highways england

M25 junction 10/A3 Wisley interchange

Environmental Statement
Volume 4 - Non-Technical Summary

Regulation 5(2)(a)
Planning Act 2008
Infrastructure Planning
(Applications: Prescribed Forms and Procedure)
Regulations 2009

February 2020

Introduction

This Non-Technical Summary has been prepared for the proposed M25 junction 10/A3 Wisley interchange (the Scheme).

Highways England, the applicant for this Scheme, has a responsibility to maintain England's road network. The Scheme proposes improvements that will provide additional capacity at M25 junction 10 and to the north and south of the A3. These improvements will reduce congestion, smooth traffic flow, improve journey times, increase safety and improve accessibility.

The Scheme comprises the alteration of two highways, namely the M25 motorway and the A3 trunk road. For each road the area of development exceeds the relevant area threshold for highway-related development to amount to a nationally significant infrastructure project (NSIP) as prescribed in Section 22(4) of the Planning Act 2008, the relevant thresholds being 15 hectares in relation to the alteration of motorways and 12.5 hectares in relation to the alteration of the A3 (the A3 being a road where the speed limit for any class of vehicle is and will be in excess of 50 miles per hour). Accordingly the Scheme comprises two NSIPs, one in relation to the M25 and the other in relation to the A3. This means that permission, known as a Development Consent Order (DCO), is required to build and operate the Scheme. The DCO application will be examined by the Planning Inspectorate which will report its findings and make a recommendation to the Secretary of State to aid decision making.

An Environmental Statement (ES) has been prepared to accompany the DCO Application which sets out a description of the Scheme, reasonable alternatives considered in the development of the design, the environmental setting, the likely significant effects of the Scheme on local communities and the environment, and the measures proposed to mitigate these effects.

This Non-Technical Summary provides a summary of the ES in non-technical language.

The full Environmental Statement comprises four volumes in total, as follows:

Volume 1 Environmental Statement main text setting out the environmental assessment in chapters

Volume 2 Environmental Statement technical appendices

Volume 3 Environmental Statement figures, including drawings, photos and other illustrative material

Volume 4 (this document) Environmental Statement non-technical summary

Printed hard copies will be available to view at:

Highways England,
Bridge House, 1 Walnut Tree Close, Guildford,
Surrey, GU1 4LZ M
Monday to Friday (9.30am - 5pm)

Guildford Borough Council,
Millmead House, Millmead, Guildford, GU2 4BB
Monday to Thursday (8.45am - 5.15pm)
Friday (8.45am - 4.45pm)

Elmbridge Borough Council,
Civic Centre, High Street, Esher, Surrey, KT10 9SD
Monday to Thursday (8.45am - 5pm)
Friday 8.45am - 4.45pm

The Environmental Statement and supporting documents can be viewed online at:
https://highwaysengland.co.uk/projects/m25-junction-10-to-a3-wisley-interchange

The Scheme

M25 junction 10/A3 Wisley interchange is where the M25, with four lanes in each direction, meets the A3 trunk road, with three lanes in each direction. The existing junction has three levels, with the M25 at the lowest level, the three-lane roundabout above the M25 and the A3 flyover above the roundabout, with two lanes in each direction. The roundabout has traffic signals on all the slip road entries.

Ockham Park junction is 1.5 km to the south and connects the A3 with the B2039 to Ockham and the B2215 Portsmouth Road to Ripley. Painshill junction is 1.0 km to the north and connects the A3 with the A245 to Byfleet to the west and Cobham to the east. There are several minor roads and private accesses connecting to the A3 between Ockham Park and Painshill junctions. The Scheme will provide a comprehensive set of improvements to the three junctions and the connecting length of the A3, as an enhancement to the existing road layout. The junction 10 roundabout will be enlarged and improved and the slip roads will be extended. The A3 will be widened to four lanes in each direction between Ockham Park junction and junction 10 and between junction 10 and Painshill junction. The A245 between Painshill junction and the Seven Hills Road junction will be widened to three lanes westbound and improvements will be made to both junctions.

The Wisley Lane junction with the A3 northbound carriageway will be closed and an alternative access provided via Ockham Park junction. Several private accesses from the A3 will be closed and alternatives provided. There will be a range of improvements to public rights of way to improve the opportunities for walking, riding or cycling alongside the A3, around junction 10 and across the M25 and A3.

The Scheme is set within an environmentally sensitive location and has been designed to avoid the important environmental features as much as possible, or minimise effects on them where this is not possible. The Scheme will be constructed within the smallest practicable extent of land from the surrounding open spaces and environmentally protected areas. There will be extensive environmental measures and new areas of land to mitigate or compensate for the land lost to the road improvements. There will be enhancement of the surrounding habitats and the attractiveness and accessibility of the area for walkers, horse riders and cyclists. The existing noise barriers along the M25 will be replaced and the whole of the A3 between Ockham Park and Painshill junctions will be finished with a reduced noise surface.

Current Challenges in the Scheme area include:

- Limited capacity at M25 junction 10 and Painshill junction, causing congestion, delay and unreliable journey times on the strategic road network
- Safety concerns arising from the accident frequency, which also leads to poor network resilience
- Congestion causing a barrier to growth. Enterprise M3 Local Enterprise Partnership has highlighted
- That projected increases in traffic at M25 junction 10 would cause further congestion and delays and hinder growth in the area unless addressed

Undertaking the proposed improvements will:

- Increase the capacity of M25 junction 10 and Painshill Junction
- Improve journey times on the M25 and A3
- Improve road safety
- Support economic growth
- Provide value for money
- Improve the scope, safety and amenity of facilities for pedestrians, cyclists and horse riders

The key environmental issues are summarised below and shown on the plan on pages 7 and 8.

- Much of the area south of the M25 at junction 10 forms part of the internationally designated Thames Basin Heaths Special Protection Area (SPA)
- The SPA area and land to the north of the M25 are within the nationally designated Ockham and Wisley Commons Site of Special Scientific Interest (SSSI), as well as being a Local Nature Reserve (LNR)
- These designated sites and some adjacent areas have open public access as they are common land or open space
- There are Sites of Nature Conservation Interest (SNCI), areas of ancient woodland and veteran trees adjacent to the Scheme and nearby
- The area around the Scheme is crossed by footpaths, bridleways and byways, including some bridges over the M25 and A3
- There are five Noise Important Areas near or in the Scheme
- There are four scheduled monuments and ten listed buildings near the Scheme
- There are individual houses and groups of houses close to the A3 and M25
- The Royal Horticultural Society's (RHS) principal visitor attraction is at Wisley Gardens to the south west of junction 10 and Painshill Park lies to the north east; both are designated as Registered Parks and Gardens of Historic Interest
- Bolder Mere is a large open expanse of water beside the A3 and is designated as a Water Framework Directive (WFD) waterbody
- Three watercourses are close to the Scheme - River Wey, River Mole and Stratford Brook

View northeast from Elm Lane footbridge with the layby combined with the entrance to Wisley Lane on left

The main components of the Scheme are outlined below:

Improvements to M25 junction 10

The junction roundabout will be elongated and widened to create extra capacity for turning traffic, using new bridges over the M25.

The entry and exit slip roads to the junction will be realigned to suit the enlarged roundabout and extended to improve traffic flow.

The existing bridges over the M25 will be demolished.

There will be four new free-flow slip lanes to allow traffic to turn left between the M25 and A3 without being delayed by the traffic signals.

The existing hard shoulders on the M25 through junction 10 will become additional running lanes for traffic and emergency refuge areas will be added.

There will be associated modifications to the M25 gantries and signs and to the slip road lighting.

Improvements to the A3

The A3 will be widened from three lanes each way to four lanes each way between Ockham Park junction and Painshill junction, except where the A3 crosses over M25 junction 10, which will remain as two lanes each way.

The junction with Wisley Lane on the northbound carriageway will be closed and a new road will be constructed, bridging over the A3 to connect Wisley Lane into Ockham Park junction.

The junction with Old Lane on the southbound carriageway will be improved.

The junction with Elm Lane on the southbound carriageway will be closed and access to Elm Corner will be provided via Old Lane and an improved section of byway open to all traffic.

All laybys between Ockham Park and Painshill junctions will be closed.

Private accesses from the A3 carriageways will be closed and new private accesses provided. Access to Wisley Common, Birchmere camp site and Pond Farm will be from Old Lane via the replacement Cockcrow Overbridge. Access to properties at Long Orchard and

the Starbucks site will be from a private road west of the A3 between Redhill Road and Seven Hills Road (South). Access to Heyswood camp site and adjacent properties will be from a private road east of the A3.

There will be new traffic signals added to Ockham Park junction, along with new and improved facilities for pedestrians, cyclists and horse-riders.

There will be associated modifications to the A3 lighting and signs and gantries will be added.

Improvements to the A245

The A245 Byfleet Road will be widened to three lanes westbound between Painshill junction and the Seven Hills Road junction to the west.

A dedicated slip lane will be added at Painshill junction, to allow traffic leaving the A3 northbound to join the A245 westbound without having to enter the roundabout.

The existing access into Old Byfleet Road from the A245 will be closed and a new entrance provided from Seven Hills Road (South), which will be a private access for Feltonfleet School.

Environmental proposals

The Scheme includes comprehensive facilities for pedestrians, cyclists and horse riders. There will be new bridleway bridges at Red Hill over the A3 and Sandpit Hill over the M25 and replacement bridleway bridges at Cockcrow over the A3 and Clearmount over the M25. There will be new and upgraded public rights of way to enhance links to and between the bridges, including a new 5.8 km long bridleway between Ockham Park and Painshill junctions that is separate from the A3 and suitable for use by road cyclists.

There will be planting on new highway earthworks where space allows. The land that will be used temporarily for construction will be restored to its former condition or similar and, for areas of common land and open space, public access will be reinstated. The Scheme will provide areas of replacement land in exchange for common land and open space lost and planting and management work will improve the attractiveness of these areas.

There will be extensive areas of habitat creation and enhancement within the Special Protection Area and on Bolder Mere to compensate for the impacts of the Scheme. These works will be phased over several years. There will be a new wildlife crossing over the A3 as part of the replacement Cockcrow bridge and amphibian crossings on Old Lane.

Construction

The Scheme is expected to start construction in winter 2020 and to take up to three years to build.

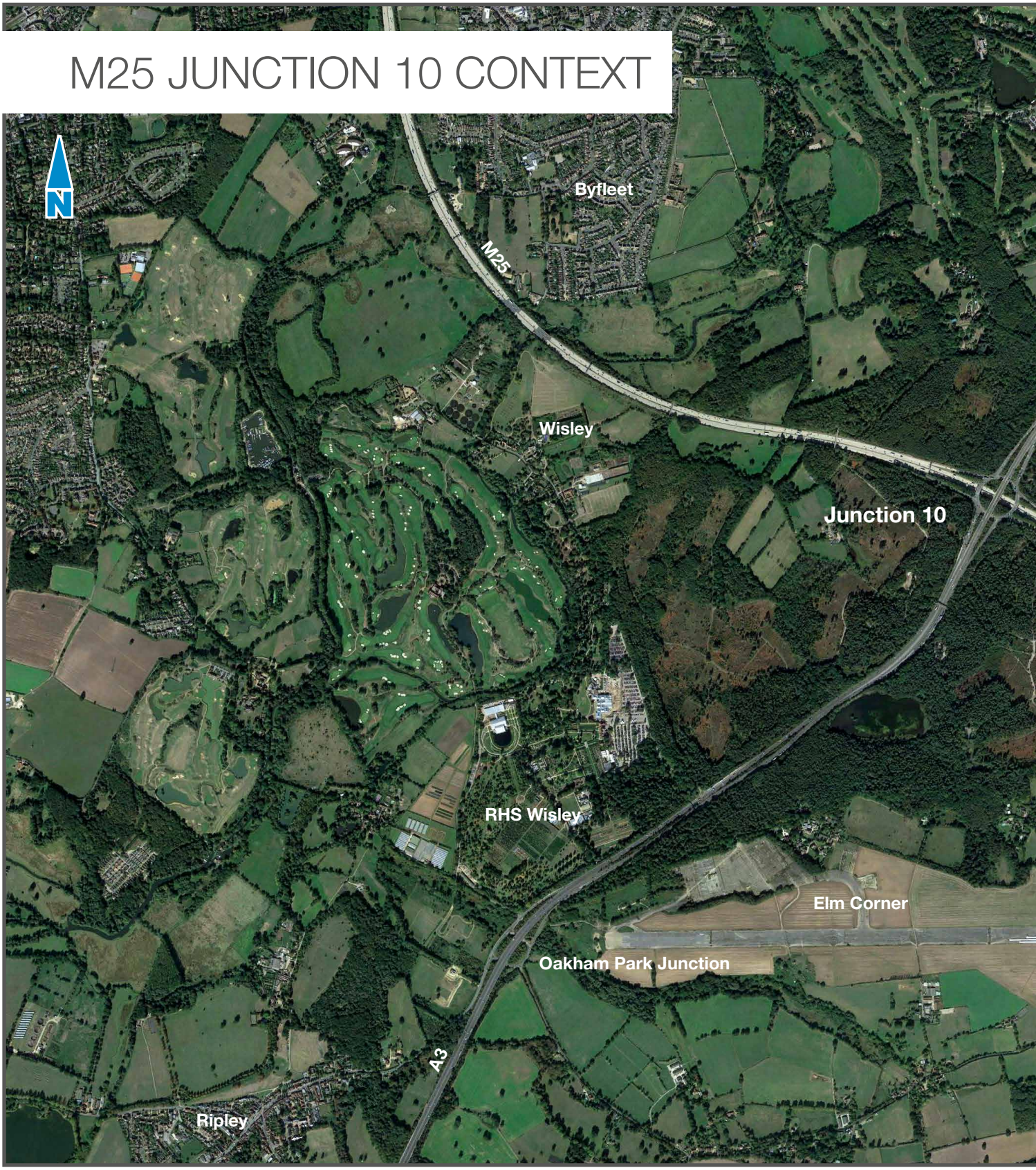
Construction will take place on Mondays to Saturdays between 7am and 7pm. Work on the M25 and A3 may also include some night working and overnight road closures for changes in traffic management layouts and works to the gantries, bridges and road surface.

The main construction compound will be adjacent to Ockham Park junction and there will be other compounds to either side of junction 10 and at the former San Domenico restaurant site, plus small compounds close to new bridges. Temporary storage of excavated materials will be on sites south of Elm Lane, near the Painshill junction and west of Clearmount bridge.

Traffic management will be used to ensure a safe environment for the workforce and minimise the effects of construction on the journey times for road users. The Scheme will provide temporary slip roads around junction 10 to ensure that traffic flows can be maintained during the construction of the enlarged roundabout.

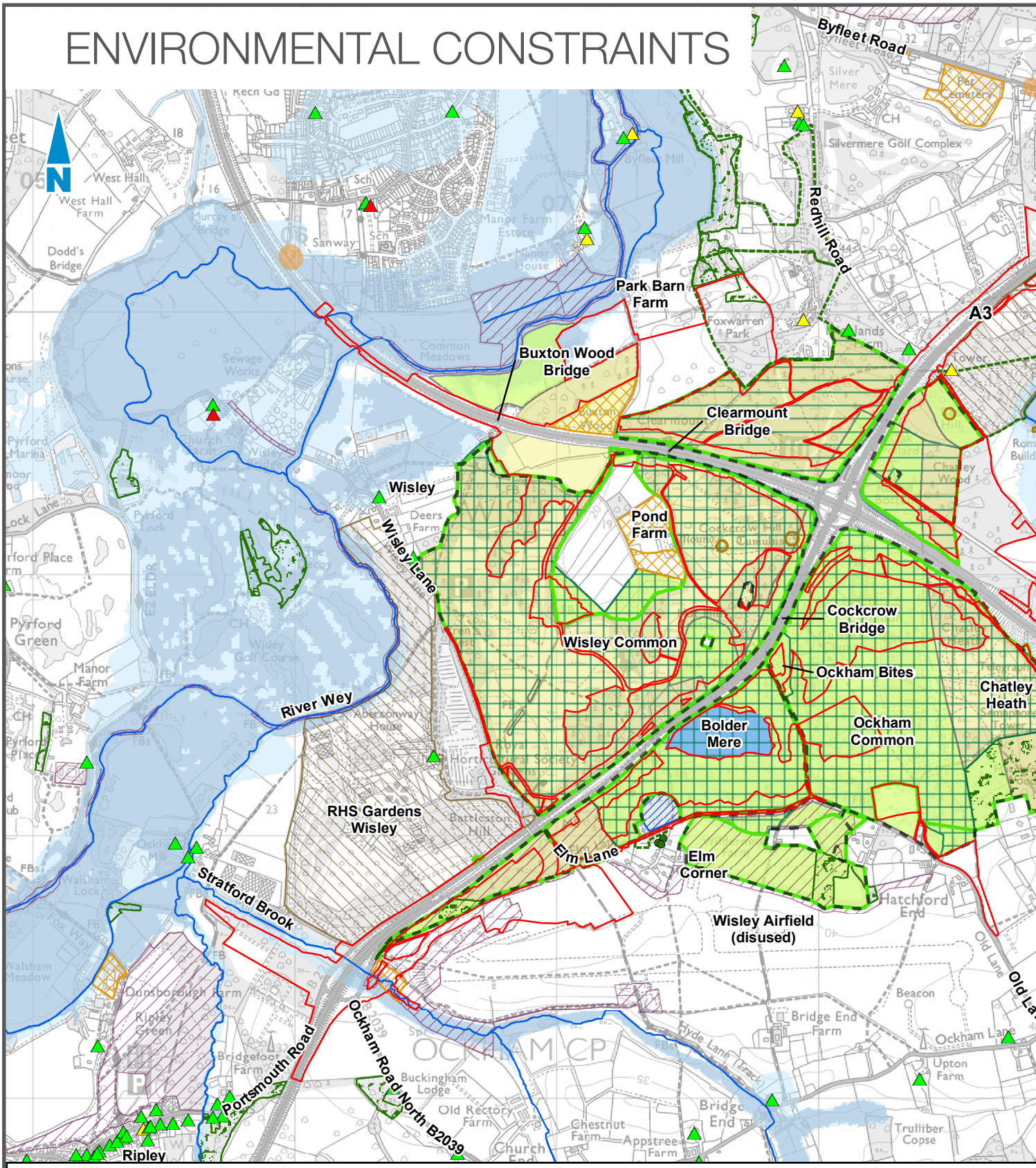
An Outline Construction Environmental Management Plan has been included as part of the ES. This includes a Record of Environmental Actions and Commitments that identifies the measures in the ES to address the likely environmental effects of the Scheme. These documents will be developed during the detail design stage to form the full Construction Environmental Management Plan that will provide further information on the construction methodology and programme.

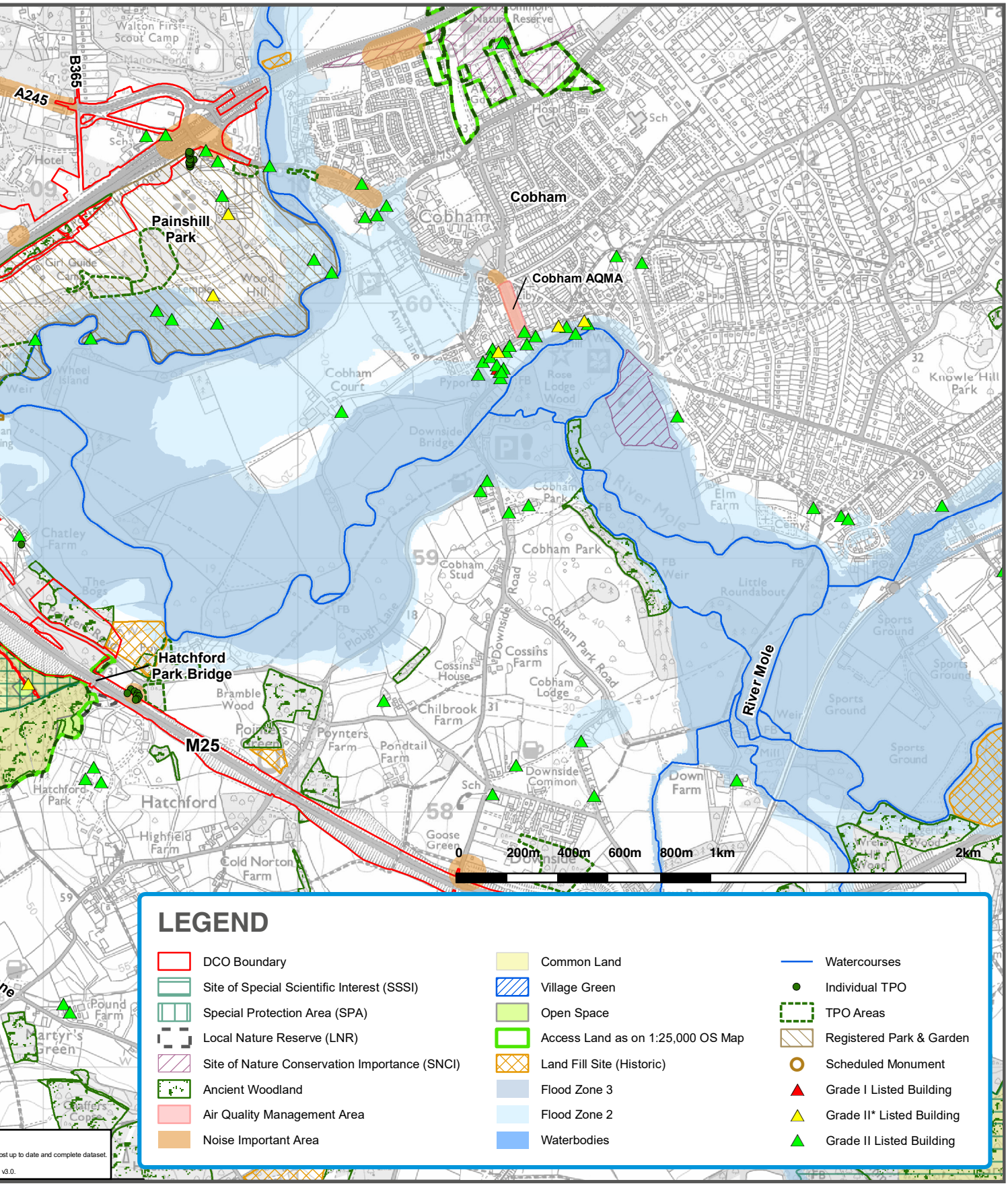
M25 JUNCTION 10 CONTEXT

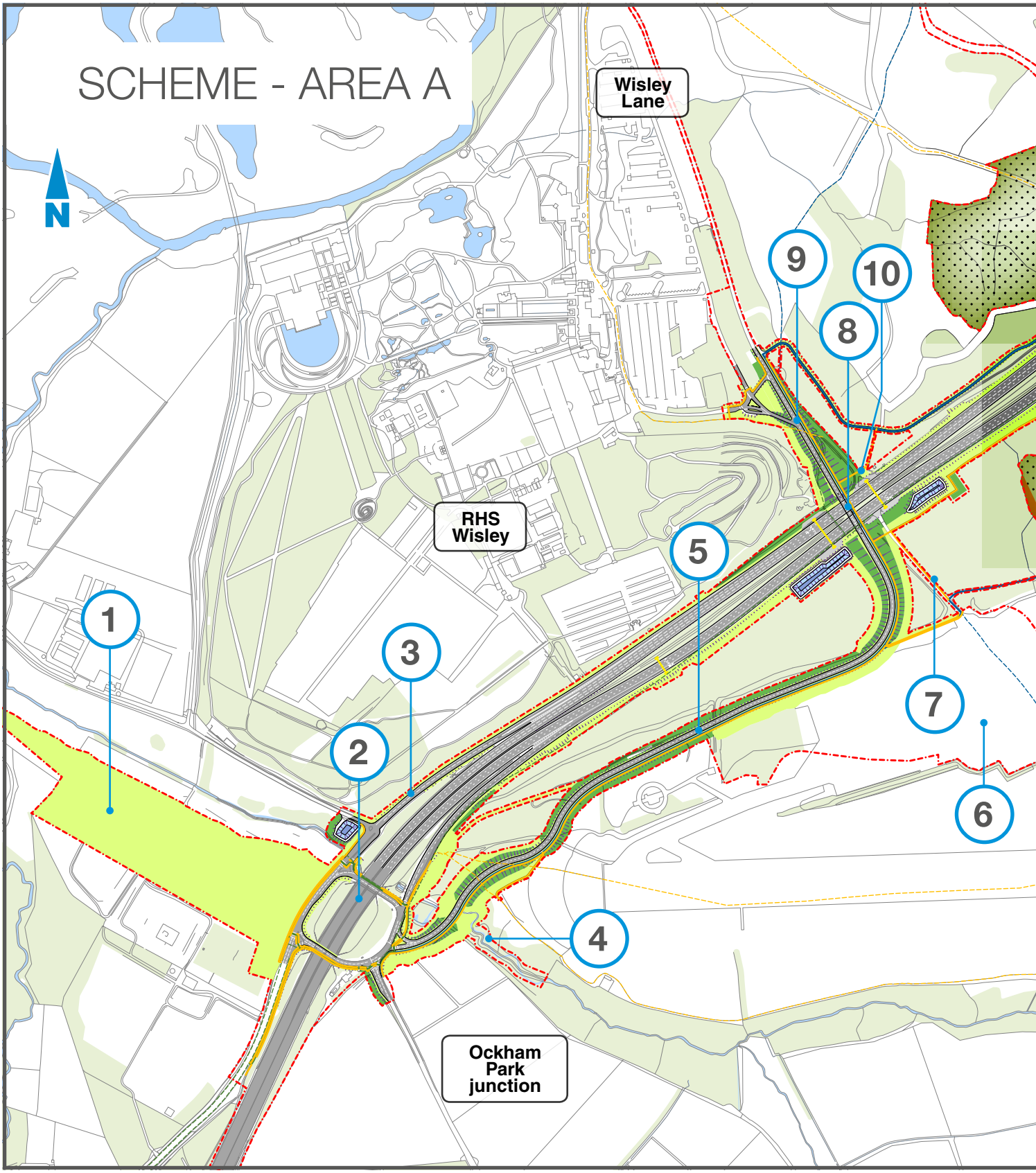



A3
Painshill Junction
Painshill Park
Cobham
M25
Hatchford
Cobham Services

ENVIRONMENTAL CONSTRAINTS

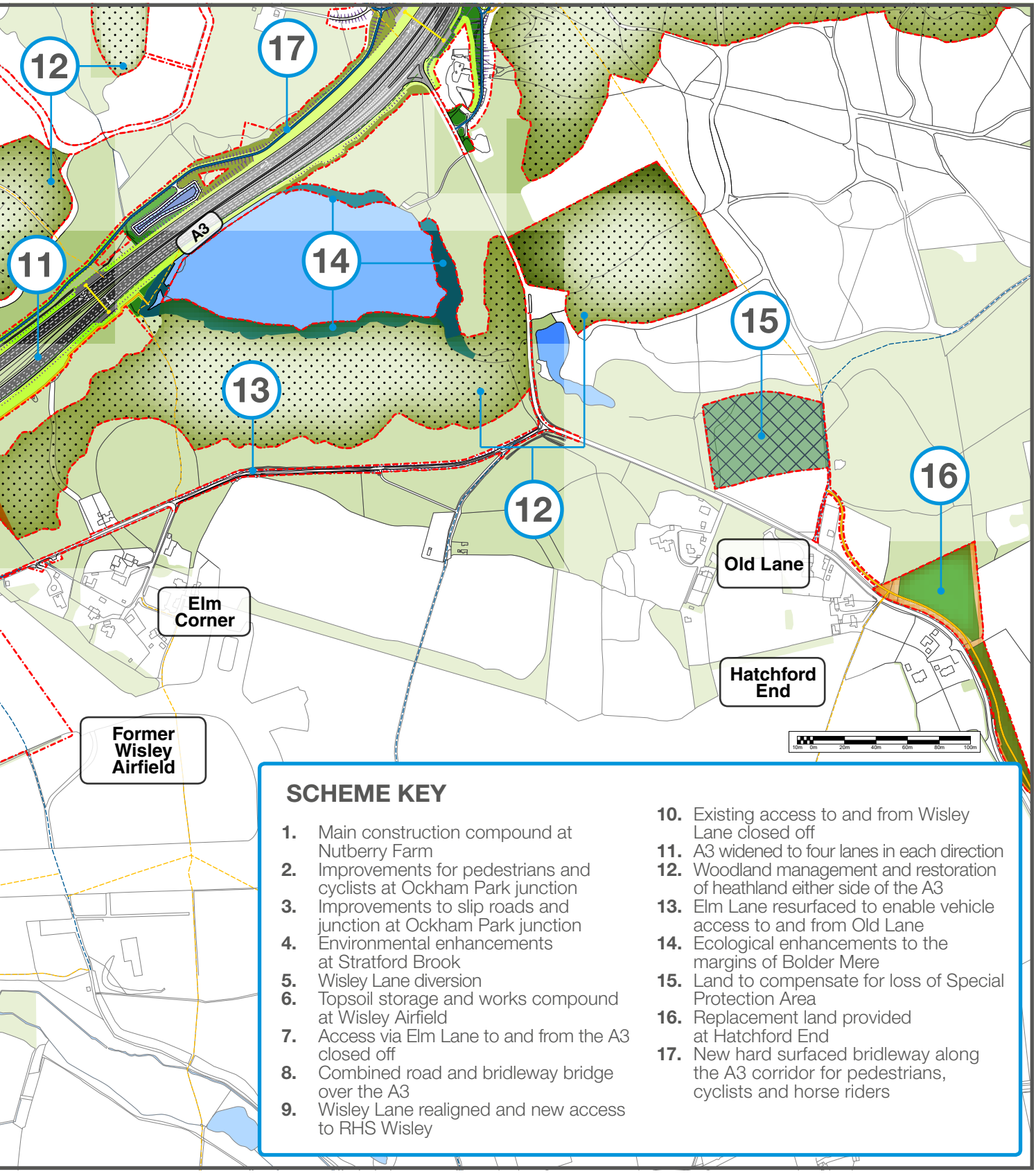



A245
B365
Painshill Park
Cobham
Cobham AQMA
Hatchford Park Bridge
M25
River Mole
0
200m
400m
600m
800m
1km
2km
LEGEND
DCO Boundary
Site of Special Scientific Interest (SSSI)
Special Protection Area (SPA)
Local Nature Reserve (LNR)
Site of Nature Conservation Importance (SNCI)
Ancient Woodland
Air Quality Management Area
Noise Important Area
Common Land
Village Green
Open Space
Access Land as on 1:25,000 OS Map
Land Fill Site (Historic)
Flood Zone 3
Flood Zone 2
Waterbodies
Watercourses
Individual TPO
TPO Areas
Registered Park & Garden
Scheduled Monument
Grade I Listed Building
Grade II* Listed Building
Grade II Listed Building



LEGEND

- DCO boundary
- Existing / proposed footpath / footway
- Existing / proposed bridleway
- Existing / proposed new footway/cycletrack
- New sign gantry
- Existing sign gantry to be upgraded
- Existing woodland and trees
- Existing waterbodies
- Proposed drainage pond
- Proposed woodland planting
- Proposed wood pasture planting
- Proposed scrub planting



SCHEME KEY

1. Main construction compound at Nutberry Farm
2. Improvements for pedestrians and cyclists at Ockham Park junction
3. Improvements to slip roads and junction at Ockham Park junction
4. Environmental enhancements at Stratford Brook
5. Wisley Lane diversion
6. Topsoil storage and works compound at Wisley Airfield
7. Access via Elm Lane to and from the A3 closed off
8. Combined road and bridleway bridge over the A3
9. Wisley Lane realigned and new access to RHS Wisley
10. Existing access to and from Wisley Lane closed off
11. A3 widened to four lanes in each direction
12. Woodland management and restoration of heathland either side of the A3
13. Elm Lane resurfaced to enable vehicle access to and from Old Lane
14. Ecological enhancements to the margins of Bolder Mere
15. Land to compensate for loss of Special Protection Area
16. Replacement land provided at Hatchford End
17. New hard surfaced bridleway along the A3 corridor for pedestrians, cyclists and horse riders

Proposed open grassland

Management of grassland to enhance biodiversity

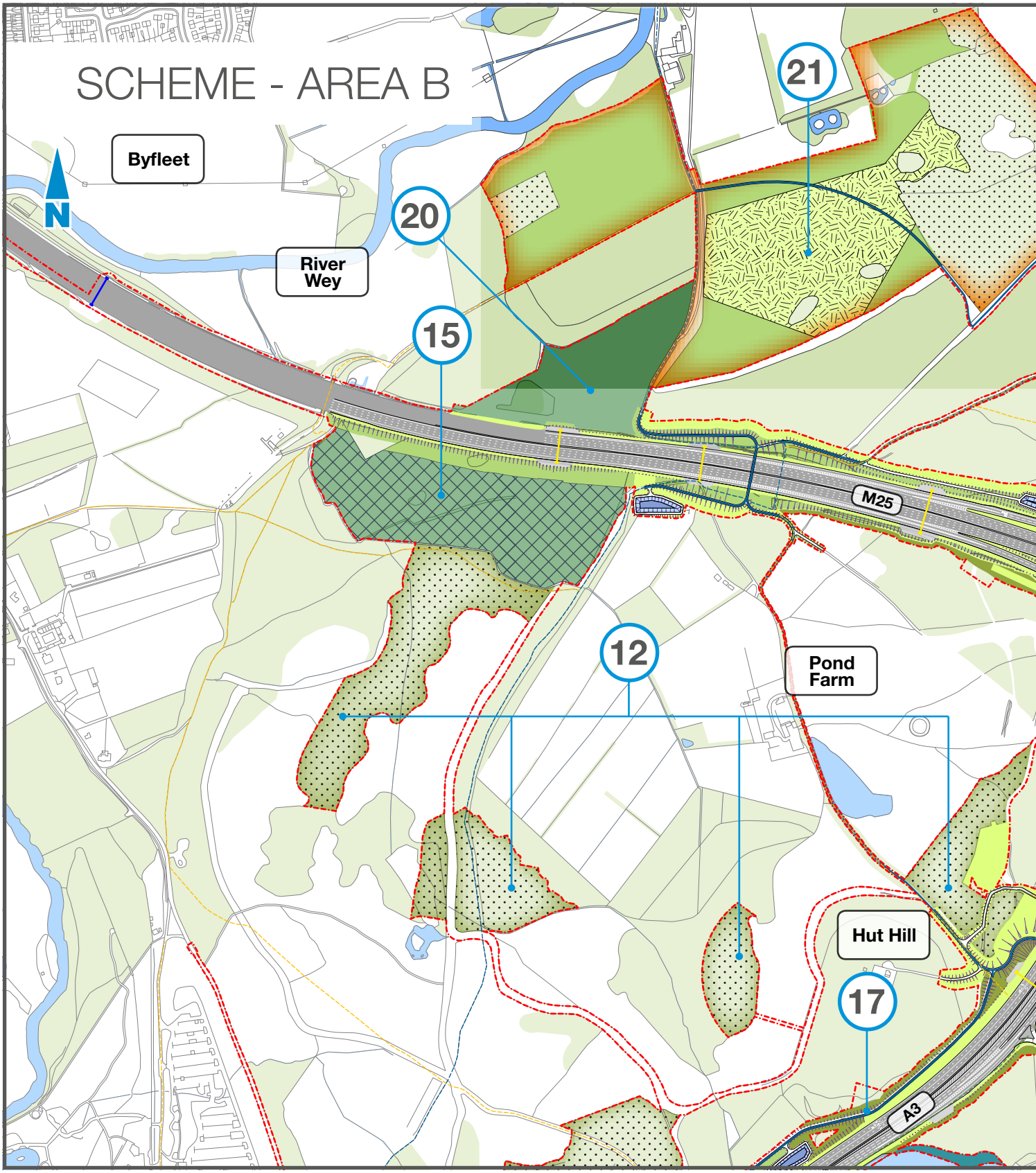
Management of existing woodland to restore heathland and / or enhance biodiversity

Replacement land

SPA compensation land

SPA enhancement area

Bolder Mere enhancement area



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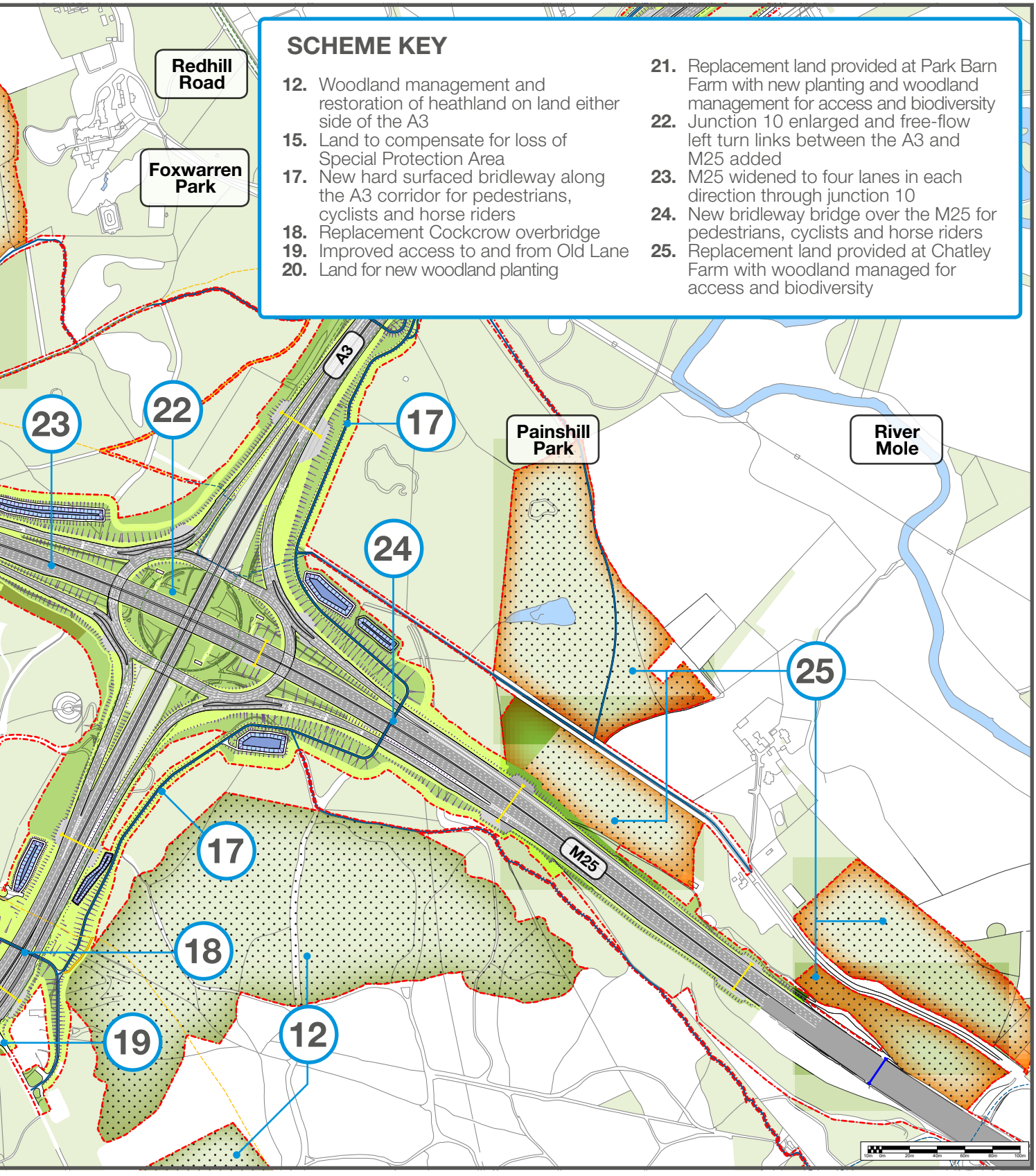
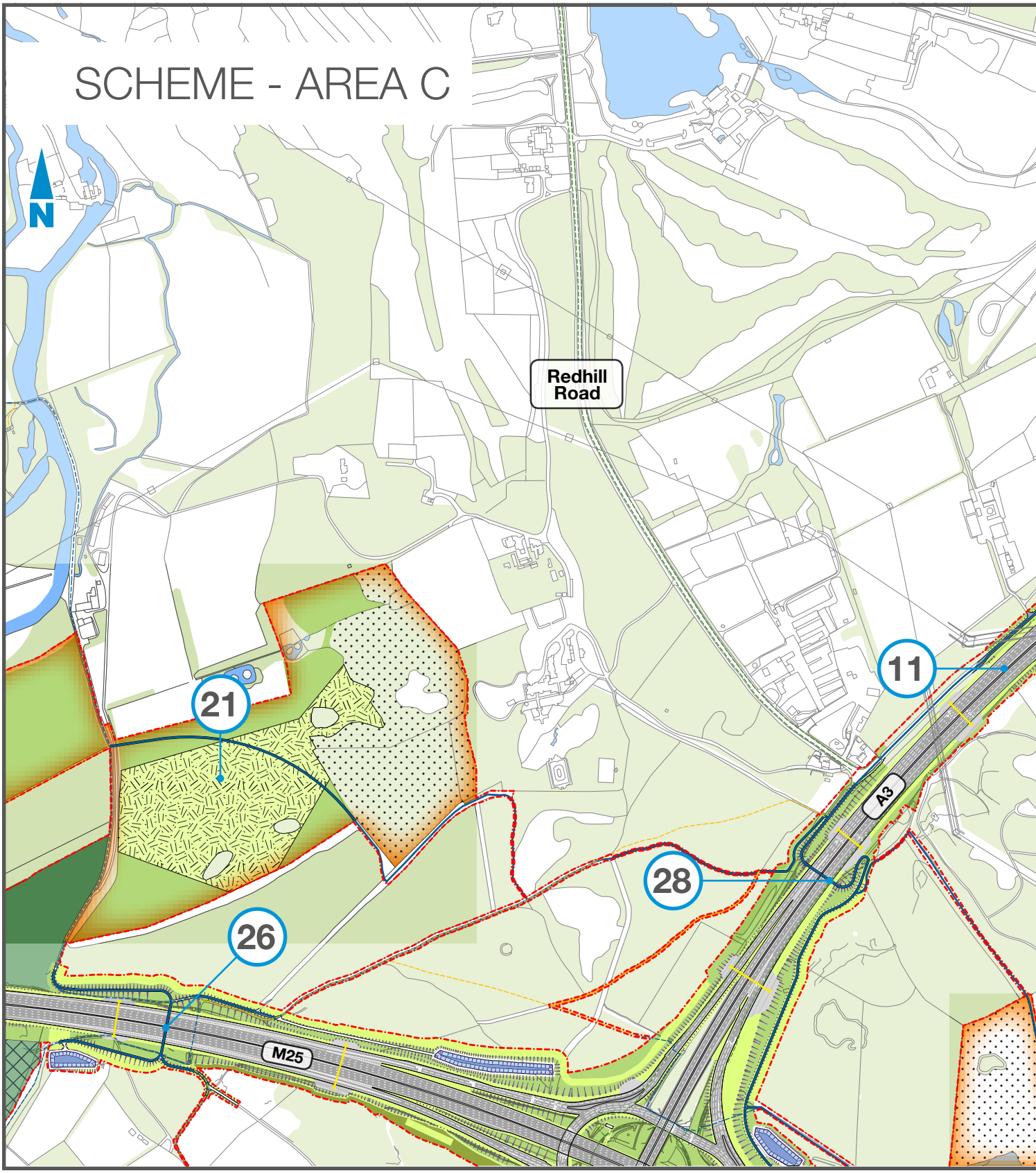
- Proposed scrub planting


SCHEME KEY
12. Woodland management and restoration of heathland on land either side of the A3
15. Land to compensate for loss of Special Protection Area
17. New hard surfaced bridleway along the A3 corridor for pedestrians, cyclists and horse riders
18. Replacement Cockcrow overbridge
19. Improved access to and from Old Lane
20. Land for new woodland planting
21. Replacement land provided at Park Barn Farm with new planting and woodland management for access and biodiversity
22. Junction 10 enlarged and free-flow left turn links between the A3 and M25 added
23. M25 widened to four lanes in each direction through junction 10
24. New bridleway bridge over the M25 for pedestrians, cyclists and horse riders
25. Replacement land provided at Chatley Farm with woodland managed for access and biodiversity
Redhill Road
Foxwarren Park
Painshill Park
River Mole
A3
M25
23
22
17
24
25
17
18
19
12
Proposed open grassland
Management of grassland to enhance biodiversity
Management of existing woodland to restore heathland and / or enhance biodiversity
Replacement land
SPA compensation land
SPA enhancement area
Bolder Mere enhancement area

SCHEME - AREA C



LEGEND

- DCO boundary
- Existing / proposed footpath / footway
- Existing / proposed bridleway
- Existing / proposed new footway/cycletrack
- New sign gantry
- Existing sign gantry to be upgraded
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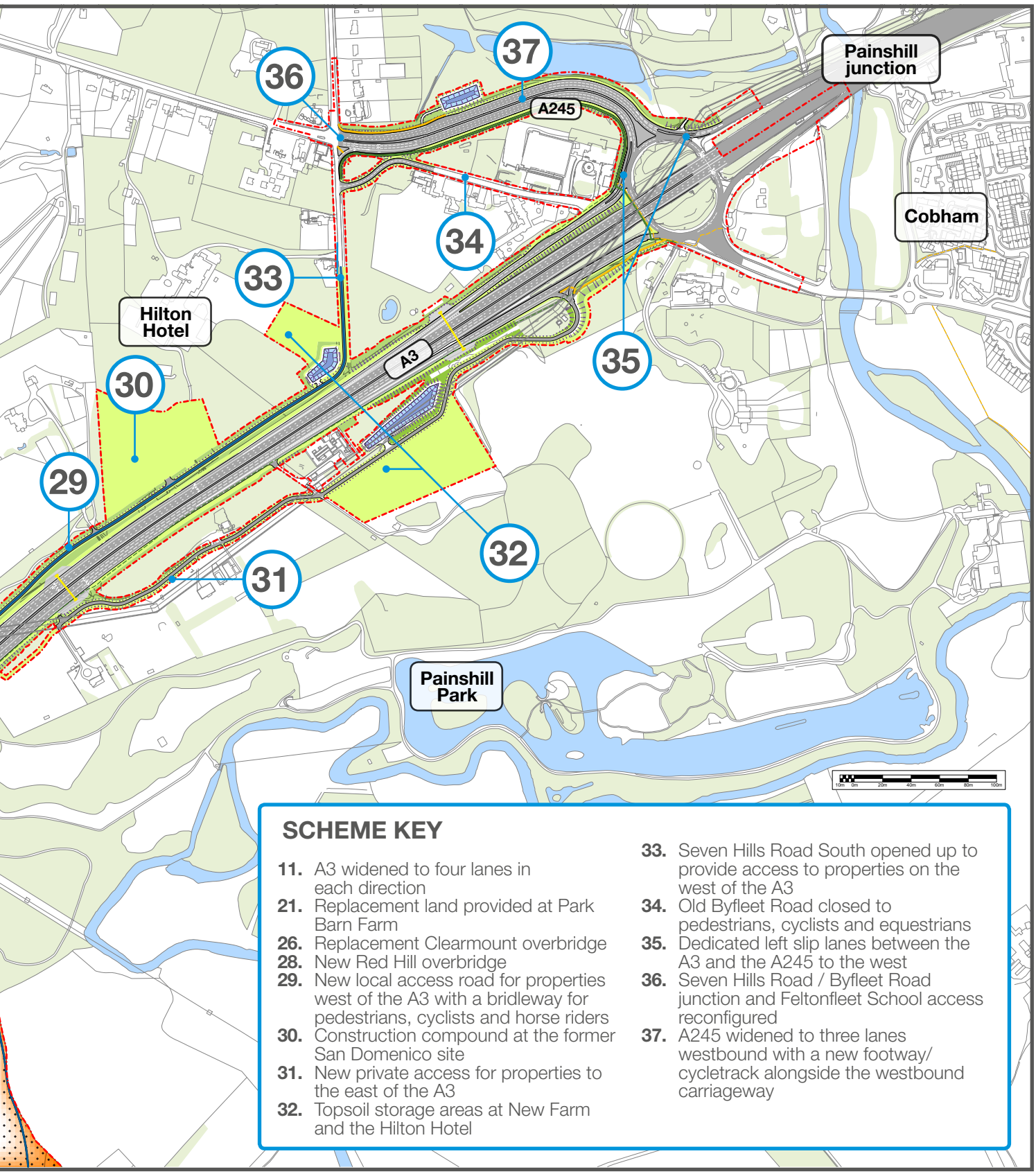


SCHEME KEY

11. A3 widened to four lanes in each direction
21. Replacement land provided at Park Barn Farm
26. Replacement Clearmount overbridge
28. New Red Hill overbridge
29. New local access road for properties west of the A3 with a bridleway for pedestrians, cyclists and horse riders
30. Construction compound at the former San Domenico site
31. New private access for properties to the east of the A3
32. Topsoil storage areas at New Farm and the Hilton Hotel
33. Seven Hills Road South opened up to provide access to properties on the west of the A3
34. Old Byfleet Road closed to pedestrians, cyclists and equestrians
35. Dedicated left slip lanes between the A3 and the A245 to the west
36. Seven Hills Road / Byfleet Road junction and Feltonfleet School access reconfigured
37. A245 widened to three lanes westbound with a new footway/ cycletrack alongside the westbound carriageway

Proposed open grassland

Management of grassland to enhance biodiversity

Management of existing woodland to restore heathland and / or enhance biodiversity

Replacement land

SPA compensation land

SPA enhancement area

Bolder Mere enhancement area

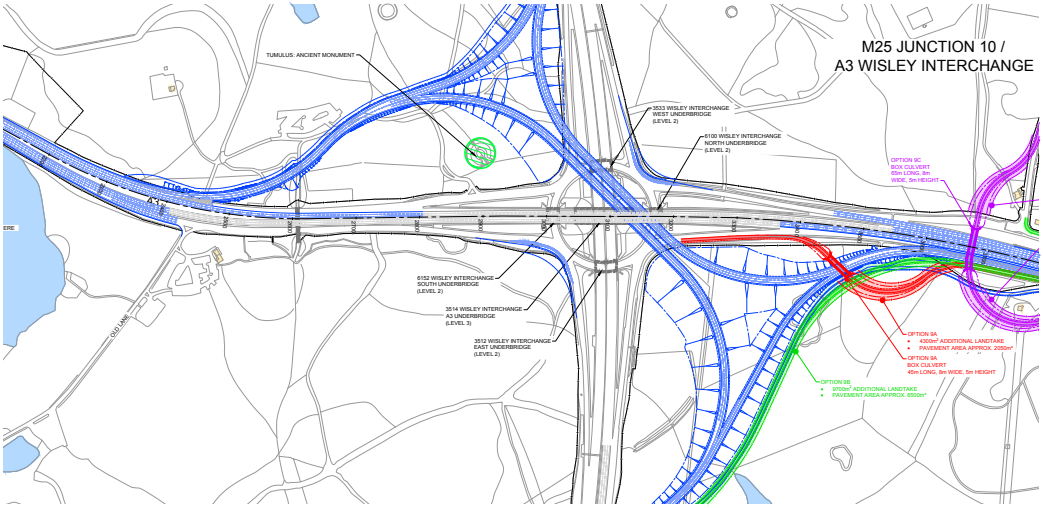
Alternatives

The Scheme is the product of a thorough option evaluation process, based on a staged approach that considered the merits of each option against the Scheme objectives and an analysis and assessment of traffic, engineering, buildability and environmental factors. This was informed by engagement with stakeholders and the local community and by public consultation.

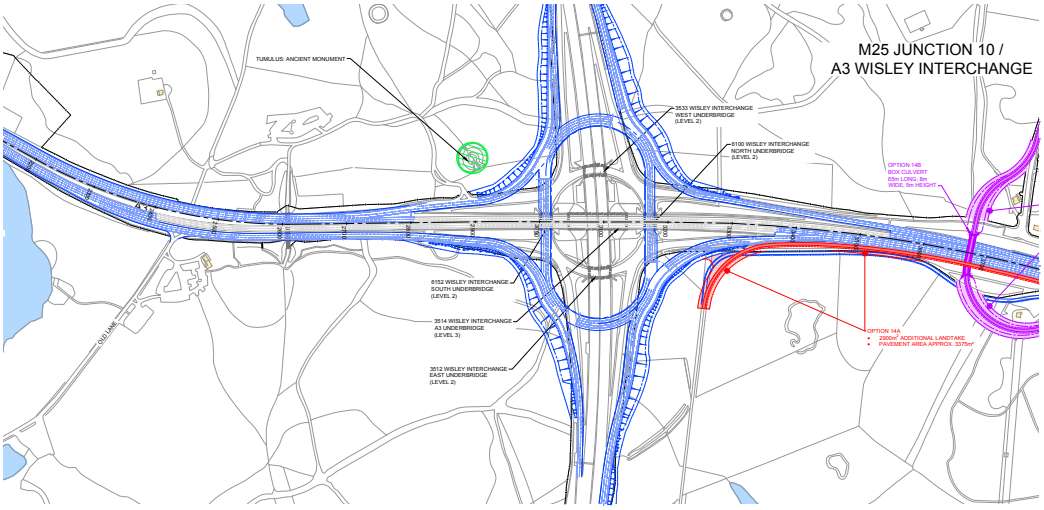
During the Option Identification Stage, a 'long list' of options was identified. Options were appraised and most were discounted to arrive at a short list of three options in April 2016 – 9, 14 and 16. From this, Options 9 and 16 were rejected due to their performance against assessment criteria including environmental impact, ease of construction, value for money and cost. This rejection included their failure to comply with guidance in the National Policy Statement for National Networks, particularly for impact on the Thames Basin Heaths Special Protection Area.

Various alternatives were developed for the new local roads and private accesses, with the chosen options also accommodating the optimum solutions for rights of way and major utilities diversions. This integrated approach has helped to minimise adverse impacts on the protected habitats, open spaces and private property.

The Scheme announced in November 2017 was considered to perform the best against Scheme objectives, including minimising environmental impact, reducing accident rates and supporting economic development. Further details are provided within the Environmental Statement, Chapter 3 - Assessment of Alternatives.



Option 9 - adding a fourth level to give free flow in two directions



Option 14 - enlarged roundabout and free-flow left turns

Environmental Statement - scope and approach

The Environmental Statement provides:

- A description of the Scheme and the mitigation measures it includes
- A summary of the alternatives considered
- Assessment of the likely effects of the Scheme on the environment
- Assessment of the cumulative effects

The Environmental Impact Assessment considers both the indirect and direct effects of the Scheme. Direct effects are the physical changes made by the Scheme, such as the removal of vegetation or provision of a new bridge. Indirect effects are those generated by the construction or operation of the Scheme, such as noise from construction machinery or road traffic.

Best practice guidance has been used to assess the Scheme, including established criteria outlined in the Design Manual for Roads and Bridges Volume 11. This Guidance combines the magnitude of the impacts and the sensitivity of the environmental resources or places to arrive at the significance of the environmental effects. This significance is, therefore, an expression of the importance of the effect, relative to the existing environment. Environmental effects can be adverse or beneficial and can range from neutral to very large. Moderate, large or very large effects are considered 'significant' in decision-making terms.

Where there are expected to be significant adverse effects, the influence of measures to avoid, reduce and, where possible, remedy these effects has been included within the assessment.

The following topics are included in this Environmental Statement:

- Chapter 5. Air Quality
- Chapter 6. Noise and Vibration
- Chapter 7. Biodiversity
- Chapter 8. Road Drainage and the Water Environment
- Chapter 9. Landscape and Visual
- Chapter 10. Geology and Soils
- Chapter 11. Cultural Heritage
- Chapter 12. Materials and Waste
- Chapter 13. People and Communities
- Chapter 14. Health
- Chapter 15. Climate
- Chapter 16. Cumulative Effects

View southwest from Elm Lane footbridge towards Ockham Park junction, with Wisley Common woodland to the left, the wide vegetated central reserve, and the wooded cutting slope along the edge of RHS Wisley to the right

Assessment of likely significant effects of the Scheme

Air Quality

What is the existing environment like?

There are four existing Air Quality Management Areas in the Scheme study area, which are locations declared by local authorities where national air quality objectives are currently exceeded. The areas have been declared because of the levels of nitrogen dioxide and, in two of the areas, the levels of particulate matter as well.

Air quality monitoring data show that there are other locations where the national air quality objectives for nitrogen dioxide have been exceeded within the Scheme study area at roadside sites, although these levels are not considered representative of public exposure. Measured levels of particulate matter are below the national objectives.

What are the effects during construction?

During construction, there is the potential for increased emissions of dust within 200m of the Scheme; however, significant adverse effects at nearby receptors will be unlikely with the application of appropriate mitigation measures as outlined in the Environmental Statement. These will include regular water-spraying and sweeping of unpaved roads, using wheel washes for vehicles and covering open vehicles leaving site.

It is unlikely that there will be significant adverse effects due to emissions from the additional traffic generated by construction. Any changes to the estimated annual average nitrogen dioxide concentrations will be small or imperceptible and will not exceed the UK objective level.

Wisley Lane and entrance to RHS Garden Wisley

What are the effects during operation?

If the Scheme is not constructed, in the opening year, there will be three locations where human health could potentially be affected because the UK average objective for nitrogen dioxide will be exceeded. If the Scheme is constructed, then one additional location is expected to exceed this objective level. Within the Air Quality Management Areas, the changes in concentrations will be imperceptible, except for Esher, where there will be a small decrease. At other locations that remain below the objective level, the changes in concentrations will be small or imperceptible and not significant.

There will be increases in the levels of oxides of nitrogen at Esher Commons SSSI and Wisley and Ockham Commons SSSI (including part of the Thames Basin Heaths SPA), but these are not expected to have an adverse effect on species within the designated sites.

Summary of construction assessment:

There will be no significant effects with the implementation of suitable mitigation measures.

Summary of operational assessment:

The Scheme is not expected to have a significant adverse air quality effect on human health or designated ecological sites.

Noise and Vibration

What is the existing environment like?

The noise assessment has considered the locations that could be sensitive to changes in noise within 600m of the affected roads, which includes residential properties, two schools, several listed buildings and various places used by the public – RHS Wisley, Painshill Park, Wisley Common, Chatley Heath, Ockham Common, guide and scout camp sites and riding schools. The designated habitats adjacent to the M25 and A3 include species sensitive to changes in noise.

The M25, A3 and A245 are the main sources of noise in the Scheme area. There are seven locations beside roads within the study area that have been identified as being subject to high levels of traffic noise, known as Noise Important Areas. Aircraft noise from nearby flightpaths to and from Gatwick and Heathrow Airports also contributes to existing noise levels.

What are the effects during construction?

Construction activities and vehicles can cause increased noise and vibration levels that have adverse effects on nearby locations. The noise levels during construction will be controlled by the mitigation measures identified in the Outline Environmental Management Plan. However, even with mitigation, there will be adverse effects on Feltonfleet School, West Lodge, the Gothic Tower and Silvermere Lodge from construction noise levels in the daytime. No significant adverse noise effects are expected from construction works that need to be undertaken during the night. There will be temporary significant effects from construction vibration at two properties on Seven Hills Road due to road works on the adjacent A245.

Summary of construction assessment:

There will be no significant adverse effects from construction noise. There is the potential for temporary significant vibration effects at two locations.

What are the effects during operation?

There will be mitigation measures provided to reduce operational noise. All new and altered sections of the A3 and M25 will be finished with low-noise road surfacing and the environmental noise barriers along the M25 will be reinstated alongside the amended road and continued alongside the A3 either side of Junction 10 as far as the first bridges. These are identified in the Outline Environmental Management Plan. No significant adverse effects from noise increases were predicted at residential properties, Noise Important Areas, the designated habitats or areas of cultural or historic importance. No significant adverse effects from airborne or ground-borne vibration are expected.

Summary of operational assessment:

The Scheme will not have a significant adverse effect on any residential properties, Noise Important Areas or non-residential noise-sensitive locations.

View west from Clearmount bridge towards junction 10, with noise barriers along the wooded edges of Wisley Common

Biodiversity

What is the existing environment like?

Junction 10 is surrounded by semi-natural habitats that have a rich diversity of species and have never been developed. An extensive area around the junction and alongside the A3 and M25 is designated as the Ockham and Wisley Commons SSSI. South of the M25 this is also designated as part of the Thames Basin Heaths SPA, a European level nature conservation designation for the site's importance for birds, particularly nightjar, woodlark and Dartford warbler. Other areas within or adjacent to the Scheme are designated at the local level for nature conservation importance, including Ockham and Wisley Commons Local Nature Reserve and three Sites of Nature Conservation Importance namely, Elm Corner Woods, Wisley Airfield and Hunts Copse.

The habitats within or adjacent to the Scheme include broadleaved, coniferous and mixed woodland, heathland, scrub, acid and neutral grasslands, ponds and a lake. There are four ancient woodlands and 41 individual and two groups of veteran trees. There are three watercourses adjacent to the Scheme; River Wey, River Mole and Stratford Brook, one important waterbody, Bolder Mere, and several ponds, ditches and damp areas.

The habitats within and adjacent to the Scheme support the following notable or protected species: sand lizard, common lizard, slow worm, grass snake, adder, great crested newt, numerous birds (including nightjar, woodlark, Dartford warbler, hobby and spotted flycatcher), eleven species of bats, badger, fish, rare plants and terrestrial and aquatic invertebrates, particularly dragonflies. The non-native invasive plant species rhododendron, Japanese knotweed, Indian balsam and New Zealand pigmyweed are present.

What are the effects during construction?

There will be permanent loss of areas designated for nature conservation at the local, national and European level: 12.7 hectares from the Ockham and Wisley Commons Local Nature Reserve, of which 11.5 hectares are also in the Ockham and Wisley Commons SSSI and 5.9 hectares in the Thames Basin Heaths SPA; plus 4.6 hectares from the Sites of Nature Conservation Importance.

Dartford warbler

Nightjar

Woodlark

There will be a permanent loss of 0.2 hectares of ancient woodland and two veteran trees, which are considered irreplaceable habitat, with potential for adverse effects on nine other veteran trees.

The habitats lost within the designated sites will be mainly plantation and naturalised woodlands, along with open water and lake margin habitats at Bolder Mere and grassland and concrete hardstanding. There will not be any loss of heathland. Outside of the designated sites, there will be losses of deciduous, coniferous and mixed woodland, wood pasture, riverside habitats at Stratford Brook.

As well as the permanent loss of habitats, there will be additional temporary impacts on designated sites and notable habitats due to the working areas and compound areas required during construction.

The numbers of breeding nightjar, woodlark and Dartford warbler are not expected to decrease because of construction activities, as these species breed in the heathland habitats beyond the proposed highways construction areas. However, habitat loss is likely to affect the invertebrates for which Ockham and Wisley Commons SSSI is notified and will also affect sand lizards, common lizards, great crested newts, bats, common birds and badgers present within the Scheme area.

To reduce the effects of the Scheme on biodiversity, vegetation and tree clearance will be conducted in ways that avoid harm to the species that may be present and will avoid sensitive seasons wherever possible (e.g. the bird breeding season). Where necessary, construction works that affect protected species will be undertaken under licence from Natural England. Pre-construction surveys will be carried out as a final precaution prior to site clearance.

The habitats and trees that are to be retained within the construction area will be protected by use of construction exclusion fencing. Lighting used during construction will be operated to limit effects on adjacent wildlife, and night-time working adjacent to notable habitats will be minimised as much as possible. Where habitats have been cleared in areas used temporarily for construction, these will be reinstated after construction or appropriate new habitats established.

Veteran trees that cannot be retained will, if practicable, be translocated, and to compensate for the loss of any individual veteran tree, three trees of the same native species of local origin will be planted. Where ancient woodland needs to be cleared, the soils will be translocated to provide a seed bank for ancient woodland ground flora to establish in newly created woodland areas.

Heathland restoration on Chatley Heath

The application of appropriate mitigation measures set out in the outline Construction Environmental Management Plan will prevent any significant adverse effects on designated sites and adjacent habitats from indirect impacts, such as increased dust or water pollution. The plan will also set out measures to prevent the spread non-native invasive plant species.

To compensate for the permanent loss and division of areas of designated sites and notable habitats, the Scheme will provide new areas of heathland, woodland, wood pasture and open acid grassland habitats and create new habitat links between areas of existing heathland or woodland. There will also be modifications to enhance the biodiversity of existing habitats. This will include the clearance and thinning of substantial areas of coniferous and mixed woodland to allow open heathland habitat to regenerate and create more diverse woodland and wood pasture habitats. In these areas, veteran trees, trees with bat roosts and locations with badger setts will be avoided. There will be enhancements of the river habitats at Stratford Brook and the marginal habitats at Bolder Mere.

The Scheme will provide new habitats that will incorporate bare patches, sandy mounds and sandy exposures to support a diverse range of invertebrate species, to provide compensatory habitat for notable invertebrates, reptiles and great crested newts. Log piles will be created from felled trees and standing and fallen deadwood will be provided from any suitable retained trees.

These various enhancements will result in habitats of higher biodiversity value once they have become established. In the long-term, the habitat creation, compensation and enhancement measures are likely to lead to increased numbers of nightjar, woodlark and Dartford warbler, resulting in a permanent positive effect on the SPA from the Scheme. To compensate for the effects of the Scheme on bats, a bat mitigation structure will be constructed and bat boxes will be placed in trees in areas of retained woodland. An artificial badger sett will be constructed and bird nest boxes will be provided. Wildlife fencing and two new toad crossings will be incorporated into Old Lane. Signs to warn vehicle users and a reduced speed limit will be put in place along Elm Lane.

Summary of construction assessment:

Once the habitats created during construction have become established, there will be permanent beneficial effects on the qualifying bird species of the SPA, Bolder Mere, sand lizards, other reptiles, bats and invertebrates.

There will be neutral effects on the SSSI, the locally designated sites, notable habitats outside of designated sites, the River Wey, the River Mole, ephemeral ditches, great crested newts, and other bird species.

Due to the loss of 0.4 hectares of ancient woodland and two veteran trees, there will be a permanent adverse effect on these resources. There will be permanent adverse effects on Stratford Brook and temporary adverse effects on badgers.

Much of the Scheme is surrounded by mature woodland

What are the effects during operation?

There are expected to be no perceivable changes in habitat structure or function within designated sites or other habitats within or adjacent to the Scheme due to changes in air quality and the effect of the changes in noise levels will be negligible. The drainage proposals within the Scheme have the potential to improve the water quality of the River Wey, River Mole, Bolder Mere and several ditches. Sensitive lighting has been designed to minimise light spill onto adjacent vegetation, including designated sites and other habitats adjacent to the M25 and A3. Replacement habitats created during construction will become established and will be suitable to support a diverse range of species. All newly created habitats will be managed and monitored as part of a long-term management plan.

Summary of operational assessment:

There will be no significant effects from traffic movement or road lighting. Replacement habitats created during construction will become established and incorporated into the long-term management plan. There will be improvements to water quality and habitat conditions for the River Wey, the River Mole, other watercourses and Bolder Mere.

Bolder Mere

Road Drainage and the Water Environment

What is the existing environment like?

The key water environment features are Bolder Mere, the Stratford Brook and the Chobham Bagshot groundwater beds, which are all Water Framework Directive water bodies. There are also numerous surface water features including ponds, ditches, soakaways and attenuation ponds within the catchments of the River Mole and River Wey that lie adjacent to the Scheme.

The diversion of Wisley Lane will cross an area of medium to high flood risk associated with Stratford Brook and there are other areas where surface water and groundwater flooding may occur. The Scheme study area includes a Principal Aquifer, Secondary Aquifers and water Source Protection Zones.

What are the effects during construction?

The excavation and deposition of materials, spillage of contaminating liquids (such as fuel) and water runoff from construction sites all have the potential to affect the water environment. The application of appropriate mitigation measures set out in the outline Construction Environmental Management Plan will prevent significant adverse effects on flood risk or the water environment. These measures will include using best practice with regard to Pollution Prevention Guidelines, bunding of areas where contaminating materials are stored, testing of contaminated materials, limiting works in the floodplain and using appropriate piling methods.

Summary of construction assessment:

With the implementation of mitigation measures, there will be no significant effect on flood risk or the water environment.

What are the effects during operation?

During operation, contaminants on the road surface and accidental spillages can cause pollution incidents by water runoff into ponds, ditches and groundwater. The Scheme will provide a comprehensive set of drainage control and pollution prevention measures, which do not exist at present for these roads. There will be no significant adverse effects on groundwater quality and negligible spillage risk to the groundwater catchments. The Scheme will be compliant with the requirements of the Water Framework Directive.

Summary of operational assessment:

With the proposed drainage and control measures, there will be no significant effects on surface water, groundwater, flood risk and Water Framework Directive compliance.

Landscape and Visual

What is the existing environment like?

The Scheme is set within an area of woodland, heathland, parkland and farmland close to the settlements of Byfleet, Cobham and Ripley between the River Mole and River Wey. The southern section of the Scheme lies within a fairly flat area between these two rivers whilst further to the north the ground rises to small, sandy hills. Close to the A3 and M25 there are several individual houses and groups of properties, Cobham adjoins Painshill junction at the north end of the Scheme and, to the south, there is a disused airfield on which housing development is proposed.

At either end of the Scheme are Registered Parks and Gardens of Historic Interest – RHS Wisley to the southwest and Painshill Park to the northeast. The landscape surrounding junction 10 is designated as either common land or open space and provides an attractive area for walkers and horse riders to enjoy, although the movement and noise of traffic detract from the tranquillity of the area.

The A3 broadly follows the old alignment of Portsmouth Road across the heaths at or close to ground level, whereas the M25 is of more recent construction and runs on an embankment to cross the River Wey and then in cutting past Clearmount, under junction 10 and past Telegraph Hill. Both roads feel generally enclosed by mature trees, due to extensive forestry plantations on the heaths and belts of planting along the boundaries of the parks, gardens and fields.

What are the effects during construction?

During construction, trees and woodlands will be removed to enable the Scheme to be built, which will make the existing roads and traffic more visible from parts of the surrounding area. The clearance and construction activity will add to the adverse effects of the road corridor on tranquillity of the open landscape. There will also be views of construction machinery and views of construction compounds from some places.

The enhancement works to the SPA and the replacement land will mean that woodland clearance will be seen in several locations; however, these works will not all be done at the same as the road construction, so the visible effects will be localised. The generally enclosed landscape created by woodland, farmland and parkland alongside the M25 and A3 corridors will largely remain.

Summary of construction assessment:

Large scale clearance of trees and woodland will have a significant adverse effect on the landscape around the A3 and M25. Construction activity will add to the adverse effects of the road corridor on tranquillity of the open landscape and will be visible from some locations.

View northeast from Cockcrow bridge towards junction 10, showing the woodland surroundings to the A3

South part of Buxton wood and the SPA compensation land near Wisley

What are the effects during operation?

Once the Scheme is complete, there will be a larger area of roads with traffic in views from the surroundings. There will also be views of new gantries and signs, particularly along the A3. The extra views of the M25 and A3 that were created during the construction phase will remain until the new planting begins to mature and, over a period of years, the effects of the Scheme will reduce. The works to restore heathland in parts of the surrounding area will alter the character of the local landscape, taking it back to its more open appearance before the extensive forestry planting of the latter half of the 20th century. The Scheme includes large areas of tree planting and woodland management in the replacement land areas, which will provide attractive new landscapes for people to enjoy.

Summary of operational assessment:

The adverse effects of the altered and enlarged highways will reduce as new and reinstated planting begins to mature, leading to a neutral effect. There will be a permanent change in character of parts of the surrounding landscape, with increased areas of heathland and deciduous woodland.

Geology and Soils

What is the existing environment like?

The Scheme lies on the sands and sandy or silty clays of the Bagshot Formation, under which is a thick formation of clay. Varying superficial deposits are found at the western, northern and southern extents of the Scheme area. There is a Secondary A aquifer (capable of supporting water supplies at a local scale) in the bedrock underlying the Scheme. The overlying superficial deposits are designated as either Principal aquifers (capable of supporting water supply on a regional scale) or Secondary A aquifers.

There are some potential geological issues in the Scheme area, including: compressible ground, unstable sand slopes, areas of shrinking or swelling clay, areas of infilled land and some land uses that are potentially contaminative to people and habitats.

What are the effects during construction?

During construction, existing contamination may be disturbed, and new pathways for contaminants may be introduced by piling, boring, groundwater and excavation including management of runoff from construction areas, pollution controls, stockpile management and, limiting the extent and duration of soil exposure. If contamination is encountered, it would be remediated appropriately, which could be a beneficial effect of construction.

Summary of construction assessment:

There will be no significant effects on geology and soils with the implementation of suitable design and mitigation measures.

What are the effects during operation?

During operation, it is unlikely that new pollution pathways will be created. Road traffic accidents will still have the potential to create new pollution sources, but the likelihood of accidents should be reduced.

Summary of operational assessment:

There will be no significant effects on geology and soils.

Cultural Heritage

What is the existing environment like?

Historic resources within the Scheme study area include:

- Four scheduled monuments - a Neolithic hengiform monument to the north east of junction 10; a Bronze Age bell barrow and a Bronze Age bowl barrow to the south west of junction 10 and the site of a Roman bath house by the River Mole
- One Grade I Registered Park and Garden - Painshill Park - and one Grade II* Registered Park and Garden - RHS Wisley
- One Grade I Listed Building; five Grade II* Listed Buildings and 41 Grade II Listed Buildings
- Two Conservation Areas
- The historic commons surrounding junction 10

The Gothic Tower within Painshill Park

What are the effects during construction?

The clearance of vegetation and the presence of construction machinery will affect the setting of the historic resources, but there will be no direct, physical effect on known heritage assets. There is potential for encountering both known and unknown heritage assets and buried archaeological remains during any of the construction works. An archaeological mitigation strategy will be prepared that includes excavation, targeted watching briefs, monitoring and sampling. This will ensure preservation by record of the known heritage assets affected and will enable identification and preservation by record of any previously unrecorded archaeological remains.

Summary of Construction assessment:

There will be no direct impacts on known heritage assets, but there will be effects on the settings of some historic resources.

What are the effects during operation?

During operation, there will be no additional direct physical impacts on buried archaeology, as any impacts will have been either avoided, so that heritage assets can be preserved in place, or mitigated through archaeological excavation and recording prior to construction. The setting of heritage assets may be adversely affected by the presence of additional gantries and signs or amended roads; however, the mitigation measures incorporated into the Scheme, including vegetation screening and careful design, will reduce adverse effects over time.

Summary of operational assessment:

There will be no significant effects on heritage assets after the establishment of mitigation.

Materials and Waste

What is the existing environment like?

The existing environment is derived from the national baseline for the main construction materials, the regional waste arisings and the Surrey waste capacity. This shows national sales of aggregate (the main material to be used on the Scheme) of 225 million tonnes per year. Within Surrey, about two million tonnes of construction waste is generated per year and Surrey has capacity to receive about one million tonnes of construction waste.

What are the effects during construction?

Construction materials will be available from normal commercial sources. Opportunities will be explored for local sources of construction aggregates and fill, to reduce journey distances. The woodland clearance and management work will aim to maximise the usability of the large quantity of timber that will be harvested. The amount of waste that the Scheme will generate is estimated to have a minimal impact on the total waste arisings and capacity in Surrey. The waste will be controlled by measures in the outline Construction Environmental Management Plan, including the waste hierarchy, the Site Waste Management Plan, reusing materials where possible and training staff. Design improvements that have been incorporated in the Scheme, including alternative construction methods for low height retaining walls and use of hardened central reserves instead of steel barriers have helped reduce material use and waste generation. However, the Scheme will still require large quantities of materials for construction.

Summary of Construction assessment:

The expected quantities of materials required and waste generated will not have significant effects on the materials market or the waste capacity in Surrey.

What are the effects during operation?

During operation, only small quantities of materials will be used and the waste generated will be minimal.

Summary of operational assessment:

There will be no significant use of materials or generation of waste during operation.

People and Communities

What is the existing environment like?

The A3 runs between the settlements of Byfleet, Cobham, Hatchford, Ockham, Ripley and Wisley. There are also several isolated properties close to the A3 and M25, along with the hamlet of Elm Corner. There is a range of community facilities and services in the study area, including Painshill Park, RHS Wisley, Feltonfleet School and local businesses. The area contains various farms and agricultural land, business, organisations and charities. There are some development sites in the area, notably the Wisley Airfield site allocation.

Ockham Bites café adjacent to the A3 at Old Lane

Junction 10 is set within an extensive area of woodland and heathland used by the community as common land and open space. A network of public rights of way cross the surrounding area but, despite the existing crossings, the A3 and M25 act as a deterrent to the movement of pedestrians, cyclists and horse riders. These major roads are a source of stress for drivers and deter motorists on local roads making journeys around the area. The Kingston to Guildford bus service runs along the A3 with several bus stops within the Scheme area.

What are the effects during construction?

The former San Domenico restaurant building by the A3 will be demolished to enable the site to be used as a construction compound. The adjacent Starbucks coffee shop will be closed temporarily but returned to its owners after the Scheme is complete. Land will be needed temporarily and permanently from other business, farms and organisations to enable construction.

Land will be taken from the common land and open space surrounding the junction 10 and replacement land will be provided to compensate for this as part of the DCO process and made suitable for public access. This will use land from three local farms - Park Barn Farm, Chatley Farm and Poynters Farm. The main construction compound by Ockham Park junction will use part of Nutberry Farm.

There will be temporary disruption to journeys on public rights of way during construction. The footway/cycletrack alongside the A3 will be closed and a long temporary diversion signposted via Hatchford, Martyrs Green and Ockham. The routes around junction 10 will be closed and temporary diversions signposted via the existing bridges over the M25 and A3. The closure of the bridleway crossing at junction 10 will cause temporary severance until the replacement Red Hill bridleway bridge is built. The crossing of the A3 north junction 10 will be closed for up to six months until the new Red Hill overbridge is built. Other crossings over the A3 and M25 will be maintained until new bridges are completed, so there will be no disruption to access.

Local road connections will be maintained throughout the construction period with only occasional overnight closures to enable works to be carried out. Overnight closures will also be required on the A3 and M25 to facilitate demolition of existing bridges and erection of new structures, but these will be notified many months in advance and alternative routes signed. During construction, reduced speeds, narrow lanes and the presence of construction equipment will lead to increased driver stress.

Summary of construction assessment:

There will be disruption for residents and visitors, but this will be mitigated as far as possible.

What are the effects during operation?

There will be a significant adverse effect on the former San Domenico site, which will lose direct access from the A3 with access instead from Seven Hills Road. There will be no significant effects on private dwellings, community assets, the local economy and employment, or rural enterprises. The Scheme will have significant beneficial effects on growth and development due to improved capacity at junction 10 and on the A3.

The replacement land for common land and open space will provide increased areas for public recreation, which will be linked to the existing open areas by additions and improvements to the rights of way network. There will be significant beneficial effects for walkers, cyclists and horse riders, due to improved and new crossings, new and upgraded links, including the bridleway alongside the A3, and improved safety, signage and facilities. Effects on driver stress are likely to be beneficial due to reduced congestion and delay, better signage and improved safety.

Summary of operational assessment:

After construction is complete there will be noticeable benefits for local people, visitors and road users.

Horse riders near Redhill Road

Climate

What is the existing environment like?

The existing effects of the Scheme on climate arise from the quantity of greenhouse gas emissions generated by existing road users. The current climate in Surrey is one of relatively mild winters and warm summers, with occasional storms. The long-term average monthly rainfall is lower than the UK average. It is projected that, on average, the study area is likely to experience hotter and drier summers and warmer, wetter winters, along with increased frequency and severity of extreme weather events, such as heavy rainfall, storms and heatwaves.

What are the effects during construction?

Greenhouse gases will be emitted during the production of construction materials and during construction activities, including emissions from construction machinery. Mitigation measures will include exploring the potential for low carbon solutions (including technologies, materials and products) to minimise consumption of resources and maximise re-using and/or refurbishing existing assets.

The construction of the Scheme is not expected to be far enough into the future for the climate to change so significantly that its influence on construction will be different to that expected in the current climate. Therefore no significant effects are identified from climate change on construction.

Summary of construction assessment:

No significant construction effects are predicted.

What are the effects during operation?

The Scheme may cause a reduction in emissions from road users and operational energy use (such as lighting), which will in turn reduce effects on climate. The inclusion of improved connections for walkers, cyclists and horse riders will encourage less car use. The projected increase in future temperatures is likely to result in improved driver safety in winter but reduced driver safety in summer. Mitigation measures will include more regular maintenance and preventative action, emergency planning and early warning systems. However, drivers will be exposed to the same changes in risk with or without the Scheme.

Summary of operational assessment:

No significant operational effects are predicted.

Assessment of Cumulative Effects

What is the existing environment like?

Cumulative assessment considers the effects of other developments in the area in combination with the Scheme and considers the combination of effects within the Scheme, such as noise and visual effects on residential property. The following proposed developments have been included in the assessment:

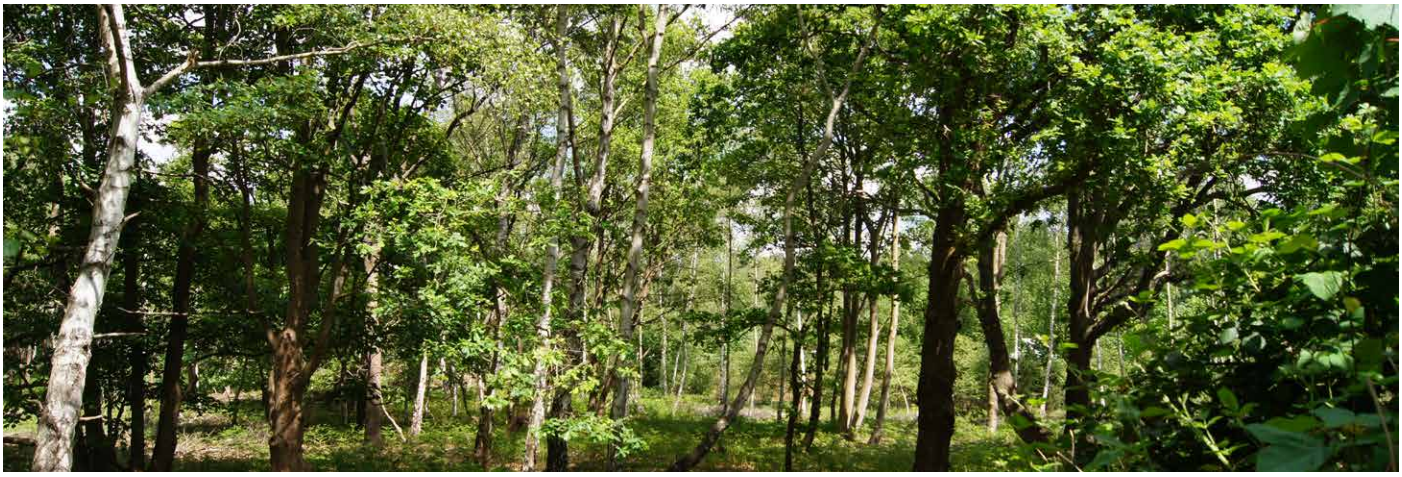
- The Highways England M25 Junctions 10 - 16 Smart Motorway Programme
- The former Wisley Airfield residential development
- Proposed building developments at the Royal Horticultural Society Gardens, Wisley
- Six other residential developments including a Care Home by Painshill junction
- Seven other developments including office, retail, industrial and school uses
- One further road scheme at Send Marsh / Burnt Common

What are the effects during construction?

The cumulative effects within the Scheme will be principally related to noise, landscape and visual effects, and land take. These effects will be temporary in nature and localised in extent. The effect will be moderately adverse in relation to residential, community and business concerns, drivers, walkers, cyclists and horse riders, and neutral for others.

Some cumulative construction effects are likely with the other proposed projects:

- Slight adverse cumulative effects in relation to construction noise
- Moderate adverse cumulative effects for drivers, some private dwellings and users of public rights of way, related to the combined effects of noise, dust, land take and changes in access and visual amenity



Woodland near Cockcrow bridge

- Slight adverse cumulative effects between the Scheme and the Feltonfleet School development related to tree removal
- Slight adverse cumulative effects related to delays in the delivery of proposed community facilities

Summary of construction assessment:

There will be some moderate adverse cumulative effects within the Scheme. There will be some slight and moderate adverse cumulative effects between the Scheme and other proposed developments in the area.

What are the effects during operation?

The cumulative effects within the Scheme will be principally related to noise combined with landscape and visual effects. There will be some beneficial combined effects from the improved roads and rights of way. The overall effect during operation will be slight adverse in relation to residential, community and business concerns, and neutral for all other issues.

Some cumulative operational effects are likely due to the combination of the Scheme and the projects:

- Slight beneficial cumulative effects for local businesses, attractions and community facilities, primarily due to improvements in access and safety
- Slight beneficial cumulative effects for pedestrians, cyclists and public rights of way
- Slight beneficial cumulative effects on driver stress

Summary of operational assessment:

There will be some slight beneficial cumulative effects during operation.

What happens next

Highways England has submitted an application under Section 37 of the Planning Act 2008 for an Order to grant Development Consent for the M25 junction 10/A3 Wisley interchange Scheme.

Following submission of the application for Development Consent, the Planning Inspectorate will consider, on behalf of the Secretary of State for Transport, whether the application should be accepted for examination.

If accepted, the documents accompanying the application will be publicly available on the Planning Inspectorate's website. Interested parties will be able to make relevant representations about the Scheme and its potential impacts. Representations received by the Planning Inspectorate will be considered as part of the examination into the application.

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