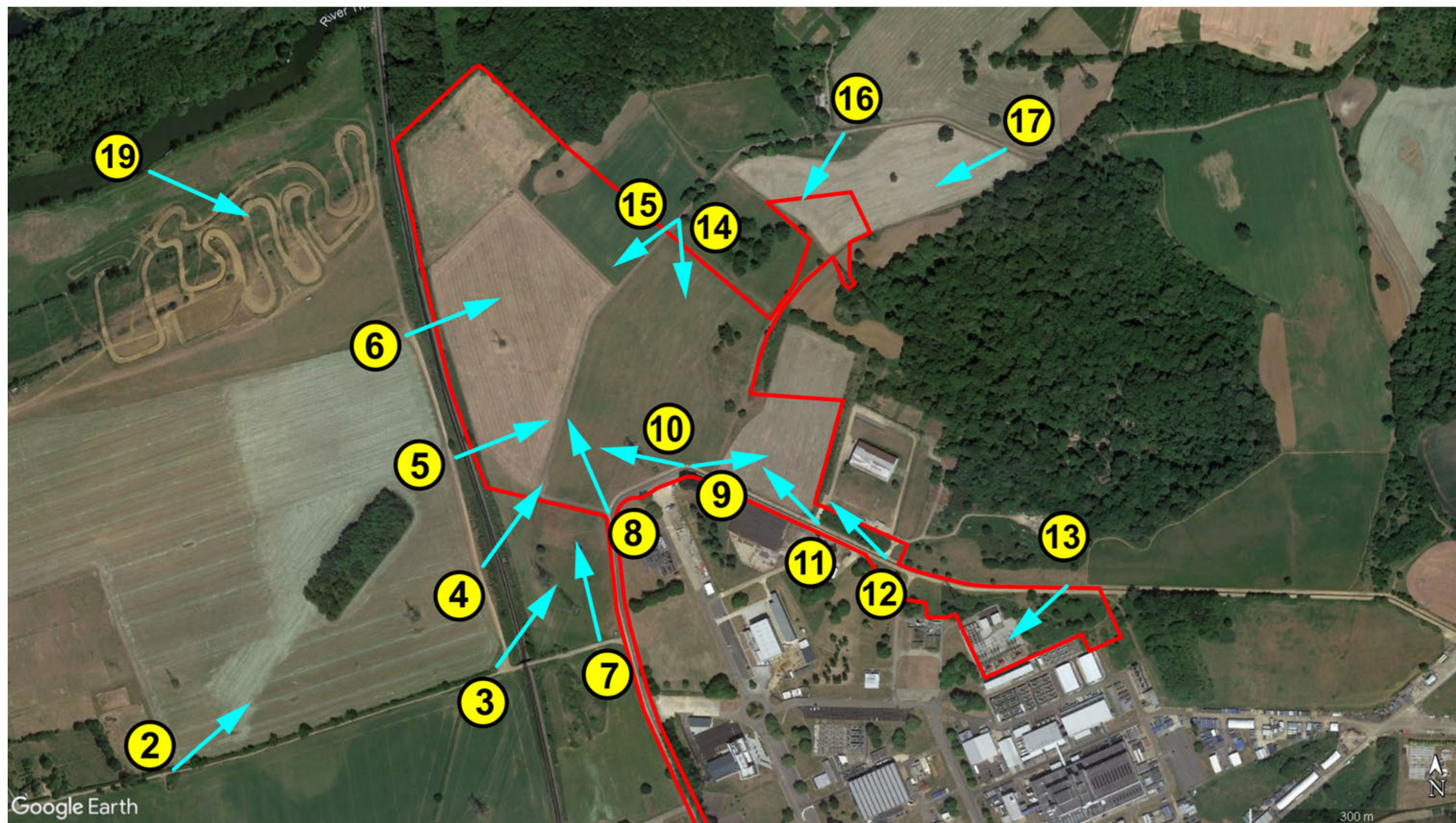


Figure 16: Long Distance External Viewpoint Locations

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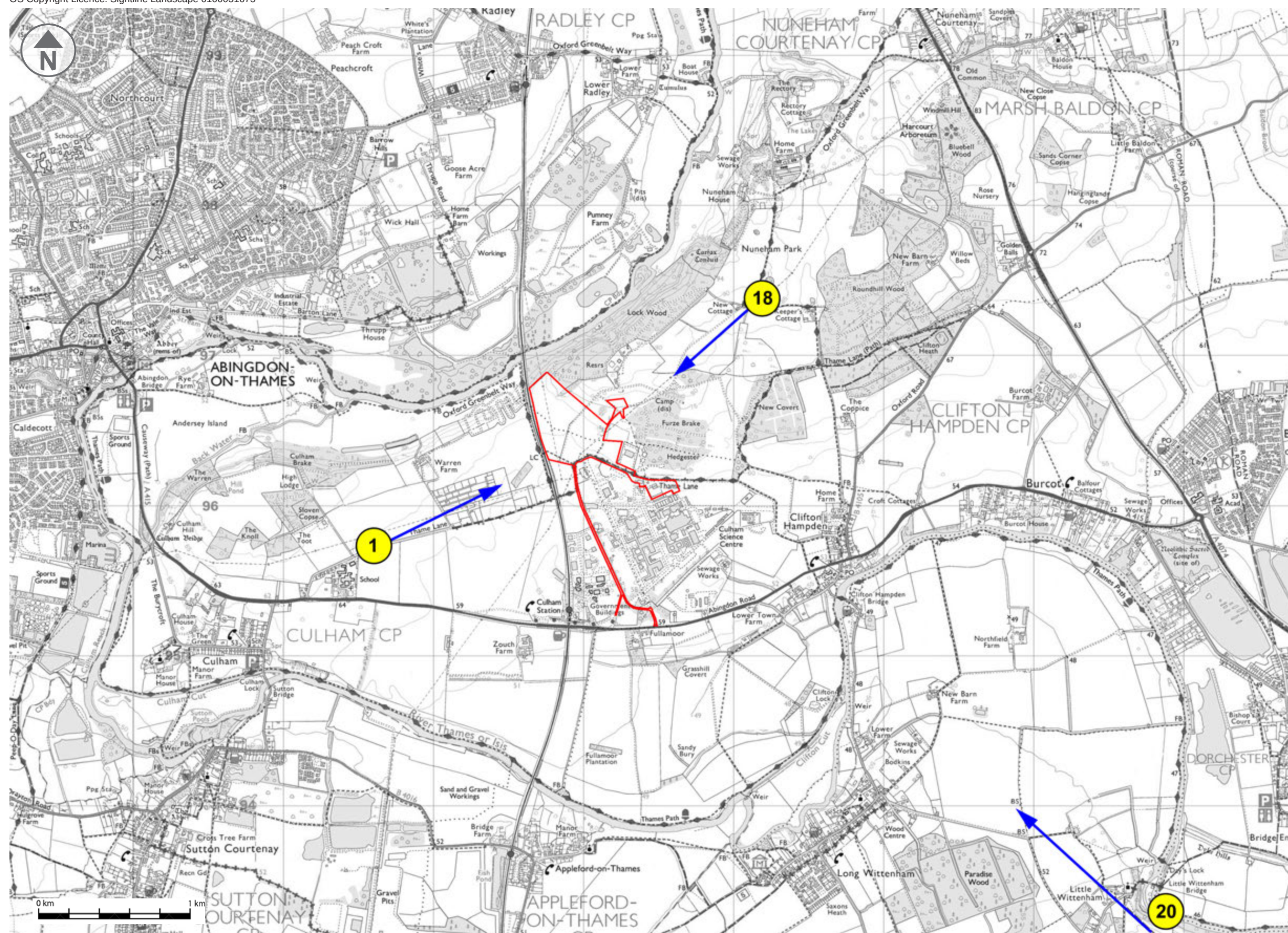


Figure 17.1: View from Thame Lane, close to the Europa School, as it approaches the site from the west (Panoramic View)



Viewpoint 1

Direction of view: Northeast

Distance to nearest site boundary: 1.3 km

Elevation: 65 m AOD

Grid reference: SU 51573 95706

Date photo was taken: 19.01.2023

The existing view

A hedge runs along the north side of this Restricted Byway, preventing views towards the Site when in leaf and affording only glimpsed views in winter when it has been cut back. The upper part of the Registered Park and Garden is visible, with the woodlands forming the skyline, although the part of the parkland within the Site and proposed as green space lies out of view. The view is adversely affected by the overhead transmission lines.

Predicted change to the view and the visual effect - Year 1

The existing hedge will screen the Proposed Development in summer and it is likely that the electrical elements of the Proposed Development will be lie below the foreground vegetation. A substantial part of the Proposed Development, including the proposed substation will be screened by Warren Copse. The planted earth bund will ensure that the proposed electrical infrastructure will be screened from view. The proposed connection tower will be visible above the skyline but seen in the ontext of the other existing towers.

The sensitivity is Medium and the magnitude of change Negligible , resulting in a Negligible, Not Significant, effect.

Predicted change to the view and the visual effect – Year 10

It will be possible to glimpse the proposed planting on the upper slopes of the parkland through gaps in the hedge, mainly in winter, but the effect on visual amenity is likely to remain Negligible, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20

The proposed woodland planting along the parish boundary and on the upper slopes will become a feature of the landscape where glimpsed views are possible, resulting in a Minor beneficial, Not a Significant effect.

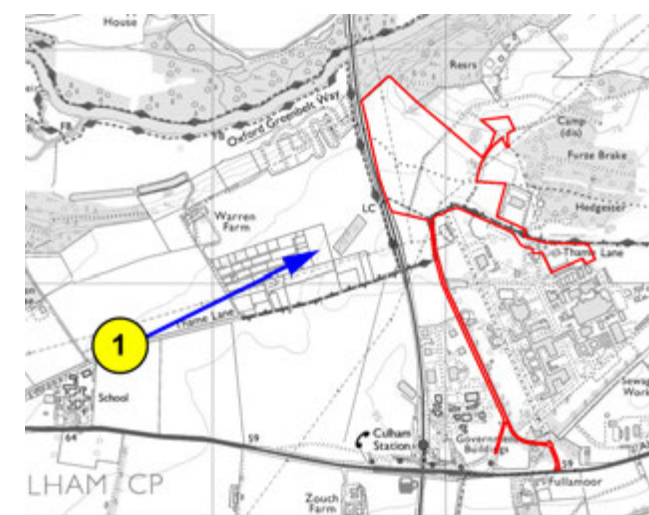
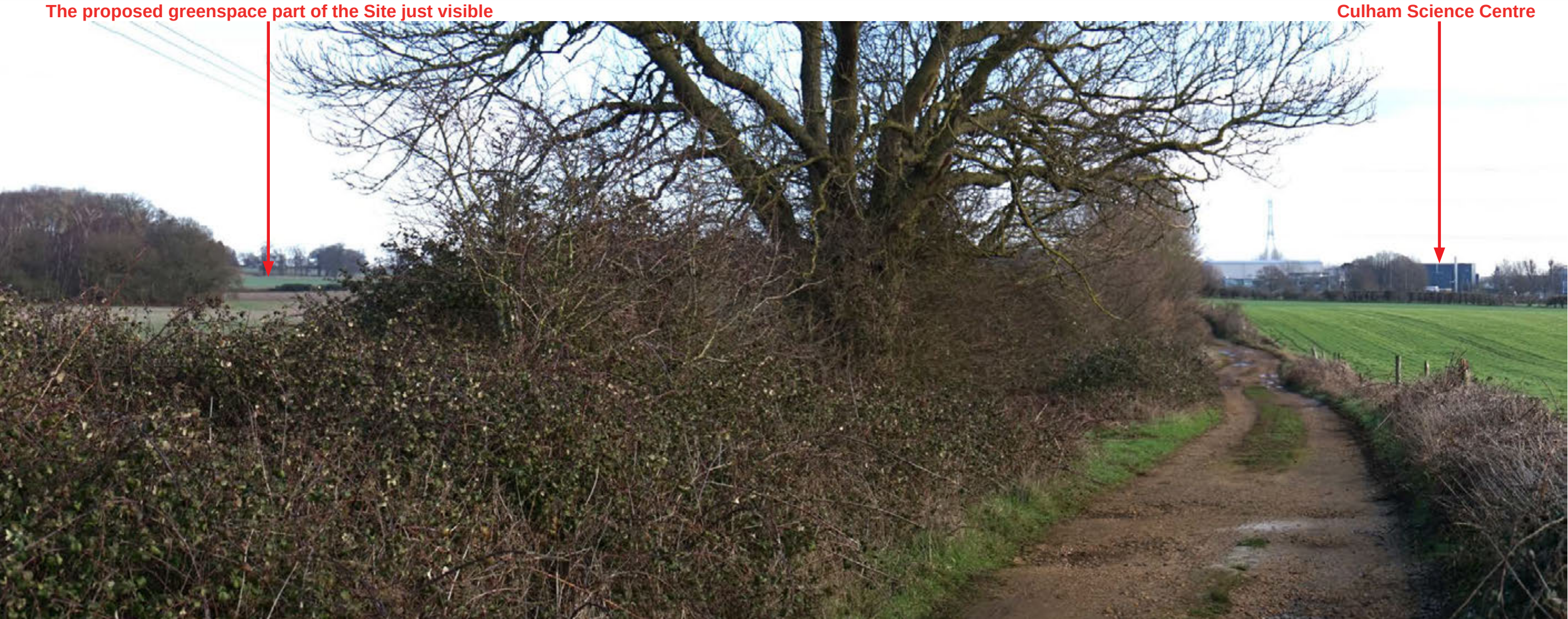


Figure 17.1: View from Thame Lane, close to the Europa School, as it approaches the site from the west (Single Frame)



Figure 17.2: View from Thame Lane (PRoW 183/4/20) as it approaches the site from the west, before it crosses the railway (Panoramic View)



Viewpoint 2
Direction of view: Northeast
Distance to nearest site boundary: 320 m
Elevation: 61 m AOD
Grid reference: SU 52350 95903
Date photo was taken: 19.01.2023

The existing view
A hedge runs along the north side of this Restricted Byway, preventing views towards the Site when in leaf and affording only glimpsed views in winter (the Site lies 300m away at its closest). In the glimpsed views the scrub growing along the railway line is visible, as are the upper slopes and wooded skyline of the parkland. Some of the buildings within the Culham Science Park form the focal main view down along the lane, which is also adversely affected by the overhead transmission lines.

Predicted change to the view and the visual effect – Year 1
A substantial part of the Proposed Development, including the proposed substation will be screened by Warren Copse. The planted earth bund will ensure that the proposed electrical infrastructure will be screened from view. The sensitivity is Medium and the magnitude of change Negligible , resulting in a Negligible, Not Significant, effect.

Predicted change to the view and the visual effect – Year 10
It will be possible to glimpse the planting on the upper slopes of the parkland through gaps in the hedge, mainly in winter, but the effect on visual amenity is likely to remain Negligible, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20
The proposed woodland planting along the parish boundary and on the upper slopes will become a feature of the landscape where glimpsed views are possible. The sensitivity will be Medium and the magnitude of change Low resulting in a Minor beneficial, Not a Significant effect.



Figure 17.2: View from Thame Lane (PRoW 183 4/20) as it approaches the site from the west, before it crosses the railway (Single Frame)



Figure 17.3: View from Thame Lane (PRoW 183 4/20) just before it crosses the railway when approaching from the west (also where it meets the Oxford Green Belt Way) (Panoramic View)



Viewpoint 3
Direction of view: Northeast
Distance to nearest site boundary: 185 m
Elevation: 63 m AOD
Grid reference: SU 52790 96046
Date photo was taken: 19.01.2023

The existing view
This is the first reasonably clear view of the Site from Thame Lane when heading east, although views of the majority of the Site are blocked by the foreground vegetation along the railway. Only the slightly elevated grass slopes on the east side of the Site, which are proposed to be green space, are visible. Lock Wood occupies the skyline and the clumps of trees within the parkland are visible, but the view is substantially adversely affected by the transmission lines and towers in the foreground.

Predicted change to the view and the visual effect – Year 1
A 3m high bund will be erected along the western and southern boundaries of the compound containing the electrical equipment and the attenuation pond. The bund will be set 20m back from the railway along the western edge and will be set at least 60m back from the railway on the southern edge. The bund will screen all but the upper metre of the inverter houses. The new tree and shrub planting with the shelters will be intrusive. The proposed connection tower will be visible on the skyline seen in the context of the existing towers. The sensitivity of the viewer is Medium and the magnitude of change is Medium, resulting in a Moderate to Major adverse effect on visual amenity, a Significant effect.

Predicted change to the view and the visual effect – Year 10
The scrub, tree and hedge planting will disguise the proposed new landform and will screen the proposed electrical infrastructure from view. The tree and shrub shelters will have been removed and the planting will have established a 100% canopy. The magnitude of change will decline to Low in summer and winter (given the depth of the planting), resulting in a Moderate adverse effect on visual amenity, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20
The proposed woodland planting along the parish boundary and on the upper slopes will be visible above the foreground planting and will be a feature of the landscape. The sensitivity will be Medium and the magnitude of change Low resulting in a Minor beneficial effect, Not a Significant effect.

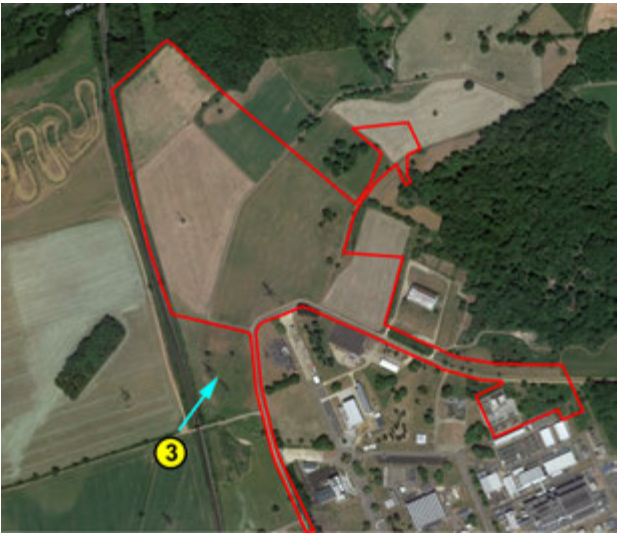
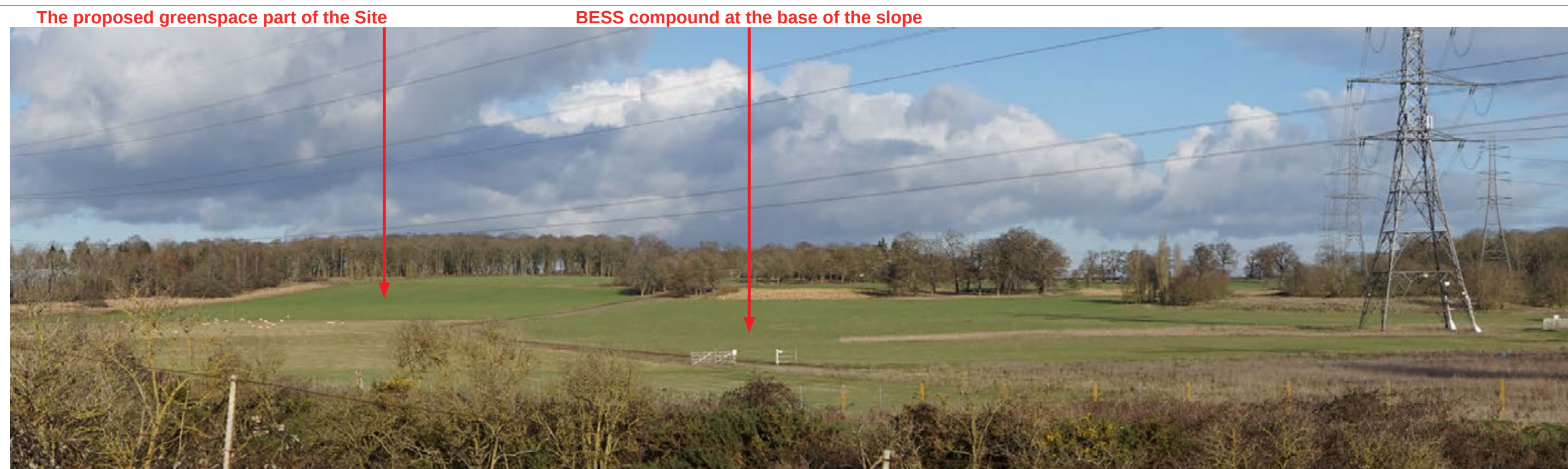


Figure 17.3: View from Thame Lane (PRoW 183 4/20) just before it crosses the railway when approaching from the west (also where it meets the Oxford Green Belt Way) (Single Frame)



Figure 17.4: View from the Oxford Green Belt Way (PRoW 183 5/10) which runs along the west side of the railway (Panoramic View)



Viewpoint 4

Direction of view: Northeast

Distance to nearest site boundary: 122 m

Elevation: 66 m AOD

Grid reference: SU 52768 96180

Date photo was taken: 19.01.2023

The existing viewpoint

A short 20m section of the footpath is slightly elevated compared with the Site and affords a view across the railway (which lies in a cutting) into the Site. Lock Wood forms the skyline. This is the best view of the Registered Park and Garden from the west side of the railway, the parkland occupies the mid to upper slopes but its setting is adversely affected by the overhead transmission line which occupies the foreground.

Predicted change to the view and the visual effect – Year 1

A 3m high bund will be erected along the western boundary of the compound containing the electrical equipment and the attenuation pond. The bund will be set 20m back from the railway along the western edge and will be set at least 60m back from the railway on the southern edge (where the gate in the field lies). The bund will screen the majority of a 4m high wooden acoustic fence which will run between the attenuation pond and the electrical infrastructure. The fence will also run along the southern edge of the BESS compound, screening the infrastructure from view. Native scrub and woodland will be planted on the new bund, with a native hedge and standard trees in front of it, to integrate it into the landscape and provide another layer of screening. Tree and scrub planting will also be undertaken in front of the acoustic fence on the southern boundary to soften its visual impact. The new landscaping with shelters and stakes and southern fence will initially appear intrusive and will restrict the view of the parkland. The connection tower will be partially visible behind a group of trees. Receptor sensitivity is Medium and the magnitude of change High resulting in a Moderate - Major adverse effect on visual amenity, a Significant effect.

Predicted change to the view and the visual effect – Year 10

The scrub, tree and hedge planting will disguise the proposed new landform and fence. The tree and shrub shelters will have been removed and the planting will have established a 100% canopy. The magnitude of change will remain High but will be of woody vegetation, resulting in a Minor adverse effect on visual amenity, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20

The proposed woodland planting along the parish boundary and on the upper slopes will be visible above the foreground planting and will be a restored feature of the landscape. The sensitivity will be Medium and the magnitude of change Low resulting in a Minor beneficial effect, Not a Significant effect.

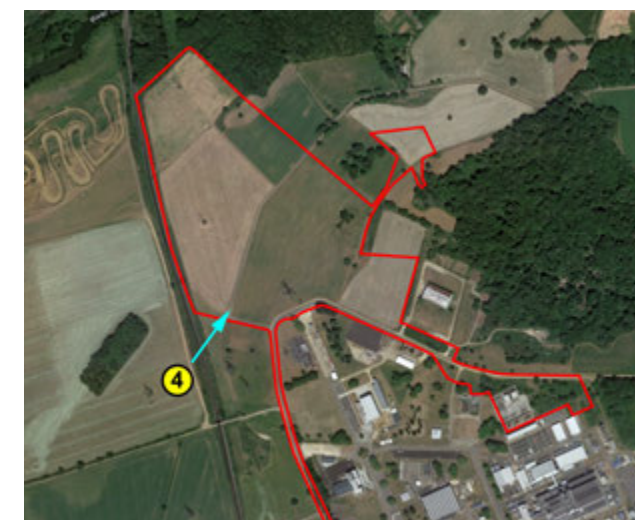


Figure 17.4: View from the Oxford Green Belt Way (PRoW 183 5/10) which runs along the west side of the railway (Single Frame)



Figure 17.5: View from the Oxford Green Belt Way 183 1/50 as it passes the site on the west side of the railway where it meets PRow 183 1/60 which crosses the railway (Panoramic View). **This footpath has now been formally stopped up and ceases to exist.**



Viewpoint 5

Direction of view: Northeast

Distance to nearest site boundary: 43 m

Elevation: 62 m AOD

Grid reference: SU 52721 96345

Date photo was taken: 19.01.2023

The existing view

This view illustrates how PRow 183 1/50 drops down to run level with the top of the cutting and vegetation within the cutting prevents views over the Site. It also illustrates how views over the Site from the Oxford Green Belt Way are reduced as the path runs at a slightly lower level than the railway. This footpath has now been formally stopped up.

Predicted change to the view and the visual effect – Year 1

The majority of the Proposed Development will be screened from view behind a 3m high bund and a 4m high wooden attenuation fence which will run between the proposed attenuation pond and the main BESS compound. The fence will also run along the southern edge of the BESS compound, screening the infrastructure from view. It is proposed to plant a hedge with trees along the base of the bund and plant the bund with native shrubs. Trees and native shrubs will also be planted in front of the acoustic fence along the southern boundary to soften its visual impact. Woodland will be planted on the bund where it broadens out further north. The fencing and new landscaping with shelters and stakes will initially appear intrusive. It will be possible to glimpse the upper part of the connection tower and wires. The sensitivity of the viewer is High and the magnitude of change Medium resulting in a Moderate- Major adverse, A Significant, effect on visual amenity.

Predicted change to the view and the visual effect – Year 10

The scrub, tree and hedge planting will disguise the proposed new landform and acoustic fences and will screen the proposed electrical infrastructure from view. The tree and shrub shelters will have been removed and the planting will have established a 100% canopy. The planting will block views of the connection tower. The magnitude of change will decline to Low in summer and winter (given the depth of the planting and distance of the infrastructure), resulting in a Minor adverse effect on visual amenity, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20

The proposed woodland planting along the parish boundary and on the upper slopes will be visible above the foreground planting and will be a feature of the landscape. The sensitivity will be Medium and the magnitude of change Low resulting in a Minor beneficial effect, Not a Significant effect.



Figure 17.5: View from the Oxford Green Belt Way 183 1/50 as it passes the site on the west side of the railway where it meets PRow 183 1/60 which crosses the railway (Single Frame)



Figure 17.6: View from the Oxford Green Belt Way (183 5/10) as it passes west of the Site (Panoramic View)



Viewpoint 6

Direction of view: East

Distance to nearest site boundary: 50 m

Elevation: 64 m AOD

Grid reference: SU 52662 96512

Date photo was taken: 19.01.2023

The existing view

This view illustrates how views over the Site from the Oxford Green Belt Way are reduced as the path runs at a slightly lower level than the railway. The Site is visible, almost at eye level but the view is marred by the overhead transmission line and the buildings within the CSC.

Predicted change to the view and the visual effect – Year 1

It is proposed to erect a 3m to 4m high landform along the western boundary of the Site which will screen the electrical infrastructure from view. It will also beneficially screen the CSC from view and reduce the visual impact of the transmission line towers. It is proposed to establish native woodland on the landform to disguise its form, provide further screening to the overhead transmission lines, but initially the planting will be intrusive. The sensitivity of the viewer is High and the magnitude of change Medium potentially resulting in a Moderate-Major adverse effect on visual amenity but while there will be a loss of an open view, the screening is on the whole considered beneficial. As a result the effect on visual amenity is considered to be Minor adverse, not a significant effect.

Predicted change to the view and the visual effect – Year 10

The scrub, tree and hedge planting will disguise the proposed new landform and will screen the proposed electrical infrastructure from view. The tree and shrub shelters will have been removed and the planting will have established a 100% canopy. The magnitude of change will decline to Low, resulting in a Moderate beneficial effect on visual amenity, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20

The planting will have established further but the view will not change significantly, essentially a line of trees and scrub forming the skyline, providing increased screening to the electrical infrastructure. The magnitude of change will decline to Low, resulting in a Moderate adverse beneficial effect on visual amenity, Not a Significant effect.



Figure 17.6: View from the Oxford Green Belt Way (183 5/10) as it passes west of the Site (Single Frame)



Figure 17.7: View from the Oxford Green Belt Way (183 4/40) as it passes south of the Site after crossing the railway (Panoramic View)



Viewpoint 7

Direction of view: North

Distance to nearest site boundary: 200 m

Elevation: 62 m AOD

Grid reference: SU 52940 96092

Date photo was taken: 19.01.2023

The existing view

This is the first open view towards the Registered Park and Garden but its setting is adversely affected by the overhead transmission line in the foreground. The setting is also adversely affected by the CSC which lies to the right of the view.

Predicted change to the view and the visual effect – Year 1

The proposed electrical infrastructure compound will be screened from view by a 3m high earth bund along the west side of the compound and a 4m high wooden acoustic fence along the west and southern boundaries. It is proposed to establish native trees and scrub on the bund and in front of the acoustic fence on the southern boundary. Initially the visible parts of the acoustic fencing and new landscaping will appear intrusive. The sensitivity of the viewer is Medium and the magnitude of change High in summer and winter, resulting in a Moderate – Major adverse, a Significant effect on visual amenity.

Predicted change to the view and the visual effect – Year 10

The scrub, tree and hedge planting along the southern boundary will disguise the proposed new landform and will screen the proposed electrical infrastructure from view. The tree and shrub shelters will have been removed and the planting will have established a 100% canopy. The gap in the bund will be filled with scrub which will screen the attenuation pond and equipment behind. The magnitude of change will be Low in summer and winter resulting in a Minor adverse effect on visual amenity, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20

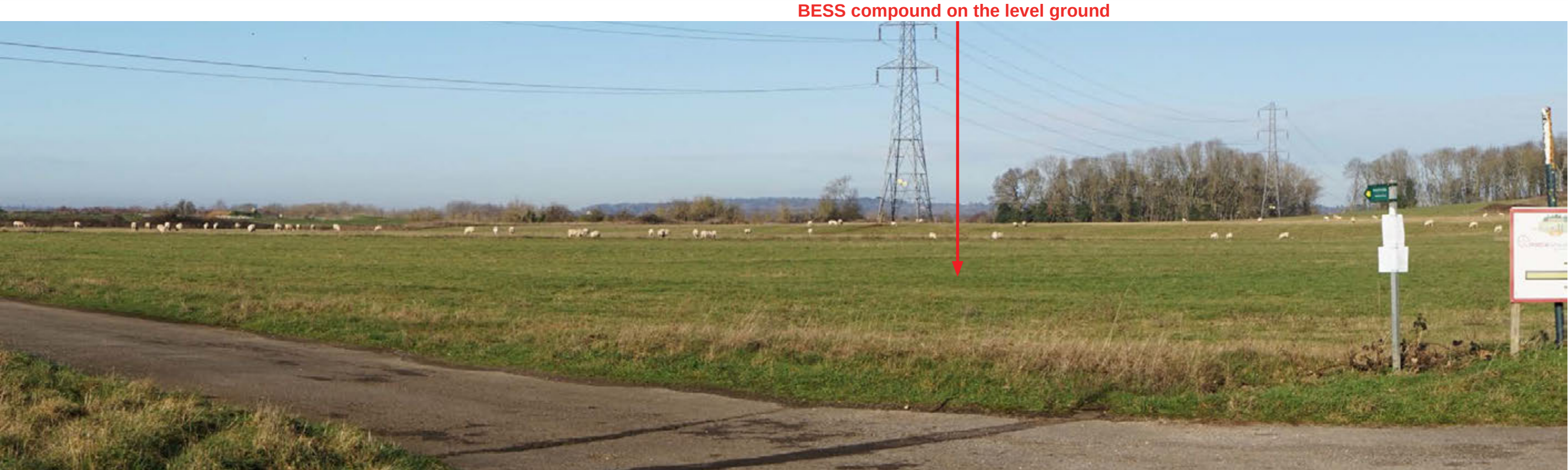
The scrub, tree and hedge planting will have gained greater stature and the woodland planting along the parish boundary will form a visible backdrop. The magnitude of change will be Low in summer and winter resulting in a Minor adverse effect on visual amenity, Not a Significant effect.



Figure 17.7: View from the Oxford Green Belt Way (183 4/40) as it passes south of the Site after crossing the railway (Single Frame)



Figure 17.8: View from the Oxford Green Belt Way (183 4/40) as it skirts the Culham Science Centre, south of the Site at its junction with footpath 183 1/60 (Panoramic View)



Viewpoint 8
Direction of view: North
Distance to nearest site boundary: 0 m
Elevation: 64 m AOD
Grid reference: SU 52941 96269
Date photo was taken: 19.01.2023

The existing view

This section of the PRoW affords a clear view across the Site, but also of the Culham Science Centre. To the northwest the view extends across to the Thames Valley and to the northeast the farmland gradually rises to Lock Wood which occupies the skyline. The clumps of trees within the parkland are visible. The vista is framed by the two transmission lines which cut through the parkland, which in association with the CSC adversely affects the setting of the parkland.

Predicted change to the view and the visual effect – Year 1

The proposed electrical infrastructure compound will be largely screened from view by a 4m high solid wood panel acoustic fence, which will also block views of the countryside beyond. If the viewer looks to the right the proposed secondary access to the proposed compound will be visible, as will part of the eastern boundary where it is not possible to erect a bund due to service constraints and acoustic mitigation is not required. The electrical equipment will be visible through the weld mesh. Native trees and shrubs will be planted in front of the acoustic fence to soften its visual impact and a native hedge in front of the weldmesh fence along the eastern boundary. The sensitivity of the viewer is Medium and the magnitude of change Medium in summer and High in winter, resulting in a Moderate adverse effect in summer and Moderate to Major adverse effect in winter, a Significant effect.

Predicted change to the view and the visual effect – Year 10

The proposed planting will have achieved 100% canopy and the stakes and shelters will have been removed. The hedge in front of the compound fence will have reached a height of 3m. In summer the planting will largely screen the acoustic fence electrical infrastructure from view, but it will be possible to glimpse these features in winter. The magnitude of change will reduce to Low in summer only resulting in a Minor adverse effect on the visual amenity of walkers in summer but Moderate adverse in winter, Not a Significant effect. The view of the wider countryside will remain blocked for this short section of the footpath.

Predicted change to the view and the visual effect – Year 20

The scrub and tree planting will have gained greater stature and the woodland planting along the parish boundary will form a visible backdrop. The magnitude of change will reduce to Low in summer only resulting in a Minor adverse effect on the visual amenity of walkers in summer but Moderate adverse in winter, Not a Significant effect. The view of the wider countryside will remain blocked for this short section of the footpath.

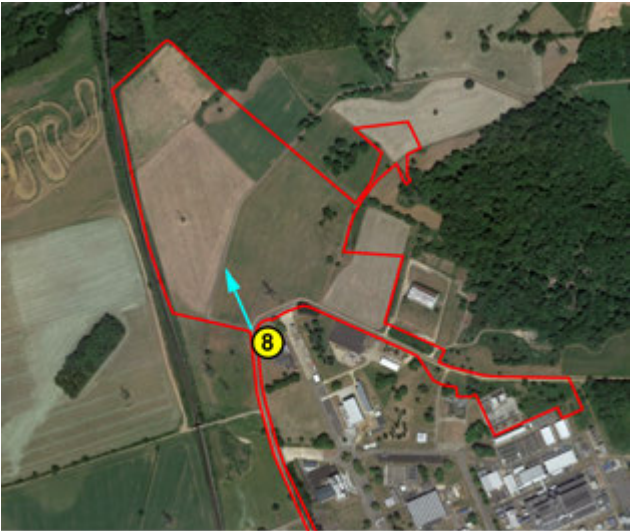
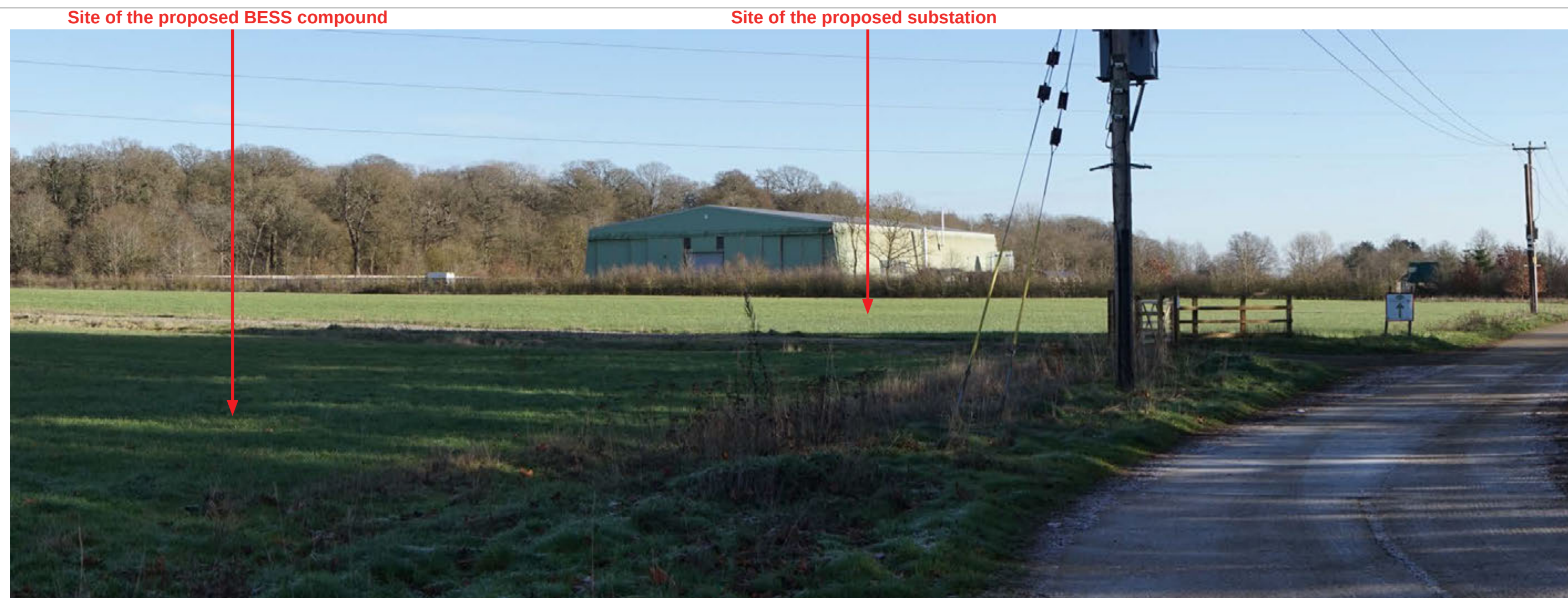


Figure 17.8: View from the Oxford Green Belt Way (183 4/40) as it skirts the Culham Science Centre, south of the Site at its junction with footpath 183 1/60 (Single Frame)



Figure 17.9: View from the Oxford Green Belt Way as it skirts the CSC approaching the site of the proposed substation (Panoramic View)



Viewpoint 9

Direction of view: East

Distance to nearest site boundary: 0 m

Elevation: 65 m AOD

Grid reference: SU 53033 96336

Date photo was taken: 19.01.2023

The existing view

The existing Restricted Byway follows the broad concrete perimeter track which runs around the outside of the perimeter security fence to the CSC. As a result the visual amenity of walkers is adversely affected by the fence, buildings and activities within the science centre. The view is also marred by an industrial shed and electrical infrastructure along the byway. Woodland forms a screening backdrop to the view. It is proposed to locate the electrical substation on the grass field in the foreground.

Predicted change to the view and the visual effect – Year 1

The Proposed Substation will occupy most of the green field visible in the foreground. Walkers will have to pass between the palisade fence to the substation and the security fence around the CSC. A hedge will be planted on an earth bund between the substation and the concrete track. The sensitivity of the receptor is Medium and the magnitude of change is Medium (as seen in the context of the existing infrastructure of the CSC), resulting in a Moderate adverse, Not Significant effect, on the visual amenity of walkers.

Predicted change to the view and the visual effect – Year 10

The hedge will have gained a height of 3m and in summer will screen the majority of the substation from view in summer, but the entrance gates will be visible as walkers pass them. The hedge will allow glimpsed views in winter. The magnitude of change will remain Medium in summer and winter and the effect will be Moderate adverse, a Not a Significant effect.

Predicted change to the view and the visual effect – Year 20

No significant change in the view since Year 10 as the hedge will be managed at a similar height. The residual effect will be Moderate adverse Not a Significant effect.



Figure 17.9: View from the Oxford Green Belt Way as it skirts the CSC approaching the site of the proposed substation (Single Frame)



Figure 17.10: View from the Oxford Green Belt Way (183 4/40) as it skirts the Culham Science Centre (Panoramic View)



Viewpoint 10

Direction of view: Northwest

Distance to nearest site boundary: 0 m

Elevation: 65 m AOD

Grid reference: SU 53033 96336

Date photo was taken: 19.01.2023

The existing view

This view illustrates how the CSC, water pumping station and overhead transmission line adversely affects the setting of the route of this section of the Oxford Green Belt Way. The Site occupies the land behind the transmission tower up to the railway, which passes in cutting and can only be discerned by the line of scrub within the cutting. Warren Copse is visible.

Predicted change to the view and the visual effect – Year 1

The electrical equipment will be clearly visible, set behind the tower and seen through the proposed weld mesh compound fence. The sensitivity of the receptor is Medium and the magnitude of change Medium (in the context of the existing electrical infrastructure), resulting in a Moderate adverse effect, Not significant.

Predicted change to the view and the visual effect – Year 10

The hedge will have gained a height of 3m and in summer will screen the majority of the substation from view but the entrance gates will be visible as walkers pass them. The magnitude of change will remain Medium and the effect will be Moderate adverse, not a Significant effect.

Predicted change to the view and the visual effect – Year 20

No significant change in the view since the hedge will be managed at a similar height. The residual effect will be Moderate adverse Not a Significant effect.

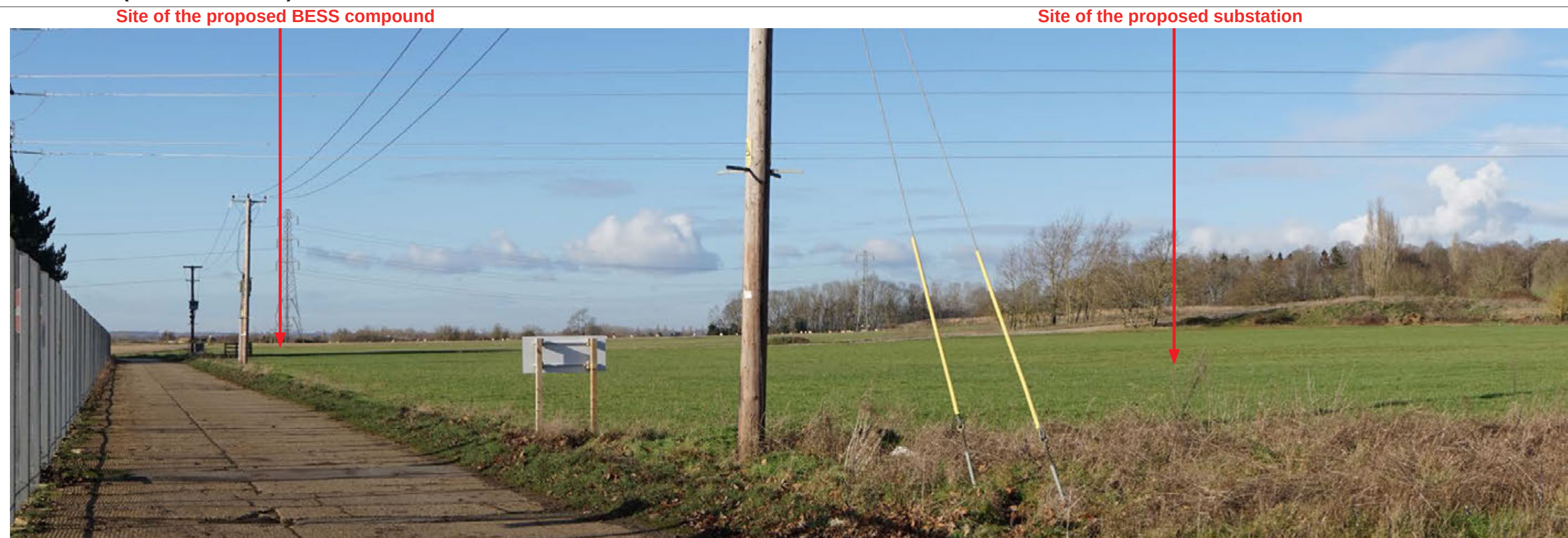
It is proposed to plant a native hedge in front of the weld mesh fence which, once established (typically 10 years) will screen the proposed compound and equipment from view in the summer and offer a glimpsed view in winter. This will result in a Minor adverse effect in summer and a Moderate adverse effect in winter.



Figure 17.10: View from the Oxford Green Belt Way (183 4/40) as it skirts the Culham Science Centre (Single Frame)



Figure 17.11: View from the Oxford Green Belt Way (171 16/70) as it approaches the site of the proposed substation from the south (Panoramic View)



Viewpoint 11

Direction of view: Northwest

Distance to nearest site boundary: 0 m

Elevation: 65 m AOD

Grid reference: SU 53227 96251

Date photo was taken: 19.01.2023

The existing view

The existing Restricted Byway follows the broad concrete perimeter track which runs around the outside of the perimeter security fence to the CSC. As a result the visual amenity of walkers is adversely affected by the fence, buildings and activities within the CSC. The view is also marred by the overhead electricity lines. Shrub cover along the railway and Lock Wood form the skyline.

Predicted change to the view and the visual effect – Year 1

The Proposed Substation will occupy most of the green field visible in the foreground. Walkers will have to pass between the palisade fence to the substation and the security fence around the CSC. Native hedge and scrub planting will be implemented on the earthworks along the northeast side of the road. There will be a loss of openness. The sensitivity of the receptor is Medium and the magnitude of change is Medium, resulting in a Moderate adverse effect on the visual amenity of walkers. The view of the parkland will be blocked, although the Proposed Development will enable people to visit the parkland and enjoy a high quality view over the Thames Valley.

Predicted change to the view and the visual effect – Year 10

The hedge will have gained a height of 3m and in summer will screen the majority of the substation from view but the entrance gates will be visible as walkers pass them. The magnitude of change will remain Medium and the effect will be Moderate adverse, not a Significant effect.

Predicted change to the view and the visual effect – Year 20

No significant change in the view since the hedge will be managed at a similar height. The residual effect will be Moderate adverse Not a Significant effect.

It is proposed to plant a native hedge in front of the weld mesh fence which, once established (typically 10 years) will screen the proposed compound and equipment from view in the summer and offer a glimpsed view in winter. This will result in a Minor adverse effect in summer and a Moderate adverse effect in winter.



Figure 17.11: View from the Oxford Green Belt Way (171 16/70) as it approaches the site of the proposed substation from the south (Single Frame)



Figure 17.12: View from the Oxford Green Belt Way (171 16/70) as it approaches the site of the proposed substation from further south (Panoramic View)

Site of the proposed BESS compound Southern edge of the site of the proposed substation



Viewpoint 12

Direction of view: Northeast

Distance to nearest site boundary: 122 m

Elevation: 66 m AOD

Grid reference: SU 53330 96209

Date photo was taken: 19.01.2023

The existing view

The existing Restricted Byway follows the broad concrete perimeter track which runs around the outside of the perimeter security fence to the CSC. As a result, the visual amenity of walkers is adversely affected by the fence, buildings and activities within the CSC. The view is also marred by the overhead electricity lines. The northside of the Byway is enclosed by woodland.

Predicted change to the view and visual effect Year 1

It will just be possible to glimpse the entrance to the substation and the proposed earth bund and young landscaping. The sensitivity of the receptor is Medium and the magnitude of change Low resulting in a Minor adverse effect on visual amenity, Not a Significant effect.

Predicted change to the view and the visual effect – Year 10

The hedge will have gained a height of 3m and in summer will screen the majority of the substation from view. The magnitude of change will remain Low and the effect will be Minor adverse, Not a Significant effect.

Predicted change to the view and the visual effect – Year 20

No significant change in the view since the hedge will be managed at a similar height. The residual effect will be Minor adverse Not a Significant effect.



Figure 17.12: View from the Oxford Green Belt Way (171 16/70) as it approaches the site of the proposed substation from further south (Single Frame)



Figure 17.13: View from the Oxford Green Belt Way (171 16/70) as it passes the proposed extension to the Culham Science Centre substation (Panoramic View)

An existing substation within the CSC



Viewpoint 13

Direction of view: Southwest

Distance to nearest site boundary: 0 m

Elevation: 65 m AOD

Grid reference: SU 53569 96172

Date photo was taken: 19.01.2023

The existing view

The existing Restricted Byway follows the broad concrete perimeter track which runs around the outside of the perimeter security fence to the CSC. Views of the CSC and the existing substation are through the security fence. In summer the substation is screened by trees, but in winter it is possible to glimpse its structure through the leafless trees, but seen in the context of other structures within the CSC.

Predicted change to the view and visual effect Year 1

The proposed extension will result in the loss of trees close to the substation. The proposed extension will be clearly visible beyond the inner access track but will be seen through the mesh of the existing security fence. The magnitude of change will be medium summer and winter and the sensitivity of the viewer is Medium resulting in a Moderate adverse effect on visual amenity.

Predicted change to the view and visual effect Year 10

Mitigation is not practical. The residual effect on visual amenity will remain as Moderate adverse.

Predicted change to the view and visual effect Year 20

Mitigation is not practical. The residual effect on visual amenity will remain as Moderate adverse.



Figure 17.13: View from the Oxford Green Belt Way (171/ 6/70) as it passes the proposed extension to the Culham Science Centre substation (Single Frame)



Figure 17.14: View from the northeast boundary of the Site within the Registered Park and Garden looking southeast (not currently a publicly accessible viewpoint) (Panoramic View)



Viewpoint 14
Direction of view: South
Distance to nearest site boundary: 130 m
Elevation: 74 m AOD
Grid reference: SU 53033 96678
Date photo was taken: 19.01.2023

The existing view
This elevated position affords a panoramic view over the Site and across to the allocated urban expansion area to the right and the CSC to the left. The view is substantially marred by the overhead transmission lines which radiate out from Didcot Power Station, which is also visible.

Predicted change to the view and visual effect Year 1
The proposed electrical infrastructure compound will lie at the base of the slope, seen in the context of the cluster of existing transmission lines. The majority of the compound will be screened by the gentle land forming along the northeast boundary. The proposed electrical substation will be partially visible, seen in the context of the CSC. The earth bunds along the western boundary will screen reduce the visibility of the railway. Native woodland and scrub will be planted on the new landform across the northeast edge, largely following the parish boundary and re-establishing the historical line of woodland. Scrub and woodland will also be planted on the created landforms along the western boundary. A block of woodland will also be planted northwest of the proposed substation. The intervening grassland will be converted to a species rich wildflower meadow and parkland trees planted within it. Public access will be permitted to this area for the operational lifetime of the facility.

Although there is currently no public access to this area, sensitivity is considered to be Medium. The magnitude of change is High, resulting in a Moderate - Major adverse, Significant effect.

Predicted change to the view and visual effect Year 10
After 10 years the proposed landscaping will screen the proposed electrical infrastructure and the CSC and will reduce the adverse visual impact of the Didcot transmission lines. The magnitude of change will reduce to Medium, resulting in a Moderate adverse effect, although this is offset by the benefit of reducing the visibility of existing development, and so a Minor adverse effect is predicted, Not a Significant effect.

Predicted change to the view and visual effect Year 20
The woodland planting along the parish boundary and tree planting within the parkland will visually isolate the park and garden from the urban fringe landscape to the southwest, resulting in a Minor beneficial effect in summer and Neutral effect in winter.



Figure 17.14: View from the northeast boundary of the Site within the Registered Park and Garden looking southeast (not currently a publicly accessible viewpoint) (Single Frame)



Figure 17.15: A continuation from Viewpoint 14 within the Registered Park and Garden but looking southwest (not currently a public viewpoint) (Panoramic View)



Viewpoint 15
Direction of view: Southwest
Distance to nearest site boundary: 130 m
(to haul road access)
Elevation: 74 m AOD
Grid reference: SU 53035 96679
Date photo was taken: 19.01.2023

The existing view
The parkland affords an extensive view, through the transmission wires, over the allocated urban expansion area, as far as Culham Brake and Sloven Copse. The buildings of Warren Farm are visible. Further to the right the view extends across the Thames Valley, which has a high tree cover. The only building that can easily be made out is the spire of St Helen's Church, Abingdon.

Predicted changes to the view and effect on visual amenity – Year 1
The view will be over the area of the Site which will become enhanced parkland with permissive access. A naturalistic landform will raise the ground along the western boundary. Native woodland and scrub will be planted on the new landform and across the northeast edge of proposed electrical compound (which is out of view to the left), largely following the parish boundary and re-establishing the historical line of woodland. A block of woodland will also be planted northwest of the proposed substation. The intervening grassland will be converted to a species rich wildflower meadow and parkland trees planted within it. Public access will be permitted to this area for the operational lifetime of the facility. Woodland planting has been omitted from the northern part of the greenspace to preserve this attractive view over the Thames Valley and it is anticipated that the northern part of the parkland will become a popular viewing spot once permissive access is granted. The woodland planting on the landform on the western boundary is designed to frame this view and draw attention away from the allocated urban expansion area.

The sensitivity of the viewer is Medium and the magnitude of change will be Medium, resulting in a Moderate adverse effect.

Predicted changes to the view and effect on visual amenity Year 10
After 10 years the proposed landscaping will screen the proposed electrical infrastructure and the CSC and will reduce the adverse visual impact of the Didcot transmission lines. The magnitude of change will reduce to Medium, resulting in a Moderate adverse effect, although this is offset by the benefit of reducing the visibility of existing development, and so a Minor adverse effect is predicted, Not a Significant effect.

Predicted change to the view and visual effect Year 20
The woodland planting along the parish boundary and tree planting within the parkland will visually isolate the park and garden from the urban fringe landscape to the west, resulting in a Minor beneficial effect in summer and Neutral effect in winter.



Figure 17.15: A continuation from Viewpoint 14 within the Registered Park and Garden but looking southwest (not currently a public viewpoint) (Single Frame)



Figure 17.16: View from deeper within the Registered Park and Garden (further northeast, not currently a publicly accessible viewpoint)
(Panoramic View)



Viewpoint 16
Direction of view: Southwest
Distance to nearest site boundary: 375 m
Elevation: 82 m AOD
Grid reference: SU 53258 96785
Date photo was taken: 19.01.2023

The existing view
This view illustrates how the visibility of the BESS Site quickly decreases on heading northeast towards the core parkland area. Only glimpsed views of the BESS Site are visible through the parkland trees. The transmission lines detract from the view. The allocated urban expansion area is also clearly visible in the distance. The transmission lines have an adverse effect on landscape character and visual amenity.

Predicted changes to the view and effect on visual amenity – Year 1
Native woodland and scrub will be planted on the new landform and across the northeast edge of proposed electrical compound, largely following the parish boundary and re-establishing the historical line of woodland. A block of woodland will also be planted northwest of the proposed substation. It will be possible to glimpse part of the battery compound at the base of the slope, seen through the trees. Sensitivity is Medium and the magnitude of change in relation to the BESS only, is Low, resulting in a Minor adverse, Not Significant effect. The proposed connection tower will be clearly visible in the foreground but seen in the context of the existing overhead line. It is proposed to plant parkland trees and native shrubs around the tower and compound to reduce its visibility within the parkland. In relation to the tower, sensitivity is Medium and the magnitude of change High, resulting in a Moderate-Major adverse effect, a **significant effect**. But this is not a public view.

Predicted changes to the view and effect on visual amenity – Year 10
Once the trees and shrubs gain stature they will beneficially screen the substation and CSC, and will reduce the adverse visual impact of the Didcot transmission lines. The effect of the BESS on visual amenity will be Negligible. The effect of the connection tower will be will reduce to Moderate adverse as the screen planting starts to take effect.

Predicted change to the view and visual effect Year 20
The woodland planting along the parish boundary and tree planting within the parkland will visually isolate the park and garden from the urban fringe landscape to the west, resulting in a Minor beneficial effect in summer and winter. The parkland trees around the connection tower will reduce its effect but it will remain Moderate adverse.

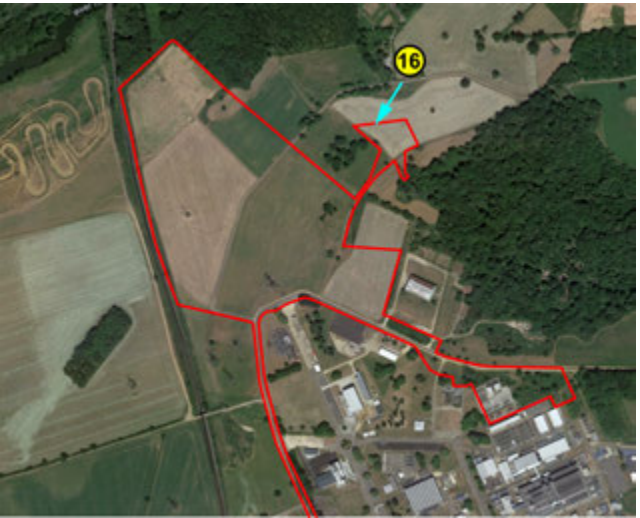


Figure 17.16: View from deeper within the Registered Park and Garden (further northeast, not currently a publicly accessible viewpoint)
(Single Frame)



Figure 17.17: View from within the Registered Park and Garden looking southwest (Panoramic View)



Viewpoint 17

Direction of view: Southwest

Distance to nearest site boundary: 450 m
to haul road access

Elevation: 81 m AOD

Grid reference: SU 53490 96767

Date photo was taken: 19.01.2023

The existing view

This view illustrates how views of the Site are still possible, but further reduced on moving deeper into the parkland, away from the edge of the slope. The allocated urban expansion area is visible in the distance.

Predicted changes to the view and effect on visual amenity – Year 1

The proposed electrical infrastructure compound will lie at the base of the slope, seen in the context of the cluster of existing transmission lines, but the majority of it will be screened by the lip of the slope and the intervening trees. It will be a glimpsed view with limited visibility in summer. Native woodland and scrub will be planted on the new landform and across the northeast edge of proposed electrical compound, largely following the parish boundary and re-establishing the historical line of woodland. A block of woodland will also be planted northwest of the proposed substation. Sensitivity is Medium and the magnitude of change associated with the BESS is Low, resulting in a Minor adverse, Not Significant effect. The magnitude of change of the connection tower will be Medium resulting in a Moderate adverse effect (but it is not a public viewpoint).

Predicted changes to the view and effect on visual amenity – Year 10

Once the trees and shrubs gain stature they will beneficially screen the substation and CSC, and will reduce the adverse visual impact of the Didcot transmission lines. The effect on visual amenity will be Negligible. The effect of the proposed connection tower will remain Moderate adverse.

Predicted change to the view and visual effect Year 20

The woodland planting along the parish boundary and tree planting within the parkland will visually isolate the park and garden from the urban fringe landscape to the west, resulting in a Minor beneficial effect in summer and winter. The effect of the proposed connection tower will remain Moderate adverse.



Figure 17.17: View from within the Registered Park and Garden looking southwest (Single Frame)



Figure 17.18: View from track adjacent to New Cottage within the Registered Park and Garden (also PRow 317 2/50) (Panoramic View)



Viewpoint 18

Direction of view: Southwest

Distance to nearest site boundary: 1.2 km

Elevation: 86 m AOD

Grid reference: SU 54147 97321

Date photo was taken: 19.01.2023

The existing view

This view illustrates how the Site is screened by topography and tree cover to people within land further northwest of the Site.

Predicted changes to the view and the effect on visual amenity – Year 1

The Proposed BESS will lie beyond the screening trees, below the brow of the hill and will have no effect on the visual amenity of residents or those using the track. The tip of the proposed connection tower may just be visible through the gap in the tree line when moving along the track but seen in the context of the existing towers.

Predicted changes to the view and the effect on visual amenity -Year 10

For the BESS No effect. For the connection tower, Minor adverse.

Predicted changes to the view and the effect on visual amenity Year 20.

For the BESS No effect. For the connection tower, Minor adverse.

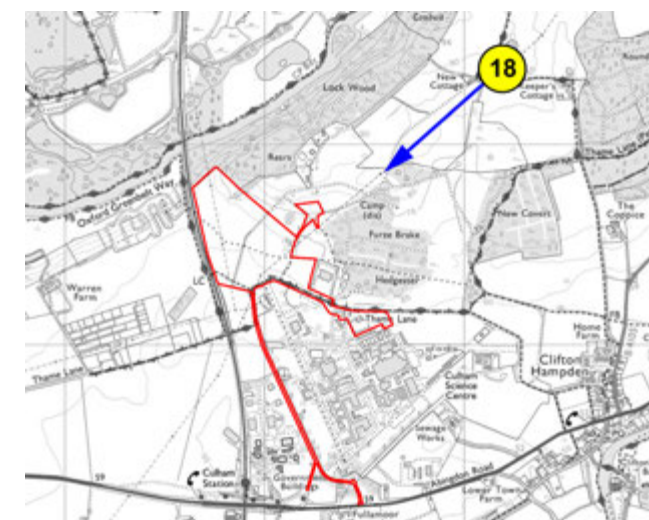


Figure 17.18: View from track adjacent to New Cottage within the Registered Park and Garden (also PRow 317 2/50) (Single Frame)



Figure 17.19: View from PRow 183 1/40 along the south bank of the Thames, northwest of the Site (Panoramic View)

Site lies beyond the brow of the hill and STRAT 9 area



Viewpoint 19

Direction of view: East

Distance to nearest site boundary: 490 m

Elevation: 52 m AOD

Grid reference: SU 52281 96748

Date photo was taken: 19.01.2023

The existing view

This view illustrates how users of the riverside footpath are too low in the landscape to afford a view of the Site. The valley slope is currently a Motocross circuit

Predicted changes to the view and the effect on visual amenity – Year 1

The Proposed Development will have no effect on the visual amenity of walkers or those using the future possible green space.

Predicted changes to the view and the effect on visual amenity – Year 10

The effect will remain as no effect on the visual amenity of walkers.

Predicted changes to the view and the effect on visual amenity Year 20

The effect will remain as no effect on the visual amenity of walkers.

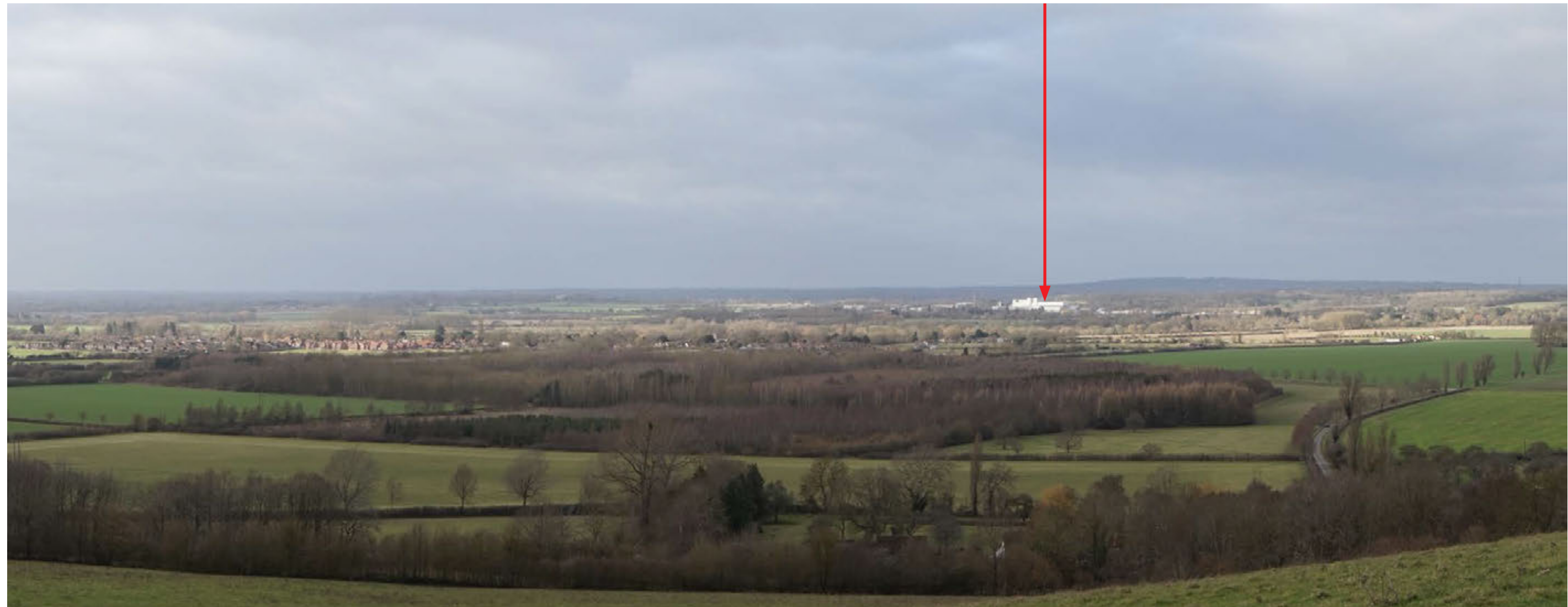


Figure 17.19: View from PRow 183 1/40 along the south bank of the Thames, northwest of the Site (Single Frame)



Figure 17.20: View from the top of Wittenden Clumps within the Site North Wessex Downs AONB (Panoramic View)

Site lies behind Culham Science Centre



Viewpoint 20

Direction of view: North

Distance to nearest site boundary: 5 km

Elevation: 118 m AOD

Grid reference: SU 56623 92835

Date photo was taken: 19.01.2023

The existing view

This is a popular viewpoint affording panoramic views over Oxfordshire, including towards the Site. The Site is, however, screened by the buildings of the CSC, which form a prominent landmark cluster.

Predicted change to the view and visual effect Year 1

The Proposed Development will have no effect on the visual amenity of visitors to the Clumps.

Predicted changes to the view and the effect on visual amenity – Year 10

There will be no effect on the visual amenity of visitors to The Clumps.

Predicted changes to the view and the effect on visual amenity Year 20

There will be no effect on the visual amenity of visitors to The Clumps.



Figure 17.20: View from the top of Wittenden Clumps within the Site North Wessex Downs AONB (Single Frame)



Figure 17.20: View from the top of Wittenden Clumps within the Site North Wessex Downs AONB (Zoomed Image)



Figure 18: Effect on the setting of Nuneham Park

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