

**A303
Stonehenge
Improvement**

HA/0/22

**Archaeological
Mitigation
Design**

March 2004

Draft

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STONEHENGE

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Executive Summary

Significant effort has been made to avoid direct impacts on the Cultural Heritage resource by the Published Scheme, however some direct impacts are inevitable. In order to best mitigate these impacts this Archaeological Mitigation Design has been produced, which deals not only with permanent direct impacts upon Cultural Heritage remains, but also describes the measures that would ensure that no direct impacts are caused by temporary works during construction.

The production of this document has been informed largely by discussions with English Heritage, Wiltshire County Council, and the National Trust through the medium of the Archaeology Meetings, but supplemented by other meetings as appropriate. These meetings have led to a comprehensive and carefully considered programme of mitigation, which would precede all construction works.

This document describes the general mitigation strategy for all direct impacts on Cultural Heritage within the scheme, and would be supplemented by individual Written Schemes of Investigation for specific mitigation areas.

These measures would contribute towards the archaeological and research objectives of the *Stonehenge WHS Management Plan* (EH 2000), the *Stonehenge WHS Research Framework* (Bournemouth University, in publication) and the *Statement of Principles Governing Archaeological Works* (EH 2001). The proposed mitigation presents a unique opportunity to advance knowledge of the wider Stonehenge landscape.

1 Introduction

- 1.1 This document sets out the methodology for mitigating the direct permanent impacts of the Scheme upon the Cultural Heritage resource. Whereas the resource comprises all aspects of the historic environment including the Stonehenge World Heritage Site (WHS), archaeological remains above and below ground, historic structures and Listed Buildings, Conservation Areas, historic landscapes and historic parks and gardens, this document is primarily concerned with archaeological remains above and below ground. The principles established and agreed would be embodied within the Contractor's Environmental Management Plan, which is the principal management document to control work on site.
- 1.2 The effects of the Scheme upon the Cultural Heritage resource are summarised in *Volume 1, Chapter 5 of the Environmental Statement (ES)*, and the impacts leading to those effects are described in *Volume 2, Part 1*, of the ES. Field investigations and studies have covered the proposed route corridor and its associated study area. These include: major published works such as *The Stonehenge Environs Project* (Richards, 1990), *Stonehenge and its Landscape* (Cleal et al, 1995) and *Science and Stonehenge* (Cunliffe & Renfrew (Eds.), 1997) and works in publication such as *The Stonehenge World Heritage Site Research Framework* (Darvill, in Publication Q1 2004). Unpublished reports on the results of fieldwalking/test-pitting, geophysical survey and trial excavation are summarised in *Volume 2, Part 1*, of the ES. As a consequence of these investigations and studies the archaeological resources that would be affected by the Scheme are sufficiently well understood. Although the entire area of the trace has been subject to survey, the inherent limitations of such sampling inevitably mean that there is a strong possibility of encountering remains beyond those already located.
- 1.3 The sources used include:
- Information derived from The English Heritage World Heritage Site Geographic Information System (WHS GIS) database, which amalgamates the Wiltshire County Sites and Monuments Record (SMR) of archaeological sites, the results of various surveys and investigations, and aerial photographic interpretation evidence (as revised by English Heritage (EH)) within an area of 135km² around Stonehenge.
 - Management of Archaeological Projects 2nd edition (MAP2) (EH, 1991)
 - The Historic Landscape Survey (*ES Volume 2, Part 2 Appendix 7*)
 - Geophysical surveys undertaken in connection with the Scheme on behalf of the Highways Agency (HA).
 - Archaeological field-walking (or surface artefact surveys) undertaken both in connection with the Scheme and with the Stonehenge Environs Project (Richards, 1990)
 - Intrusive field evaluations including test pits, trial trenches and auger transects undertaken on behalf of the HA.

Discussions with the Scheme Consultees (EH, Wiltshire County Council (WCC), and the National Trust (NT)) have taken place largely through the medium of the Archaeology Meetings, but supplemented by other meetings as appropriate.

2 Assessment of Significance and Effect

2.1 Baseline conditions

- 2.1.1 The *ES Volume 1, Chapter 5, Section 5.3* provides an introduction to the known archaeological and historical background to Stonehenge and associated monuments. It describes the prehistoric, historic and spiritual aspects of the landscape, and summarises the baseline archaeology of the route, identifying all of the sites included within the Cultural Heritage assessment.

2.2 Background informing mitigation strategy

- 2.2.1 The Scheme is a central element in enabling the delivery of many of the objectives contained within the *Stonehenge World Heritage Site Management Plan (SWHSMP)* (EH 2000). The SWHSMP objectives have been taken into account in defining the principles for archaeological mitigation and recording for the Scheme; the SWHSMP has been adopted as Supplementary Planning Guidance by Salisbury District Council. Strategic standards for all archaeological work connected with the Scheme have been derived from the Statement of Principles Governing Archaeological Work, agreed by EH, the NT, WCC, and the HA. The statement on Sustainable Access and Interpretation Principles agreed by the WHS Implementation Group in 2002 is also relevant to archaeological mitigation as it sets out principles for the protection and accessibility of archaeological remains.
- 2.2.2 Perhaps the most important document for setting the objectives for archaeological investigations is the *Stonehenge World Heritage Site Research Framework* produced by Bournemouth University for EH (in Publication Q1 2004) and referred to hereafter as the Research Framework. In addition to providing a cogent review of what is known about the Stonehenge Landscape, it has also defined a Research Agenda and a series of 36 issues for research accompanied by 24 research objectives.

3 Definitions of Effect

3.1 General

- 3.1.1 This document considers only those Cultural Heritage resources that lie within the footprint of the Scheme within which physical work such as road construction and earthworks would take place and which are contained within the areas of land included in the draft Compulsory Purchase Order for the Scheme. It is within this area, referred to as the 'trace', where permanent direct impacts could occur. The trace comprises the area of permanent and temporary land-take needed for the Scheme, which includes the road works, temporary haul routes, construction compounds, drainage treatment areas, temporary spoil storage areas and landscape mitigation areas. Where remains are buried underground, or where crop marks are only visible from the air and there is no surface evidence, the main danger is that proposed groundwork excavations could inadvertently destroy archaeological evidence. This could be caused by direct physical damage, changes to the water table due to cuttings or drainage measures, or by disturbance, such as severance of associated features. Outside the trace, any impacts that may take place would be indirect and are not addressed by this mitigation strategy. The areas for the construction compound (which would include an area for temporarily storing chalk excavated from the proposed tunnel) are included in the trace.

4 Mitigation Strategy for Temporary Works

- 4.1 A temporary diversion of the existing A303 would be needed to the north of the trace (between CH. 7480-7750) during the construction of the western tunnel portal. A temporary haul road would be built to the south of the existing A303 between the western tunnel portal at CH. 7550 and Stonehenge Road at CH. 10200 for the transport of materials and plant during the construction period. At its western end the haul route would pass 20m to the north of Scheduled Monument 10314 (Site 39), an extant round barrow. Between CH. 7900 and CH. 8000 the haul route would pass 50m to the south of Scheduled Monument 10313 (Site 41), an extant Long/Oval Barrow.
- 4.2 The diversion routes as described above would be of rafted construction formed by laying a protective geotextile upon the existing ground level, overlain by a layer of hardcore above. In this way no buried archaeological remains would be affected during construction, operation or reinstatement. No 'ripping' of the ground surface would occur during the removal of the temporary diversions.
- 4.3 A construction compound would be placed to the southwest of Longbarrow Crossroads junction. This location has been selected because it is outside the WHS, is in a convenient location when considering the movement of bulk materials, and would have a potential effect upon only a few known archaeological features. The most significant feature is Site 21, a late Neolithic Hengiform Ring Ditch 10476, which would be fenced-off for its protection prior to the construction of the compound. Other anomalies have been identified by geophysical survey and aerial photography within the area, however these have not been evaluated by excavation as the design of the compound is the same as that adopted for the temporary haul routes, and would be overlain by a geotextile blanket covered by hardcore which would avoid the risk of direct impacts. No 'ripping' of the ground surface would occur during the removal of the compound.
- 4.4 It would be necessary, during the construction of the tunnel, for de-watering measures to be put in place. Excavation of the well-points would be covered by the same form of investigation as conducted during the geotechnical survey, i.e. advance archaeological investigation of the points affected. The de-watering would require the water to be discharged in up to three banded de-watering areas (see Figure P1A/ENV/ACH/MIT/01 sheets 5 - 6). Topsoil would be left in-situ in these areas, and the material for the earth bunds would be imported from elsewhere on the scheme. The bunds would be constructed upon geotextile membrane to prevent artefacts contained within the imported material mixing with the local topsoil and on completion of the works they would be removed.

5 General Mitigation Strategy and Sequence for Permanent Works

5.1 General strategy

5.1.1 Mitigation measures have been proposed for all sites within the trace (which includes roadworks, mitigation earthworks, temporary roads, construction camps, drainage, and treatment areas) and for each site or feature that would be affected by the Scheme (see *ES, Volume 2, Part 1, Section 3*, for individual entries). In acknowledgement of the potential for unrecorded remains to exist, the technique of strip-map-record would be employed widely. The measures fall into one or more of nine categories that have been agreed with EH, the NT and WCC at the Archaeology Meetings. The mitigation measures would be included within the *Contractor's Environmental Management Plan*, which is the document described in the *ES Volume 1, Chapter 15, Section 15.4*. The nine categories are:

1. Preservation in situ by engineering design / areas with no-access to construction traffic.
2. Fieldwalking all areas to be affected where not previously undertaken, to establish artefact densities prior to stripping of topsoil (Table 1)
3. Topographic survey of earthworks (primarily water meadows in the Till Valley).
4. Specific excavations (Table 2), including palaeo-environmental and other scientific sampling regimes, such as treatment of colluvium
5. Strip-map-excavate including palaeo-environmental and other scientific sampling regimes (Table 3)
6. Strip-map-protect (Table 3)
7. Watching brief
8. Mapping of topsoil translocation
9. Re-siting of milestones

5.1.2 Separate and specific Written Schemes of Investigation (WSIs) would be prepared for each archaeological site or section of the route. The generic approach is summarised in the *ES Volume 2, Part 1, Section 4*, which is based on the standard methodology used in previous assessment and evaluation stages of the A303 project, thus ensuring consistency of results and the maximum information return.

5.2 Archaeological staffing and management

5.2.1 A Project Archaeologist would be responsible for the implementation of this Mitigation Strategy. The Project Archaeologist would liaise with the Contractor's Environmental Clerk of Works and the Employer's Archaeological Advisor (who would advise the HA). The Mitigation Strategy would be undertaken principally by Halcrow-Gifford and Wessex Archaeology supported by a variety of such specialised analysts as may be required. An Organisational Structure is in Section 7 below.

5.2.2 The mitigation works would be directed and managed by Halcrow-Gifford. Gifford Archaeology is accredited by Lloyds Quality Assurance to ISO 9001:2000 and is an Institute of Field Archaeologists (IFA) Registered Organisation. Wessex Archaeology, also an IFA Registered Organisation, would undertake the field investigations, carry out analyses of artefacts and samples and drafting of reports, supported where necessary by other specialists. Gifford holds copies of all Wessex Archaeology manuals to enable a clear and auditable

process and to ensure the highest standards are maintained throughout for both management and technical archaeological practices. All work would be undertaken in accordance with current standards (see *ES Volume 2, Part 1, Section 4.6*).

- 5.2.3 Gifford Archaeology would maintain consultation with the engineering teams throughout the works, to ensure the appropriate archaeological response to any changes to the construction methodology or timetable.

5.3 Preservation in situ by engineering design

5.3.1 Relatively large areas of land are affected by earthworks for landscape mitigation. Within these areas the impacts on the archaeology are potentially highly adverse as a consequence of the standard procedures of stripping topsoil and storing it separately for use in landscape restoration. However, the soil-balance for the scheme would allow for subsoil (the layer immediately above the chalk) to be left in place for the majority of these areas, leaving archaeological remains in-situ. Fieldwalking would be carried out in areas where not previously undertaken prior to the removal of topsoil. A watching brief would be maintained during stripping (where required) to ensure that subsoil is left in place. Areas where soil would be removed would also be subject to mapping (Section 5.12).

5.3.2 Where it is necessary for chalk to be exposed, archaeological features would be recorded by the process of strip-map-protect (see Section 5.8), and then preserved in situ beneath the earthworks mitigation, protected by a layer of geotextile. No chalk would be excavated within the earthworks mitigation areas.

5.4 Fieldwalking all areas to be affected where not previously undertaken

5.4.1 All areas within the trace affected by the Scheme that had not previously been fieldwalked, including any land that had previously been pasture rather than arable, would be ploughed and allowed to weather for not less than 3 weeks. Thereafter the areas would be fieldwalked using the strategy employed previously by Wessex Archaeology. Table 1 details the areas which would be subject to fieldwalking. All artefacts would be collected and analysed. The retention and discard policy for artefacts would be agreed with EH, the NT, WCC and the recipient museum.

5.4.2 All areas to be stripped would also be subjected to a controlled metal-detector survey by a specialist under license.

Table 1: Areas to be Ploughed, Weathered and Fieldwalked (excluding Earthworks Mitigation Areas)

Chainage	Nature of remains	Significance (MIV)	Impact
CH. 2400-2560	Elements of field system (Site 3)	Minor	Very High Adverse
CH. 3610-3780	Elements of field system (Site 9)	Minor	Very High Adverse

5.5 Topographical survey of earthworks

5.5.1 An area with surviving earthworks – the earthworks of relict water meadows of the Till Valley – would be recorded by detailed topographical survey and documentary research, leading to a brief report and hachured survey plan at an appropriate scale. Limited areas of these earthworks would be affected (buried) by earthworks associated with landscape mitigation and the proposed River Till viaduct approach embankments and bridge piers.

5.6 Excavation, including palaeo-environmental and other scientific sampling regimes, prior to any construction works, within defined areas (Table 2)

5.6.1 This fieldwork would be targeted to excavate and record archaeological remains in a clearly defined area of the route, in order to achieve particular archaeological objectives. The excavations would be completed before construction could commence in that location. The intensity of hand-excavation would be, as a minimum, that set out in Section 6.6, Table 5, and would be further specified in the individual Written Schemes of Investigation. All stripping would take place under archaeological supervision.

Table 2. Areas for Mitigation by Excavation

Excavation area	Period / Monument Class	Significance (MIV)	Impact	Research Objective
Excavation Area 1 CH. 2300 - 2800	Small square enclosure, circular feature to the NE, rectilinear features, linear trends associated with IA enclosure Site 4.	Minor (inside trace)	Very High Adverse inside trace.	3, 14, 16, 12
Excavation Area 2 CH. 4010 - 4220	Colluvial/alluvial deposits and palaeo-environmental remains within area of bridge piers. (Site 14)	Potentially important	Very High Adverse	3, 4, 12
Excavation Area 3 CH. 5300 - 5375	A historic boundary with possible early origins. (Site 16)	Potentially moderately important	Very High Adverse	
Excavation Area 4 CH. 5700 - 6600	Features related to Bronze Age and later settlement. (Site 20)	Minor inside trace	Very High Adverse inside trace.	3, 4, 12, 14, 16
Excavation Area 5 CH 7451 - 7550	Area adjacent to Site 37; Scheduled barrow 10477	Potentially very important	Very High Adverse inside trace.	
Excavation Area 6 CH. 7800 - 7901	Area adjacent to Site 41; Oval barrow 10313, within western portal	Very important outside trace; but Minor inside trace	Very High Adverse inside trace.	3, 9, 14, 16
Excavation Area 7 CH. 9120 - 9260	Area of excavation in Stonehenge Bottom. Colluvial deposits known from this area, especially on western slope (Site 48)	Minor important	Very High Adverse inside trace.	3, 4, 14, 16
Excavation Area 8 CH. 9940 - 10160	Area adjacent to Bronze Age round barrow Scheduled Monument 10497, and eastern portal. (Sites 66 and 67)	Potentially very important	Very High Adverse inside trace.	
Excavation Area 9 CH. 4850 - 5300	Trenches would be excavated to sample colluvial deposits that date from the Neolithic onwards, and their relationship with later field systems. (Site 9)	Minor important	Very High Adverse	3, 4, 12
Area 10 CH. 11500 - 11650	Excavation in area of Drainage Treatment Area 6, potential for sealed Mesolithic deposits (Site 90 as identified in the Cultural Heritage Proof of Evidence).	Moderately important	Very High adverse.	3, 4, 14, 16
Area 11 CH. 12110 - 12200	Excavation in area of Drainage Treatment Area 9, potential for Romano-British and Anglo-Saxon deposits (Site 88)	Important	Very High Adverse	
Area 12 (in discussion)	Removal of A303 Causeway in Stonehenge Bottom (Site 62)	Minor Important	Very High Adverse	3, 4, 14, 16

5.7 Strip-Map-Excavate, including palaeo-environmental and other scientific sampling regimes, prior to any construction works, within defined areas (Table 3)

5.7.1 This process would be implemented where chalk is to be both exposed and excavated, and would ensure that all archaeological features are recorded as specified in Section 5.5, unless agreed otherwise. Topsoil would be stripped under archaeological supervision, and excavation would proceed according to a detailed Written Scheme of Investigation, to be agreed with the scheme consultees prior to excavation commencing on site.

5.8 Strip-Map-Protect (Table 3)

5.8.1 It is always possible that, in the course of a strip-map-excavate programme, unexpectedly important remains could be uncovered. If these remains were within areas designated for earthworks associated with landscape mitigation or temporary store of chalk/soil, the remains as revealed would be carefully recorded in plan, and would then be re-covered with topsoil, sealed by geotextile, and the mechanism for preservation-in-situ (see Section 5.3) would be implemented.

5.8.2 If unexpected important remains were to be discovered within areas that needed to be excavated for the Scheme, and preservation in situ was not possible, any such areas would be treated as described in Paragraph 5.7.1 above, for strip-map-excavate.

Table 3. Areas for Mitigation by Strip-Map-Excavate/Protect (excluding Earthworks Mitigation Areas) as Outlined within the Areas of Controlled Topsoil Strip and Strip-Map-Excavate detailed on Figure P1A/ENV/ACH/MIT/01 (Sheets 1 – 8)

Chainage (Indicative Only)	Nature of remains	Significance (MIV)	Impact
CH. 900-2300	Elements of field system (Site 3)	Minor	Very High Adverse
CH. 2800 - 4010	Elements of field system (Site 3)	Minor	Very High Adverse
CH. 4201 - 4799	Elements of field system (Site 9)	Minor	Very High Adverse
CH. 5376 - 5719	Bronze Age and later pits (Site 17), field system (Site 19)	Minor	Very High Adverse
CH. 6611 - 7450	Scatter of pits/tree throws	Minor	Very High Adverse
CH. 7550 - 7800	Scatter of pits/tree throws	Minor	Very High Adverse
CH. 7910 - 9940	Possible remains beneath existing A303	Not known	N/A – Strip-Map-Protect
CH. 10161 - 12400	Possible remains beneath existing A303	Not Known	N/A – Strip-Map-Protect

5.9 Investigation of colluvium

5.9.1 Some portions of the route would cross areas where significant colluvium has accumulated as a result of agricultural activity. These comprise generally a lower soil/sediment sequence, overlain by more recent hillwash.

5.9.2 The buried 'soil/sediment' sequence is known from investigations undertaken to the west of Longbarrow Crossroads to contain more archaeological artefacts than the hillwash, which is

essentially devoid of finds. This is a stasis and stabilisation horizon, and is a preserved portion of prehistoric palaeo-landscape. Where encountered, a representative sample (to be agreed in the Written Scheme of Investigation (WSI)) of this would be excavated in plan (after removal of colluvial overburden) to examine the possibility of human action and to examine the nature of this palaeo-surface. Such surfaces have been defined in a large number of dry valleys in southern England but have rarely, if ever, been examined in plan.

- 5.9.3 The hillwash may have buried tree hollows, which could play an important part in understanding the developing landscape. The density of occurrence and number of these features would be recorded in plan, and 10% of these would be excavated in half-section.
- 5.9.4 The chronological sequence for the colluvial build-up along the route is undated at present. More detailed hand excavation of these deposits may provide enough artefacts to produce a distribution from which to date the sequence. However, a series of Optically Stimulated Luminescence (OSL) dating sequences through these deposits, in close conjunction with soil micromorphology and land snail analysis (which can survive surprisingly well in the area) would help to establish a more detailed landscape history.

5.10 A303 Causeway at Stonehenge Bottom

- 5.10.1 Following completion of the tunnel, the existing A303 between Longbarrow Crossroads and Stonehenge Road would be downgraded to the status of a byway. At Stonehenge Bottom, the A303 crosses the valley on a 1960's causeway, following more or less the same line as an 18th Century turnpike road. Photographs dating from the early 20th Century, and historic OS maps, show that the turnpike road also crossed the valley on a causeway, at a lower level than the present earthwork. As described in the *ES, Volume 1, Paragraph 5.3.5.15*, the former line and level of the pre-1960's causeway has been established as closely as possible by map-regression and the proposed byway would be formed to pre-defined levels. A series of trial trenches would be excavated across the existing causeway to attempt to confirm the exact historical level of the causeway. If this were shown to differ from the predicted level of the causeway it would be possible to amend the final level of excavation by agreement with EH, NT and WCC. An archaeological programme of strip-map-excavate would be implemented to mitigate the impacts on potential sealed deposits that pre-date the existing causeway.

5.11 Watching brief

- 5.11.1 An archaeological watching brief would be maintained under the following circumstances:
- Stripping of topsoil in earthworks mitigation areas where subsoil is to be left in place. This would ensure that archaeological features are not exposed in these areas.
 - Minor works, such as service trenches, where it is not possible for these to be contained within temporary ground surfaces (site compound, haul routes, temporary diversions).
 - Excavation of Drainage Treatment Areas 7 and 8. These areas lie within the boundary of the current A303, however it is possible that alluvial deposits have survived beneath the modern disturbance. Should such deposits be observed, these would be sampled for palaeo-environmental evidence.
- 5.11.2 The number of archaeologists in attendance would be commensurate with the number of machines in use and Health and Safety requirements, with a minimum presence being one archaeologist supervising the activities of one excavating machine. In the event of the discovery of archaeological remains, the watching brief archaeologist would have the authority to suspend work while the archaeological remains are recorded.
- 5.11.3 In the event of the discovery of significant archaeological remains, such as human remains, or where the recording of archaeological features would require a suspension of work in excess

of one hour, the watching brief archaeologist would inform the Project Archaeologist, who would arrange for an extension to the suspension of works with the Environmental Clerk of Works.

5.12 Topsoil translocation

5.12.1 In substantial areas the topsoil would be stripped and used elsewhere, principally for restoration of agricultural land beneath areas that had been re-shaped by new earthworks as part of the necessary landscape mitigation. As the topsoil used for restoration could contain archaeological artefacts, this action could create a new, biased archaeological record by confusing the artefactual contents of two or more quite distinct areas. In order to prevent this confusion, areas where topsoil is to be removed would be fieldwalked (Section 5.4) and then mapped by archaeologists, and the ultimate placement of the topsoil also mapped, so that future researchers would be aware of those areas where artefacts may have become mixed.

5.13 Re-siting of milestones

5.13.1 At locations where construction activities would coincide with the positions of Listed milestones, these would be protected from damage, removed, and stored safely while construction takes place. Once construction has been completed at each location, each milestone would be repositioned as close as possible to its position prior to construction. The milestones are not currently in their original positions. Listed Building Consent would be obtained for each milestone prior to its removal. These milestones are marked on drawings P1A/ENV/ACH/MIT/01, Sheets 1 to 8.

5.14 Treatment of scheduled monuments

5.14.1 As stated above all archaeological sites of national importance would be preserved in situ. Those which fall within the trace would be protected. These include:

- Site 20A: an enclosure which lies either side of the current A303. This would be excluded from any works.
- Site 21: a (hengiform) ring ditch which would be fenced and avoided by all activity within the Construction Compound.
- Site 26A: Winterbourne Stoke Long Barrow. Part of the scheduled area of this monument lies under the A360; however the road itself is not included in the schedule. Removal of the A360 at this point would not impact archaeological remains, however Scheduled Monument Clearance would be sought for activities in this area.
- Site 37, a ploughed-out round barrow, lies approximately 400m to the west of the western tunnel portal. This site would be preserved in situ at the southern edge of the cutting.
- Site 41: a long barrow beside the A303. This would be excluded from all works. The tunnel would pass 7m below it but would not impact upon it.
- Site 50: The Avenue at the point it is crossed by the A344. The A344 would be closed and the ground re-instated without impact upon the archaeological remains. Scheduled Monument Clearance would be sought for activities in this area.
- Site 70: The Avenue where it is crossed by the current A303. Here, there would be no impact upon buried remains.
- Site 64: the ground would be reinstated next to a round barrow. Scheduled Monument Clearance would be sought for activities in this area.

- in addition, the eastern portal excavations would be adjacent to a round barrow (Site 67). Scheduled Monument Clearance would be sought for activities in this area.

5.14.2 Other scheduled sites lie immediately beside the trace, and although there would be no direct impacts upon them, discussions would be held with EH to ensure that Scheduled Monument Clearance would be sought for these sites if required. These sites include Site 49 (the Heel Stone), Site 51 (a round barrow adjacent to the A344) and Site 42 (round barrows adjacent to the western tunnel portal).

5.15 Unforeseen archaeology

5.15.1 There is a possibility of uncovering archaeological features of an unexpected nature during the removal of topsoil or other soils within the site. In the event of a feature of possible interest not covered by a Written Scheme of Investigation being discovered during excavation, the Project Archaeologist (who would be based on-site throughout the construction period) would ensure that:

- All topsoil stripping or other excavation works near the feature of possible interest would be immediately ceased.
- The Environmental Clerk of Works and the Employer's Archaeological Advisor would be immediately informed so that a decision could be made regarding the importance of the find.
- Temporary fencing would be erected around the area of interest as defined in consultation with the Environmental Clerk of Works and the Employer's Archaeological Advisor to allow representatives of EH safe access to the Site.

Following discussions on site, a WSI would be produced for agreement.

5.16 Sequence for mitigation

5.16.1 It is currently anticipated that archaeological mitigation of stripping within the trace would commence immediately upon start of the project. Work programmes for Earthworks Mitigation areas and the removal of the A303 and A344 would be agreed at that time.

5.17 Intervention map – see Drawings P1A/ENV/ACH/MIT/01- Sheets 1- 8

5.17.1 In order to assist in the programming of construction works and provide a rapid reference system for employees of the Balfour Beatty-Costain JV (BBCJV) responsible for construction operations in individual sections of the Scheme, an intervention map would be prepared. This would identify all areas along the route where archaeological mitigation and/or further investigation is required, including areas affected by temporary or off-line works. The nature of the archaeological works would also be identified on the intervention map.

Table 4 – Summary of Mitigation Proposals by Construction Activity

Construction activity	Topsoil	Chalk	Direct Impacts	Mitigation
Earthworks Mitigation	Topsoil removed, subsoil left in place	Left in situ	None	Watching brief on removal of topsoil to ensure that chalk is not exposed.
	Topsoil and subsoil removed	Left in situ		Strip-Map-Protect
Road Trace: Structures and structural embankments	Excavated	Excavated – to provide a proper foundation to the embankment	Destruction of archaeological artefacts/features	Excavate known and identified 'Sites' Strip-Map-Excavate
Road Trace: Cuttings	Excavated	Excavated	Destruction of archaeological artefacts/features	Excavate known and identified 'sites' Strip-Map-Excavate
Services	Excavated	Excavated	Direct impact – destruction of archaeological artefacts / features	Watching Brief

6 General Written Scheme of Investigation

6.1 General Methodology

6.1.1 This section sets out the general methodology that would apply to the excavation and recording of archaeological remains in the field and to post-fieldwork including archive preparation. The same standards and practices would be applied to all archaeological remains, whether these are encountered during archaeological excavation, strip map and excavate on any part of the route. Watching briefs would follow the standards set out below, however these would be carried out on the basis of a written instruction, and would not require a WSI.

6.1.2 A separate WSI would be prepared for each area of investigation. Each WSI would provide details of the proposed approach where this differs from the general mitigation strategy outlined below. Each site or section of the route addressed by a WSI would be identified by reference to the Chainage at which it is located and displayed on an overall scheme plan. Reference would also be made to the Archaeological Areas identified in the *Archaeological Appraisal* (Mott MacDonald 2001), where relevant. The methodology for archaeological recording would follow that set out below, but appropriate variations or refinements may be proposed where relevant. Each WSI would contain as a minimum:

- A plan showing the location of the area(s) to be mitigated and identifying areas proposed for preservation *in situ* and areas proposed for archaeological fieldwork, related to the intervention map.
- A summary of the known archaeological resource and the predicted impact of road construction.
- A rationale for the proposed mitigation method(s) including how these works might contribute to the Issues and Objectives identified in the Stonehenge WHS Research Framework
- Section-specific aims and objectives where appropriate.
- Appropriate variations or refinements to the archaeological recording methodology set out below in Section 6.7, where relevant.
- An estimate of the resources (staff numbers, grades and hours) required to undertake the proposed fieldwork and post-excavation assessment analysis.
- A provisional programme for the proposed fieldwork, from instruction to release of the affected area for construction.

6.2 Standards

6.2.1 All works would be undertaken in accordance with the appropriate professional standards, in particular:

- The Institute of Field Archaeologists, *Code of Conduct* (1999).
- The Institute of Field Archaeologists, *Standards and Guidance for Archaeological Watching Briefs* (1999).
- The Institute of Field Archaeologists, *Standards and Guidance for Archaeological Excavations* (1999).
- The Institute of Field Archaeologists, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (1999).

- The Institute of Field Archaeologists, Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials (2001).
- Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. (EH, 2002).
- MAP 2 (EH, 1991).

6.3 Permissions and notifications

- 6.3.1 Some indirect effects on the context setting of scheduled monuments, including Stonehenge, would arise during construction, and in some circumstances may continue into operation but such effects would not require Scheduled Monument Clearance.
- 6.3.2 Where Scheduled Monument Clearance would be required, as described in Section 5.14, this would be sought from EH at the earliest opportunity following the award of contract.
- 6.3.3 Where Listed Building Consent is required for the removal of milestones during construction, this would be sought from the Salisbury District Council Conservation Officer at the earliest opportunity following the award of contract.
- 6.3.4 In the event of the discovery of human remains, the Environmental Clerk of Works and the Employer's Archaeological Advisor would be notified as soon as possible. The Project Archaeologist would seek a Home Office licence for the removal of human remains. Further excavation and recording would be carried out in accordance with the conditions of this licence (see also Para 6.15.1).
- 6.3.5 All archaeological mitigation measures would comply fully with the Treasure Act 1996.

6.4 Health and Safety

- 6.4.1 All work would be carried out according to the Health and Safety Management Plan, which would be contained within the Project Management Plan.

6.5 Mechanical excavation

- 6.5.1 In areas identified for archaeological excavation or strip and record, topsoil and overburden would be removed using a 360° excavator fitted with a toothless bucket, working under the continuous direct supervision of one or more suitably experienced archaeologists.
- 6.5.2 Spoil would be removed from the site by dump-truck to stockpile locations identified by the main contractor. Dump-trucks and other plant would not be permitted to track across stripped areas unless these have been declared clear of archaeological remains and the appropriate certificate of release issued by the Employer's Archaeological Advisor. Plant would operate in defined and clearly marked haul routes that had either been declared clear of archaeological remains by the Employer's Archaeological Advisor or where archaeological remains had been appropriately protected from damage. Topsoil and modern overburden would be removed in a series of level spits down to the top of the first significant archaeological horizon.

6.6 Hand excavation: Excavation and Strip-Map-Excavate

- 6.6.1 All surfaces and features of whatever origin requiring clarification would be cleaned by hand and recorded in plan at an appropriate scale (Table 5). All features of probable archaeological origin would be investigated by hand in accordance with a sampling strategy to be described in detail by means of specific WSIs.

Table 5 – Summary of Hand Excavation strategy

Feature	Excavation Strategy
<u>Linear features</u>	
Field boundaries/land divisions	Excavated sections to include 50% of all terminals, intersections and other relationships Excavation of 10% of selected lengths for finds recovery may be undertaken subsequently.
Structural components	Excavation, recorded sections to include all terminals, intersections and other relationships. Minimum excavation 50% of all features
Human remains	100% Excavation
Discrete features	Minimum 50 % hand excavation
Pits	Minimum 50 % hand excavation
Post-holes	Minimum 50 % hand excavation
Tree hollows	All to be recorded in plan, 10% to be excavated in half-section
<u>Horizontal deposits</u>	
Layers/spreads/ stratified deposits/colluvium	Excavation recorded in running sections, half sections or on a grid system and excavated in spits, as appropriate
Artefact scatters	Excavation recorded in running sections or on a grid system, with 3-D recording of probable <i>in-situ</i> finds assemblages, as appropriate

6.7 Recording

- 6.7.1 All archaeological features and deposits encountered during the mitigation measures would be recorded using the Wessex Archaeology *pro forma* recording sheets and a continuous unique numbering system, where appropriate. Plans at appropriate scales would be prepared, showing the areas investigated and their relation to more permanent topographical features. The plans would show the location of contexts observed and recorded in the course of the investigations. Other plans, sections and elevations of archaeological features and deposits would be drawn as necessary at 1:10, 1:20 and 1:50 as appropriate. All drawings would be made digitally or by hand in pencil on permanent drafting film. The spot height of all principal features and levels would be calculated in metres relative to Ordnance Datum, correct to two decimal places. Plans, sections and elevations would be annotated with spot heights as appropriate. Photographs would be taken as necessary to produce a photographic record consisting of monochrome prints and colour transparencies. Digital images may be taken to support report preparation but would not replace archive standard material.
- 6.7.2 Following hand-excavation and recording according to the procedures specified in 6.6.1, Table 5 and 6.7.1 above, it may be necessary to excavate further, substantial archaeological features using a mechanical excavator. Mechanical excavation of features would take place only with the agreement of the Employer's Archaeological Advisor, EH, the NT and WCC.

6.8 Finds collection

- 6.8.1 Objects relating to human exploitation of the area that are exposed in the course of excavation would be recovered or, where recovery is impracticable, recorded. All finds would be recorded by context and significant objects would be recorded in three dimensions. All recovered objects would be retained unless they are undoubtedly of modern or recent origin.

The presence of modern objects would, however, be noted on context records. In these circumstances sufficient material would be retained to elucidate the date and function of the deposit from which it was recovered. Animal bone samples would be recovered by hand during excavation and processed as part of the finds assemblage. Animal bone recovered from bulk soil samples would also be retained for analysis. Burnt flint, because of the high volumes expected to be recovered and the limited information intrinsic in the material, would be analysed but not retained for museum deposition.

6.9 Finds treatment

- 6.9.1 All finds would be processed according to procedures set out in Wessex Archaeology's policies and guidelines on finds analysis, environmental sampling and archive preparation, and in accordance with the Institute of Field Archaeologists' guidelines. All artefacts would, as a minimum, be washed, marked, counted, weighed and identified. Spot dating of finds would be undertaken during the course of the fieldwork in order to inform excavation strategy. Provision would be made for liaison with external finds specialists, including site visits, as appropriate.
- 6.9.2 Objects that require immediate conservation treatment to prevent deterioration would be treated according to guidelines laid down in *First Aid for Finds* (Watkinson, D. & Neal, A. V., 1998). The Wiltshire County Council Conservation Centre, Salisbury, where appropriate, would carry out further conservation of any artefacts. Full records would be made of any conservation treatment; these records would form part of the archive. Provision would be made for the on-site conservation of particularly fragile or unstable materials, including attendance by a specialist conservator, as appropriate. Specialist work on any metalwork, bone (including worked bone, human remains and other organic remains), industrial waste, ceramic material, glass and lithic material would be carried out as necessary. All metalwork would be X-rayed and stored in a stable condition along with other fragile and delicate material.

6.10 Environmental sampling

- 6.10.1 Provision would be made for the bulk sampling of appropriate archaeological deposits recorded during the investigation for artefactual, economic and environmental data.
- 6.10.2 The environmental sampling strategy would take account of the *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation* (EH/2002). Bulk environmental soil samples of 30 litres would be taken from sealed archaeological features for plant macrofossils, small animal bones and small artefacts. Where the complete context volume is less than 30 litres, a 100% sample would be taken. Where appropriate, column and/or spot samples for analysis of molluscan, pollen and other microfloral/faunal remains would be taken.
- 6.10.3 A high priority would be given to the sampling of anaerobic deposits such as alluviums or peats where organic materials may be preserved. If possible, a single monolith column sample would be taken through any medieval or earlier alluvial deposits present at the site for micro-morphological analysis. Bulk environmental samples would be collected from any peat or organic deposits present.
- 6.10.4 Bulk samples (including artefact samples) would be processed by standard flotation methods at Wessex Archaeology's offices at Old Sarum Park, Salisbury. Flots would be retained on a 0.5 mm mesh and the residues fractionated into 4 mm, 2 mm and 1 mm fractions and dried. The coarse fractions (>4 mm) would be sorted, weighed and discarded; any artefacts or animal bone would be extracted and retained. The flots would be scanned under a x10 - x30 stereo-binocular microscope and the presence of charred remains quantified, to record the preservation and nature of the charred plant and charcoal remains.

6.10.5 Recognised specialists would assess the survival and potential of palaeo-environmental evidence. The same specialists would also be retained to undertake further analysis, where relevant. Provision would be made for the processing and assessment of environmental samples during the course of the fieldwork, in order to inform the excavation strategy.

6.11 Samples for dating

6.11.1 A suitable specialist would make provision for archaeomagnetic dating of suitable deposits. Samples of suitable material would be retained for radiocarbon dating where contexts cannot be closely dated by artefactual or other means.

6.11.2 Analysis of finds and environmental samples would be undertaken to a level commensurate with the aims and objectives of the investigation as set out in this document and in individual WSIs. This would normally be to the Wessex Archaeology Data Level 3 (assessment, comprising scanning and, where relevant, identification of potential for further analysis). For environmental samples, assessment would aim to provide a record of the presence and quantity of remains (microflora, faunal or charred), which would allow identification of potential for further analysis where relevant. OSL (Optically Stimulated Luminescence) dating would be carried out on suitable colluvial sequences.

6.12 Feedback during fieldwork

6.12.1 The initial processing of finds and samples would proceed in parallel with site investigations, allowing information generated (e.g. dating, or palaeo-botanical remains) to be communicated back to site and allow site excavation/recording strategies to be modified accordingly.

6.13 Assessment reports

6.13.1 Following completion of the fieldwork stage for any specified archaeological mitigation investigations, an assessment report would be prepared within an agreed time period. The assessment report(s) would be prepared in accordance with the standards set out in Appendices 4 and 5 of MAP2 (EH 1991). The assessment report(s) would present detailed proposals for further analysis, report production, publication and archiving, along with the strategies, resources and programme necessary to carry out such work.

6.13.2 An assessment of the potential of the archive (including the archive from earlier stages of investigation and fieldwork) for further analysis would be undertaken. The assessment phase may include the following elements:

- The conservation of appropriate materials, including the X-raying of metalwork.
- The spot-dating of all pottery from excavated contexts: this would be corroborated by scanning of other categories of material.
- The preparation of site matrices with supporting lists of contexts by type (ditch fill, pit fill etc.), by spot-dated phase (Late Bronze Age, Roman, Saxon etc.) and by structural grouping (e.g. contexts by pit, by ditch etc.), supported by appropriate scaled plans.
- An assessment statement would be prepared for each category of material, including reference to quantity, provenance, range and variety, condition and existence of other primary sources.
- The selection and prioritisation of bulk soil samples taken for artefactual, economic, environmental and dating purposes in the light of preliminary phasing: sieving, processing and scanning of selected soil samples would be undertaken and an assessment statement would be prepared by appointed specialists.

- A statement of potential for each material category and for the dataset as a whole would be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national research priorities.

6.13.3 The assessment report(s) would contain, as a minimum:

- A non-technical summary.
- A discussion of the archaeological and planning background to the project.
- An outline description of the aims of the excavation and the methodology used in order to achieve these aims.
- Specialist assessment reports.
- A summary of the archive contents.
- A site location plan at an appropriate scale.
- Proposals for the preparation of an academic report commensurate with the significance of the data recovered, for publication in an appropriate forum.

6.13.4 The results would be presented in such a way that there would be no need for recourse to the archive. Draft copies of the report(s) would be supplied to the Employer's Archaeological Advisor and the monitors for comment, before finalisation.

6.14 Procedures for monitoring and certification

6.14.1 Monitoring of site works would consist of two stages:

6.14.2 Regular site meetings (when required) to discuss specific site issues, and to agree variations to excavation/sampling/artefact collection strategies, with reference to the general strategy outlined above. The Project Archaeologist, the Environmental Manager, the Environmental Clerk of Works, Contractor's representative, the Employer's Archaeological Advisor, EH, the NT and WCC would be invited to attend these meetings.

6.14.3 Monthly meetings on-site to discuss progress, the perceived effectiveness of the mitigation strategy within the context of the scheme as a whole, and to discuss and agree changes in strategy where this would benefit the archaeological resource impacted directly by the scheme, or the value of the recording exercise. These meetings would act as a continuation of the established Archaeology Meetings, and the Project Archaeologist, the Environmental Manager, the Environmental Clerk of Works, Contractor's representative, the Employer's Archaeological Advisor, EH, the NT and WCC would be invited to attend. The organisational structure during the construction phase is shown in Section 7.

6.14.4 The attendees would be provided with a summary of progress and issues arising no later than five days prior to each monthly site meeting. Where specific weekly site meetings are required, all pertinent information would be made available to the Scheme consultees at the earliest opportunity.

6.14.5 Each of the areas defined for archaeological mitigation are shown on the Archaeological Intervention Map (Section 5.17). Construction would not commence in these areas until the archaeological mitigation measures specified in the site-specific WSI had been completed and signed-off by the Employer's Archaeological Advisor.

6.15 Publication, dissemination and access

6.15.1 The Project Archaeologist would liaise with the Public Liaison Officer in the production of a Project Community Liaison Plan, and would contribute to the presentation of the results of

the archaeological investigations. It is anticipated that this would accommodate the reasonable requests of Druid representatives.

6.15.2 Detailed publication in an appropriate form is anticipated in due course. It is anticipated that this report would be available within three years of the completion of the principal investigations.

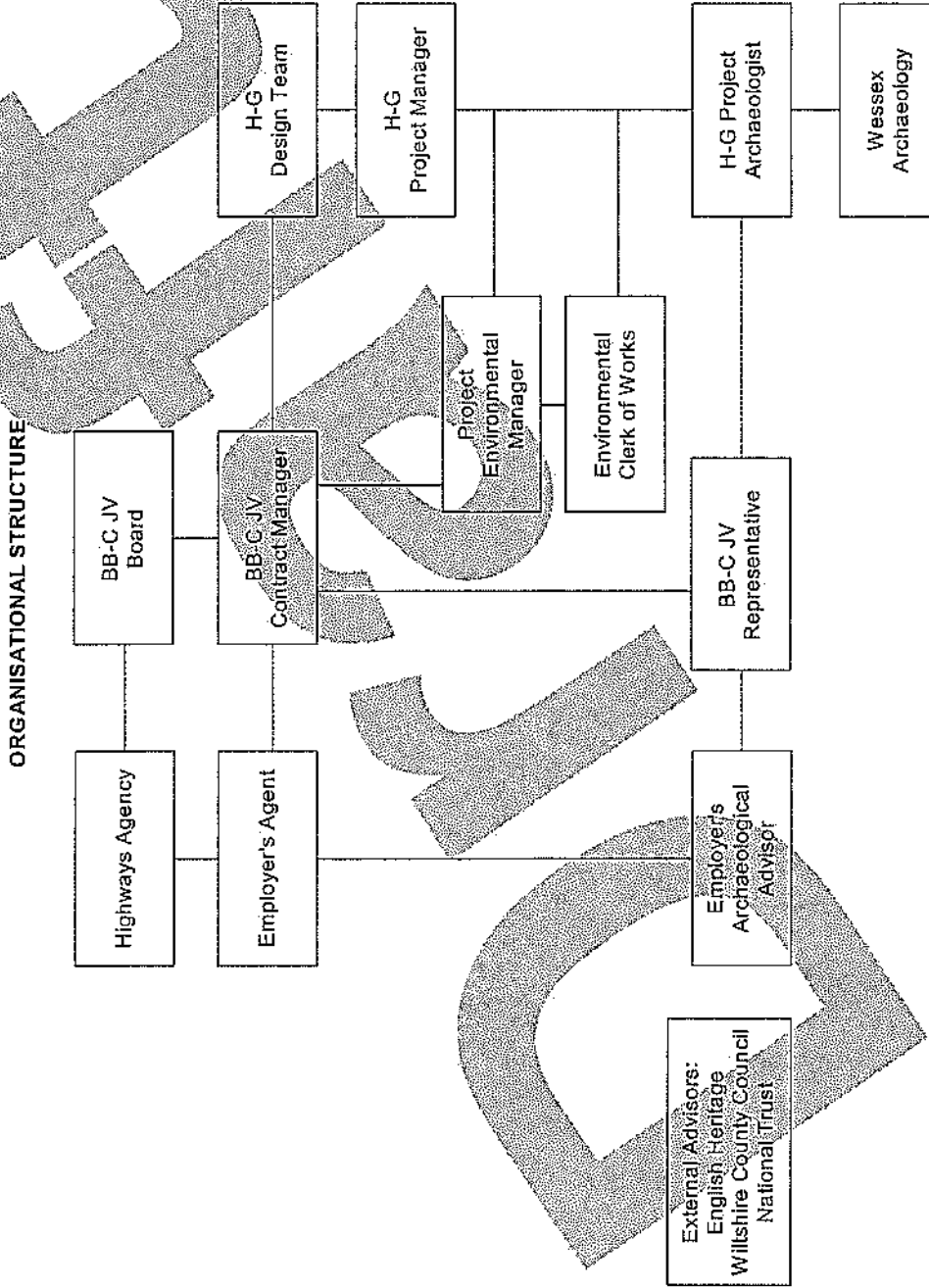
6.15.3 In addition to an academic report, it is anticipated that a separate publication would be produced for public consumption, in advance of the detailed report, as now required by the Highways Agency.

6.16 Archive

6.16.1 Agreement has or would be reached with the land-owners (who would therefore also own artefacts discovered on their land) for both artefacts and other archived material to be deposited with the recipient museum. It is recommended that provision be made for some materials to be displayed in the new Stonehenge Visitor's Centre (if this proceeds). Following acquisition of land, artefacts would be owned by the HA, who commit to the archive being prepared in accordance with appropriate professional standards, and deposited with the recipient museum.

7 Organisational Structure

Each party is answerable to different employers as detailed in the diagram. English Heritage, Wiltshire County Council and the National Trust are independent from the Highways Agency Structure.



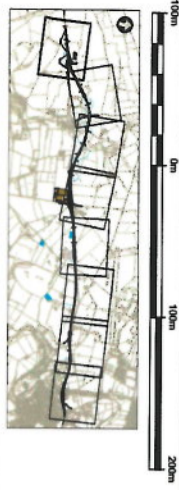
8 Conclusion

- 8.1.1 The Scheme would provide many benefits to Stonehenge and the monuments that surround it. Although no nationally important archaeological sites would be impacted directly by the Scheme, it is inevitable that some archaeological remains would be adversely affected and it is an objective of the Scheme that any such impacts should not occur needlessly. Where possible, archaeological remains would be preserved in situ for future generations. However, where this is not possible the strategy described in this document would ensure that those remains are treated with due care and respect, as befits a World Heritage Site and its surrounding landscape. The proposed mitigation measures present a unique opportunity to study the development of the landscape around Stonehenge, and would add much to the existing body of knowledge.

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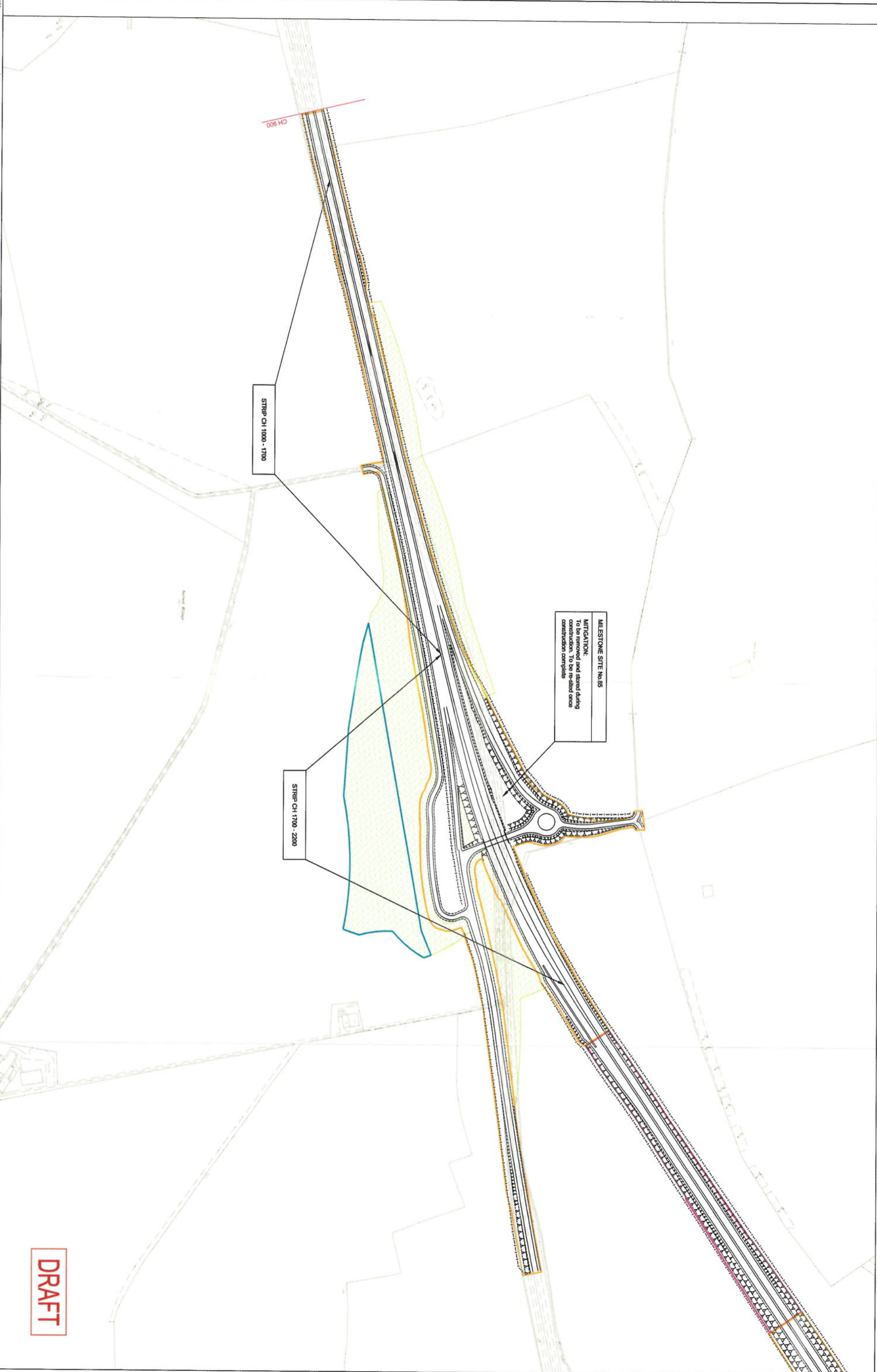
9 References

- Cleal, R.M.J., Walker, K. E., Montague, R. (Eds.) 1995. *Stonehenge in its Landscape*. EH. London.
- Cunliffe B., Renfrew C. (Eds.) 1997. *Science and Stonehenge*. OUP/British Academy. Oxford
- Darvill, T. 2002. *Stonehenge World Heritage Site – Archaeological Research Framework. Version 2*. : EH and Bournemouth University. Online at <http://cswb.bournemouth.ac.uk/consci/stonehenge> (as at 26/01/04)
- English Heritage, 2000. *Stonehenge World Heritage Site Management Plan*. EH. London.
- English Heritage 2002. *Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation*. EH. London
- English Heritage, 1991, Management of Archaeological Projects, 2nd edition.
- The Institute of Field Archaeologists, 1999. *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*
- The Institute of Field Archaeologists, 1999. *Code of Conduct*
- The Institute of Field Archaeologists, 1999. *Standards and Guidance for Archaeological Excavations*
- The Institute of Field Archaeologists, 1999. *Standards and Guidance for Archaeological Watching Briefs*
- The Institute of Field Archaeologists, 2001. *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*
- Richards, J. 1990. *The Stonehenge Environs Project*. EH. London.
- Watkinson, D. & Neal, A. V., 1998. *First Aid for Finds*. RESCUE/UKIC Archaeology Section. London.



KEY

- ARCHAEOLOGICAL EXCAVATIONS
Controlled topsoil strip, excavate and record (based on OS mapping)
- AREA OF CONTROLLED TOPSOIL STRIP AND STRIP-MAP-EXCAVATE
Map record (based on OS mapping)
- AREAS OF LANDSCAPING
To be removed and stored during construction. To be re-installed once construction complete
- INDICATIVE AREAS OF LANDSCAPING TO BE FIELDWALKED

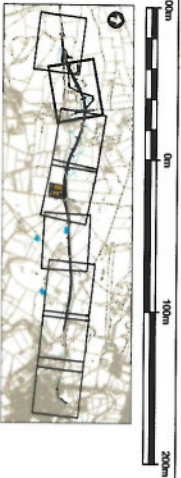


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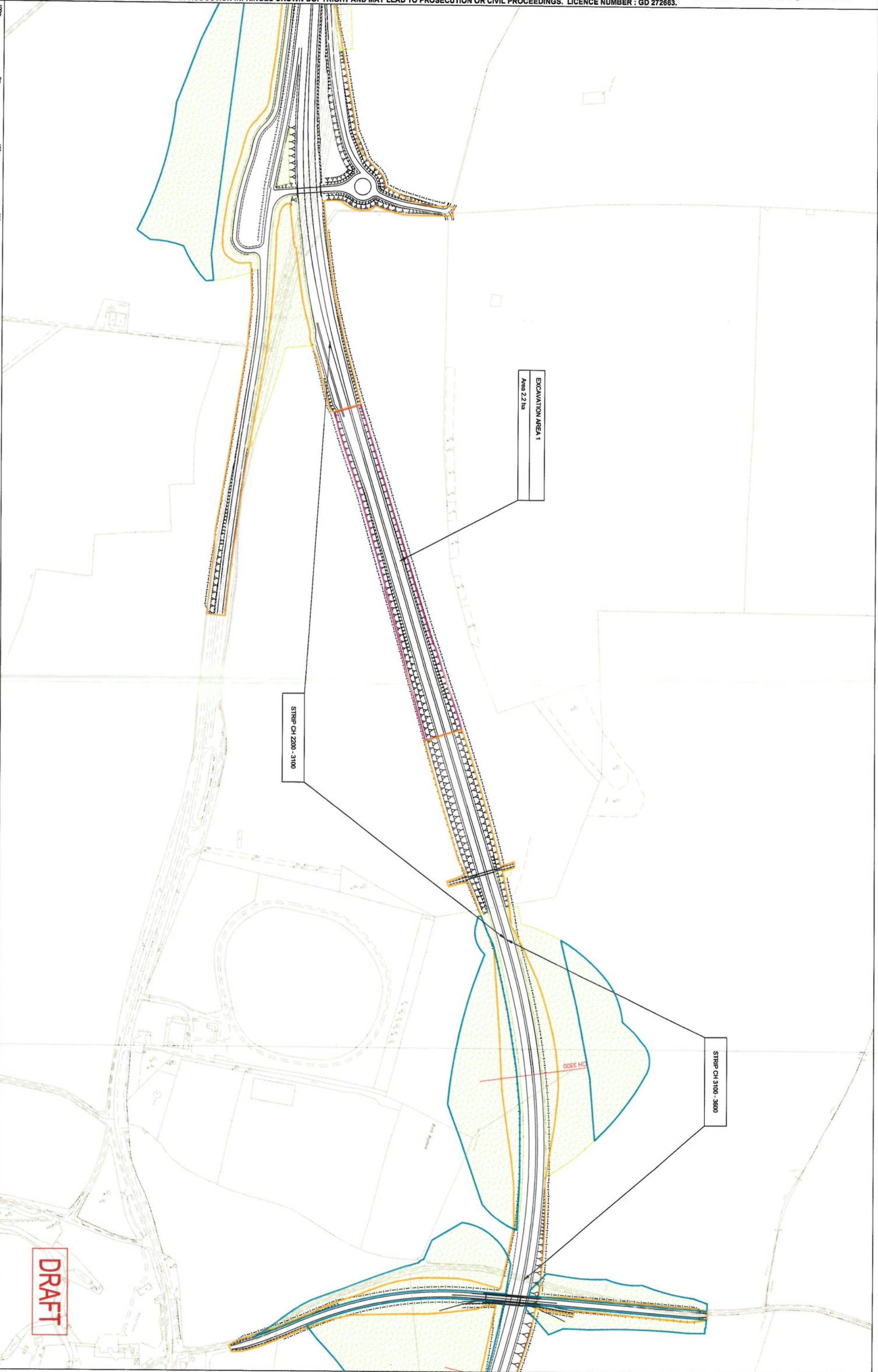
STRIP CH 1700 - 2200

MILESTONE SITE No.85
MITIGATION:
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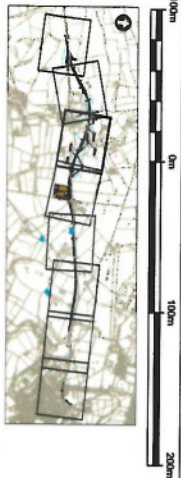
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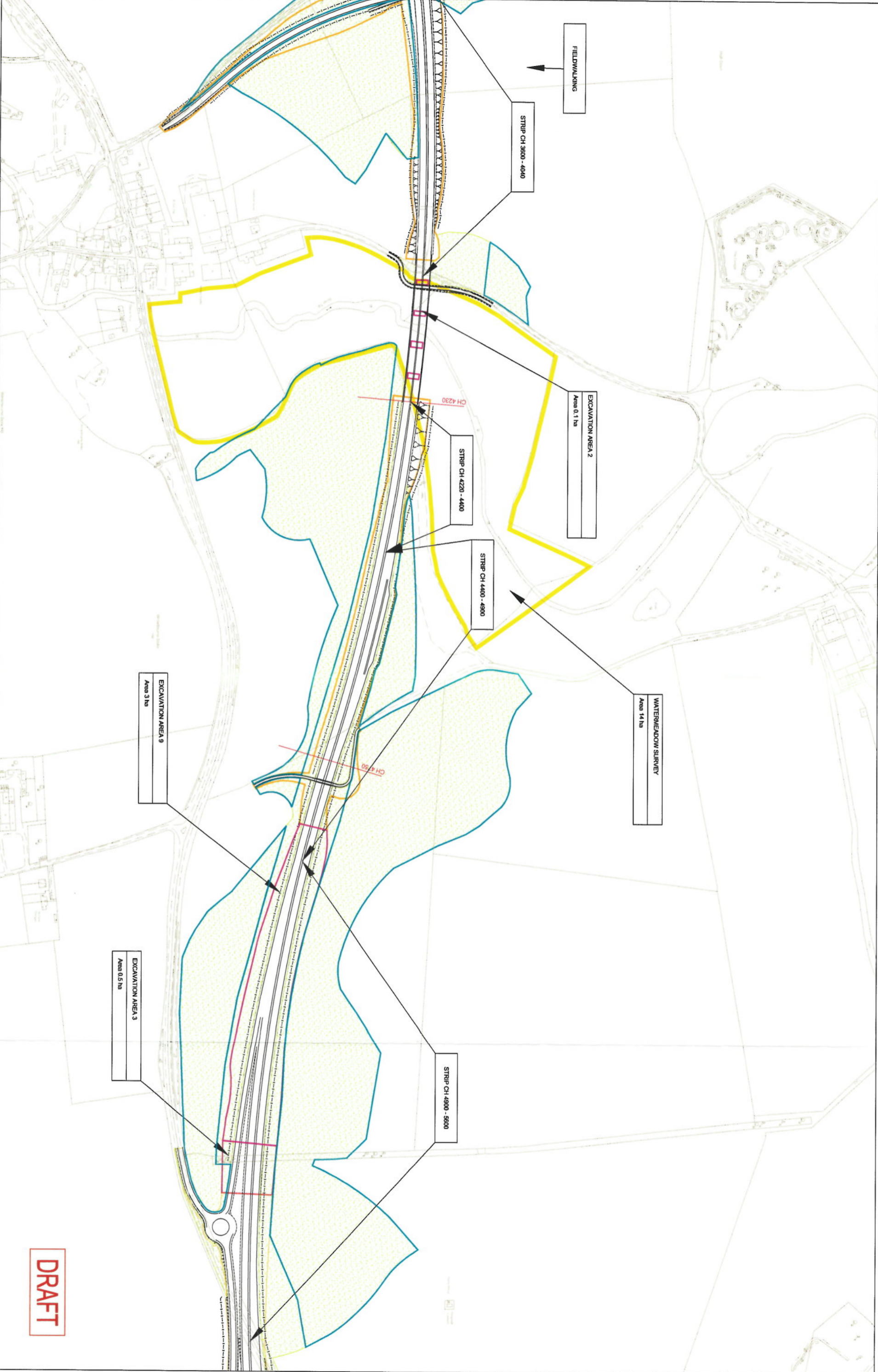


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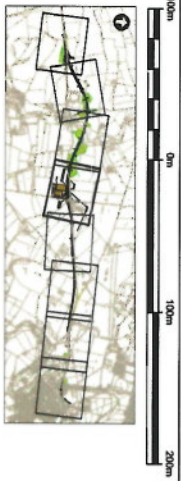


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Relict Water Meadows
- INDICATIVE AREAS OF LANDSCAPING TO BE FIELDWALKED

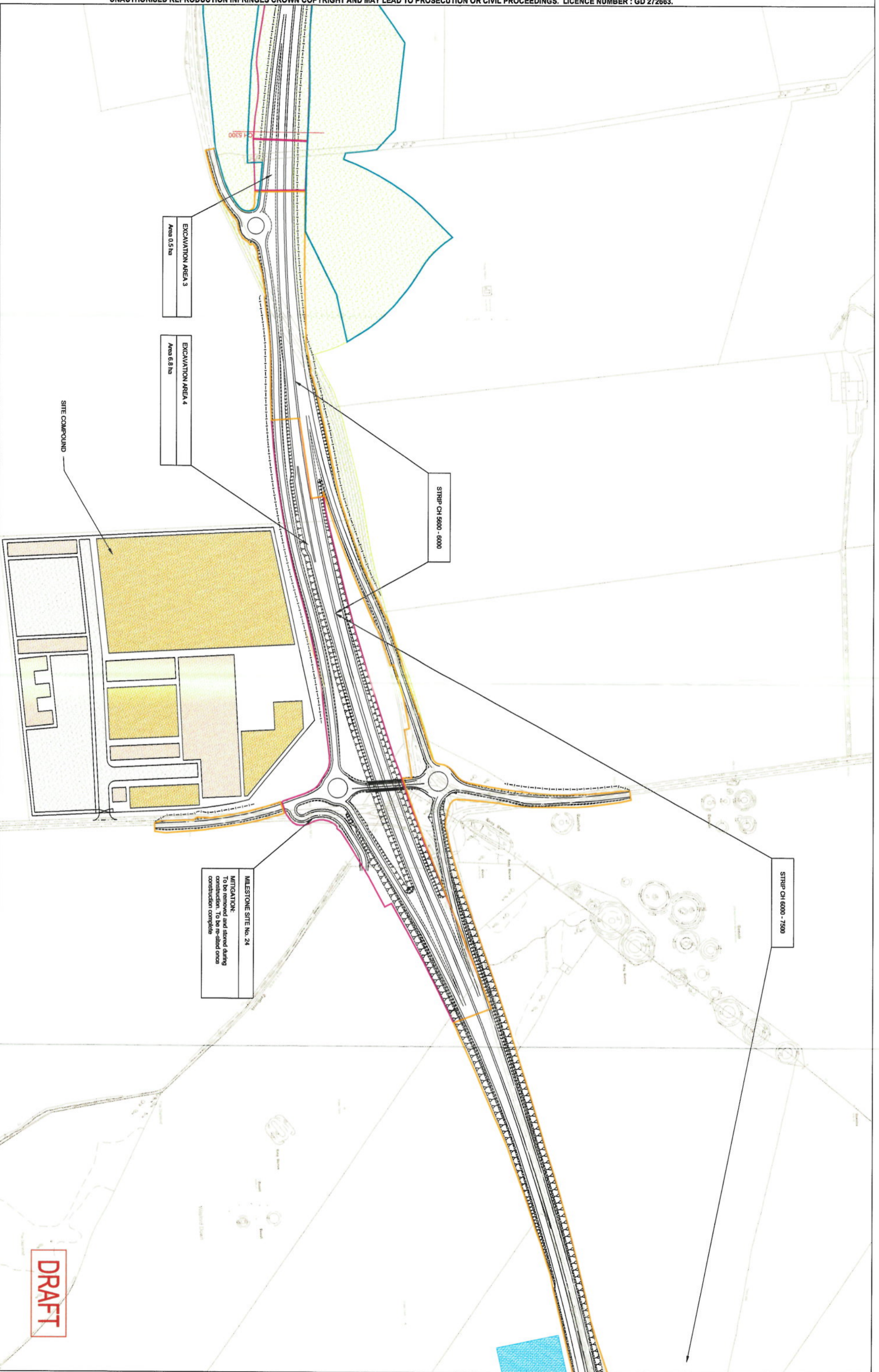


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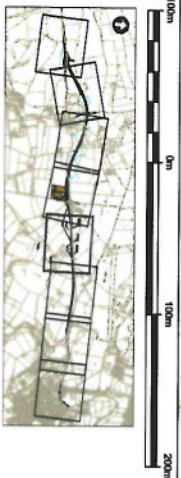


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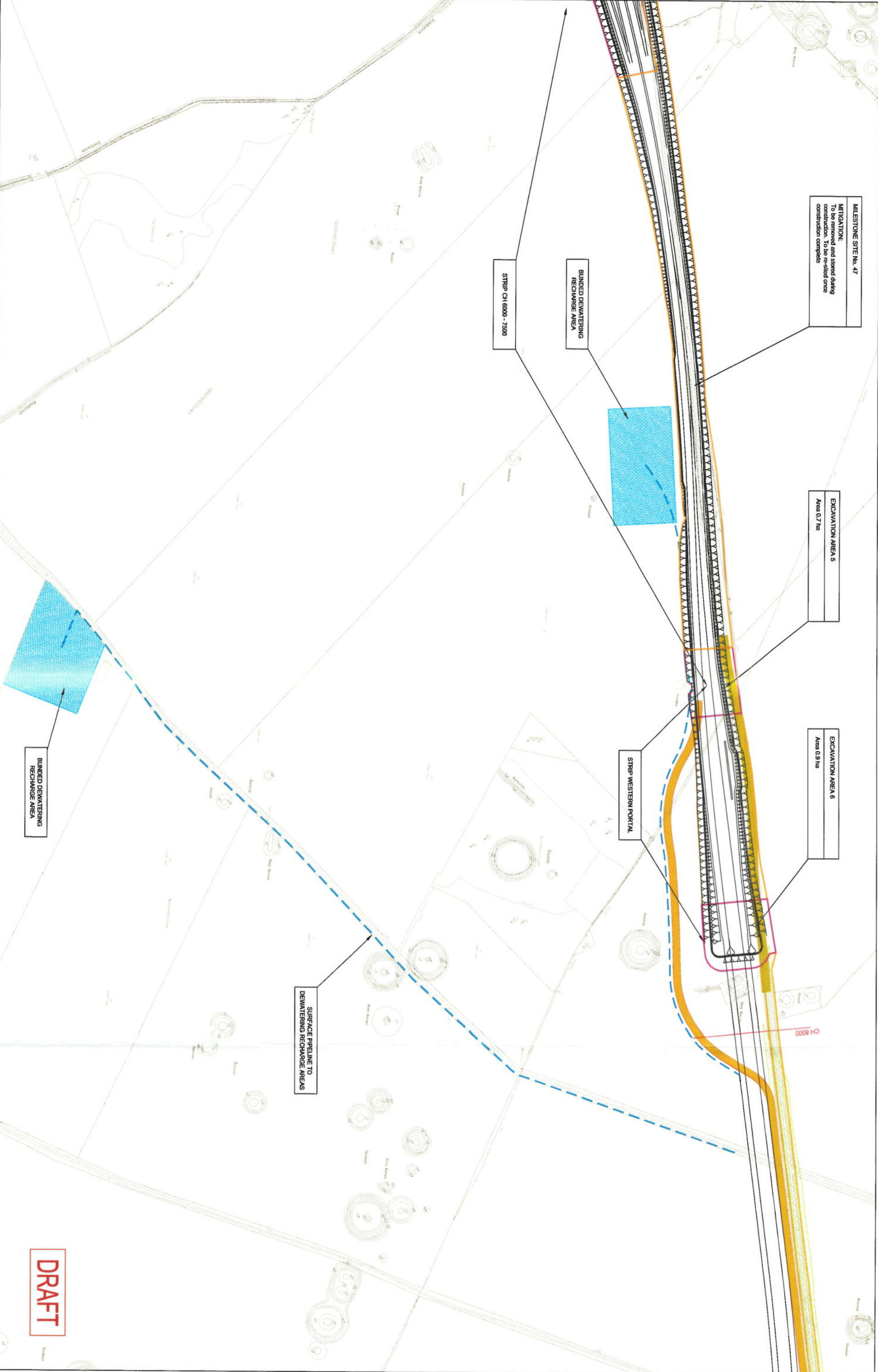
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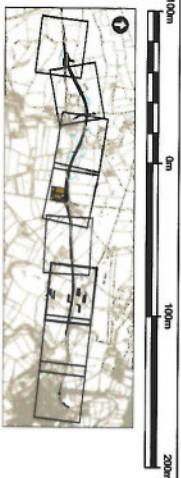
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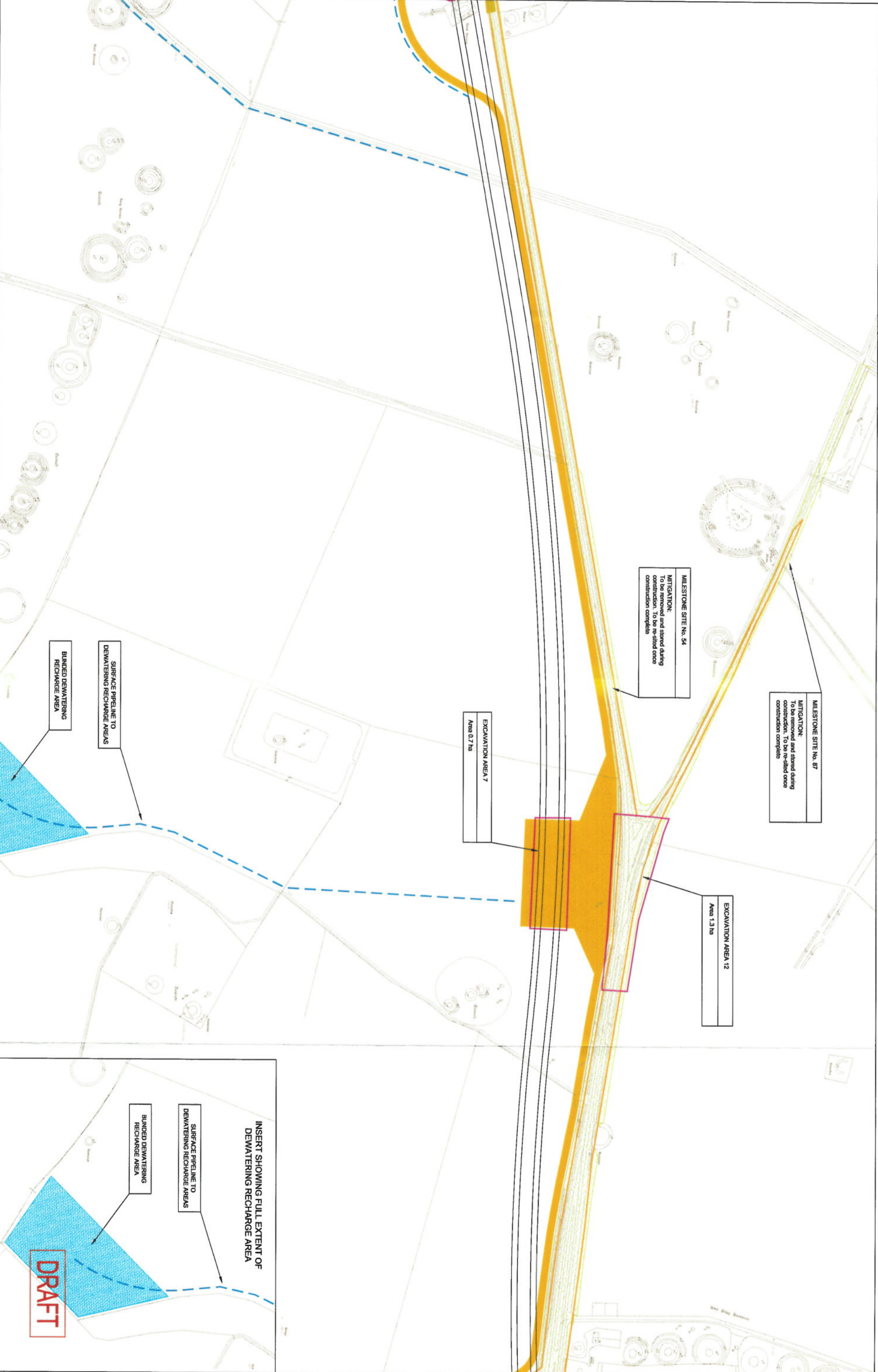
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 - INDICATIVE AREAS OF LANDSCAPING TO BE FIELDWALKED
 - TEMPORARY HAUL ROUTE
 - TEMPORARY DIVERSION OF A303



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- KEY**
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 - TEMPORARY HAUL ROUTE
 - TEMPORARY DIVERSION OF A303

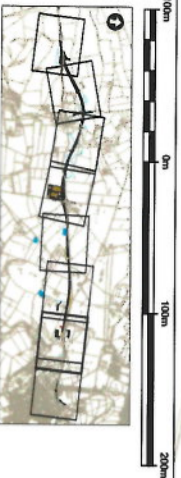


INSERT SHOWING FULL EXTENT OF DEWATERING RECHARGE AREA

SURFACE PIPELINE TO DEWATERING RECHARGE AREAS

BUNDED DEWATERING RECHARGE AREA

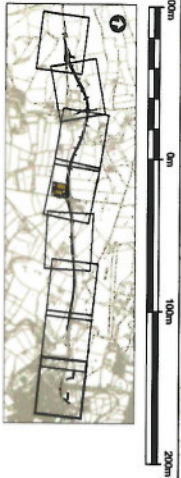
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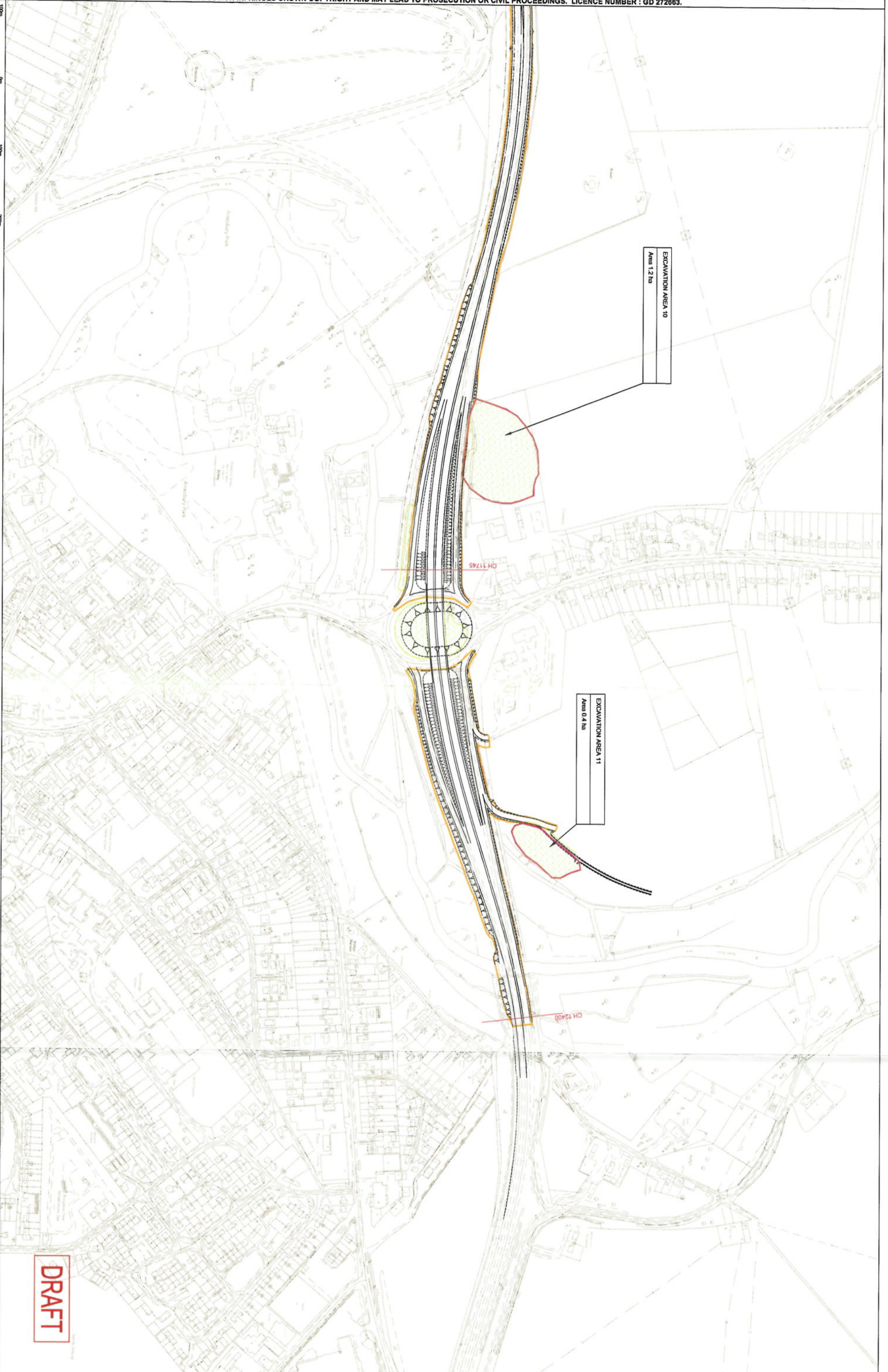


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EXCAVATION AREA 10
Area 1.2 ha

EXCAVATION AREA 11
Area 0.4 ha

CH 11745

CH 12400

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