



Longfield Solar Farm

Wheeler's Hill and Cranham Road Ecology Survey

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1 Introduction

- 1.1.1 AECOM was instructed by Longfield Solar Energy Farm Ltd to undertake an Ecological Walkover Survey of the 'Wheeler's Hill and Cranham Road land' that is included within the Order limits for the proposed Longfield Solar Farm (the 'Scheme'). Further information on the Scheme is provided in **Chapter 2: The Scheme of the ES [EN010118/APP/6.1]**.
- 1.1.2 Minor carriageway widening within the highway boundary is proposed along Wheeler's Hill and Cranham Road (a total 3km length of road) to facilitate access to the Scheme from the east off the A130 (see Figure 1). Due to potential ecological constraints as a result of this proposed widening work an Ecological Walkover Survey was undertaken on the Wheeler's Hill and Cranham Road land on 17th May 2022. This comprised a Phase 1 Habitat survey and appraisal for protected species.
- 1.1.3 This report should be read in conjunction with the main **Preliminary Ecological Appraisal (PEA) of the Scheme [EN010118/APP/6.2]**.

2 Method

2.1 Desk Study

- 2.1.1 A review of relevant desk study information provided in the **PEA of the Scheme [EN010118/APP/6.2]** was undertaken for designated sites and protected/notable species.

2.2 Phase 1 Habitat survey

- 2.2.1 The Phase 1 Habitat survey was undertaken on 17th May 2022 in accordance with the standard survey method¹. Phase 1 Habitat survey is a standard method of environmental audit involving categorising different habitat types and habitat features within the Wheeler's Hill and Cranham Road land. The information gained from the survey was used to determine the likely ecological value of the Wheeler's Hill and Cranham Road land, and to direct any more specific survey work which may need to be carried out prior to the determination of the DCO. The standard Phase 1 Habitat survey method was extended to record target notes on protected, notable and invasive species.

2.3 Appraisal of the potential suitability of habitats for protected and notable species

- 2.3.1 An appraisal was made of the potential suitability of the habitats present to support protected and notable species of plants or animals (as defined by

¹ Joint Nature Conservation Committee (2010) Handbook for Phase 1 habitat survey: A technique for environmental audit.

legislation and planning policy in Section 2 of the PEA [EN010118/APP/6.2]). Field signs, habitat features with potential to support protected species and any sightings or auditory evidence were recorded when encountered, but no detailed surveys were carried out for any particular species.

- 2.3.2 In addition, specific attention was given to identifying instances of invasive non-native plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and those “widespread species” listed in the Invasive Alien species (Permitting and Enforcement) Order 2019. Locations of plants or stands of any such invasive non-native plant species, if found, were recorded.
- 2.3.3 This report identifies further requirements for species surveys based on the results of this survey.

2.4 Survey limitations

- 2.4.1 Where habitat boundaries coincide with physical boundaries recorded on Ordnance Survey (OS) maps, the resolution was determined by the scale of mapping. Elsewhere, habitat mapping was as estimated in the field and/or recorded by hand-held GPS. Where areas of habitat are given, they are approximate and should be verified by measurement on site where required for design or construction. While indicative locations of trees are recorded this does not replace requirements for detailed specialist arboriculture survey to British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction.
- 2.4.2 There were no other limitations to the survey.

3 Results

3.1 Designated sites

- 3.1.1 Based on desk study information in the **PEA [EN010118/APP/6.2]** the nearest statutory designated site for nature conservation is the River Ter Site of Special Scientific Interest (SSSI) located 3 km to the north. The closest non-statutory site is a special roadside reserve (designated for the grassland flora interest) located alongside the A130 approximately 50 m to the west of the Wheeler's Hill and Cranham Road land. Other non-statutory sites are approximately 800 m to the north comprising Chopping's Wood Local Wildlife Site (LoWS) and Stonage Wood LoWS, both of which are ancient woodlands.

3.2 Habitats

- 3.2.1 The area surveyed encompassed all safely accessible parts of the Wheeler's Hill and Cranham Road land (i.e., land within the Highway Boundary), and adjacent habitats to a maximum distance of 50 m, where accessible or where this land was visible from within the Wheeler's Hill and Cranham Road land

or from Public Rights of Way, or other publicly accessible areas. This excluded private houses/gardens.

- 3.2.2 Typical and notable plant species were recorded for different habitat types and reflect the conditions at the time of survey. This was not intended to be a detailed inventory of the plant species present in the survey area, as this is not required for the purposes of Phase 1 Habitat survey.
- 3.2.3 The Phase 1 Habitat survey was undertaken on 17th May 2022 by suitably experienced AECOM ecologists who recorded and mapped all habitat types present within the survey area, along with any associated relevant ecological receptors observed. The Phase 1 Habitat map for the Wheeler's Hill and Cranham Road land is provided as Figure 2. Where relevant ecological receptors (i.e., signs or evidence of protected/notable species) were present, target notes, e.g. T1, T2 etc., were recorded and the positions of these, where recorded, are shown in Figure 2. Representative photographs are provided in Annex A.

Semi-improved grassland

- 3.2.4 This comprises a short section of mown and un-mown relatively diverse semi-improved neutral grassland verge at the western end of the Wheeler's Hill and Cranham Road land at T1 on the northern side of the carriageway. Species include a single pyramidal orchid (*Anacamptis pyramidalis*), Yorkshire fog (*Holcus lanatus*), yellow oat-grass (*Trisetum flavescens*), false oat grass (*Arrhenatherum elatius*), red clover (*Trifolium pratensis*), hop-trefoil (*Trifolium campestre*), yellow-wort (*Blackstonia perfoliata*), rough meadow grass (*Poa trivialis*), perennial rye-grass (*Lolium perenne*), wild carrot (*Daucus carota*), cock's-foot (*Dactylis glomerata*), cow parsley (*Anthriscus sylvestris*) and common bent (*Agrostis capillaris*).

Poor semi-improved grassland

- 3.2.5 Other verges throughout the Wheeler's Hill and Cranham Road land are all generally species poor grassland and generally between 0.5 and 5 m wide and often shaded by adjacent trees. It has been mown in places. Species include false oat-grass, creeping buttercup (*Ranunculus repens*), cock's-foot, daisy (*Bellis perennis*), soft brome (*Bromus hordeaceus* subspecies *hordeaceus*), Yorkshire fog, rough meadow grass, perennial rye-grass, common couch (*Elymus repens*), dandelion (*Taraxacum officinale* aggregate), ribwort plantain (*Plantago lanceolata*), hogweed (*Heracleum sphondylium*), hemlock (*Conium maculatum*), hedge mustard (*Sisymbrium officinale*), cow parsley, red campion (*Silene dioica*), common nettle (*Urtica dioica*) and broad-leaved dock (*Rumex obtusifolius*).

Hedges

- 3.2.6 This habitat comprises species poor and species rich hedges with trees (e.g., T6) alongside the carriageway.
- 3.2.7 Some hedges have associated features such as ditches and connection to woodland habitats. Many hedges had been less intensively managed and

have been allowed to grow tall. There are also garden hedges with non-native species (mapped as introduced shrubs). There was a range of species diversity with woody species recorded within the hedges including pedunculate oak (*Quercus robur*), ash (*Fraxinus excelsior*), horse chestnut (*Aesculus hippocastanum*), field maple (*Acer campestre*), hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), elder (*Sambucus nigra*), dog rose (*Rosa canina* aggregate), blackthorn (*Prunus spinosa*) and elm (*Ulmus* species).

Tall ruderal herbs

- 3.2.8 Small areas of dominant tall ruderal herbs were observed along the road verges in the grassland. These habitats were dominated by common nettle, cow parsley, broad-leaved dock, creeping thistle (*Cirsium arvense*) and hogweed. Two small stands (1m² and 5m² stands) of giant hogweed (*Heracleum mantegazzianum*) are present at T5.

Scrub

- 3.2.9 There are a few small patches of dense and scattered scrub along the verges and more extensive areas of scrub in the adjacent woodland. These scrub habitats are dominated by woody species such as bramble, hornbeam (*Carpinus betulus*, hawthorn, elder and blackthorn.

Broadleaved scattered trees

- 3.2.10 Occasionally on the verges and adjacent to the Wheeler's Hill and Cranham Road land, there were some individual and scattered mature trees including ash and pedunculate oak (see T2, T3, T4).

Amenity grassland

- 3.2.11 This comprises a short section of verge in front of dwellings close to the carriageway.

Bare ground

- 3.2.12 There are small areas of bare ground associated with access driveways, paths, tracks and other hardstanding areas.

Adjacent habitats

Cultivated/disturbed land – Arable

- 3.2.13 Arable fields form the majority of habitat adjacent to the Wheeler's Hill and Cranham Road land and these consisted of a number of different crops including oilseed rape (*Brassica napus*) and wheat (*Triticum aestivum*). Other plant species found growing within the edges of the crops included broad-leaved dock, ground ivy (*Glechoma hederacea*), perennial ryegrass, creeping thistle, field pansy (*Viola arvensis*), small nettle (*Urtica urens*), common field speedwell, black-grass (*Alopecurus myosuroides*) and pineapple weed (*Matricaria discoidea*).

Improved grassland

- 3.2.14 This is present adjacent to the Wheeler's Hill and Cranham Road land in the cattle/horse grazed fields to the north of the Order limits. The fields are

dominated by perennial rye-grass with occasional other species including Yorkshire fog, cock's-foot (*Dactylis glomerata*), common couch, creeping thistle, cow parsley, dandelion and meadow buttercup (*Ranunculus acris*).

Broad-leaved plantation woodland

- 3.2.15 There are areas of plantation woodland present, notably towards the east and south of the Wheeler's Hill and Cranham Road land next to the Quarry. Species include pedunculate oak and hornbeam, wild cherry (*Prunus avium*), field maple, hawthorn, hazel, elder and ash. These woodlands are of recent origin, much of which is planted, with some dense naturally regenerating scrub and occasional individual mature oak trees present. Ground flora species was generally poor and included red campion, bramble (*Rubus fruticosus* aggregate) and common nettle.

Standing water

- 3.2.16 This habitat comprises a lake with an island and shallow sided margins to the north-east of the Wheeler's Hill and Cranham Road land. There are a few garden ponds adjacent to the Wheeler's Hill and Cranham Road land.

Quarry

- 3.2.17 This habitat comprises a large quarry to the south-west of the Wheeler's Hill and Cranham Road land with standing water, bare ground, woodland, scrub and grassland habitats

Other habitats

- 3.2.18 Other habitats observed comprise private gardens, houses and farms with lawns, trees and shrubs and some with ponds visible from the Wheeler's Hill and Cranham Road land (e.g.T7).

3.3 Notable Habitats

- 3.3.1 Table 1 provides a summary of notable habitats based on the results of the Phase 1 Habitat survey (up to 50m from the Order limits boundary) and with reference to guidance for the recognition of NERC Act Section 41 and the relevant Local Biodiversity Action Plan (LBAP). ✓

Table 1: Notable habitats within the Scheme

Habitat	NERC Act	LBAP	Supporting Comments
Ancient and/or Species-rich Hedgerows and Green Lanes	✓	✓	Ancient and/or species rich hedgerows are present across the Wheeler's Hill and Cranham Road land. Impacts to hedgerows from the Scheme (i.e., minor carriageway widening) are unlikely to occur and the Scheme has been designed to avoid potential impacts.
Standing Open Waters / Ponds	✓	-	There are a few waterbodies adjacent to the Wheeler's Hill and Cranham Road land in

Habitat	NERC Act	LBAP	Supporting Comments
			private gardens and larger lakes (former gravels pits) and no impacts are likely to occur from the Scheme.
Lowland Mixed Deciduous Woodland	✓	-	Broad-leaved woodland is present across the Wheeler's Hill and Cranham Road land and no woodland is likely to be affected by the Scheme.

3.4 Protected and notable species

3.4.1 Table 2 provides a summary of potentially relevant species identified through a combination of desk study and field survey. The table summarises the conservation status of each species and provides comment on the likelihood of presence. Where species are identified as likely or possible, they are likely to represent legislative constraints or may be material to determination of the Application and mitigation, and/or further surveys are likely to be required to determine presence or probable absence.

Table 2: Protected and notable species relevant or potentially relevant to the carriageway widening

Species/ Species Groups	Legally Protected Species	Species of Principal Importance	Other Notable Species	Present	Present / Potentially Present in Wider Zone of Influence	Supporting Comments
Badger <i>Meles meles</i>	✓	✓	x	x	?	Currently there are no signs of badger or their setts on or immediately adjacent to the Wheeler's Hill and Cranham Road land.
Bats	✓	✓	x	?	✓	The Wheeler's Hill and Cranham Road land contains trees and adjacent woodlands and buildings which have the potential to support roosting bats (e.g. T2, T3 and T4, Figure 2). None are likely to be impacted by the carriageway widening.
Breeding birds	✓	✓	✓	?	✓	Habitats such as trees, hedgerows present within the Wheeler's Hill and Cranham Road land may support nesting birds during the breeding season. The habitat is sub-optimal close to the road due to high volumes of traffic. Consideration of breeding birds is required if the carriageway widening requires any scrub/tree removal. as per general precautions provided in the ES chapter.
Flora	✓	✓	✓	x	?	There is limited potential on roadside verges for Red List plants and none recorded during the walkover. Some more species-rich grassland to the west of the Wheeler's Hill and Cranham Road land (i.e., T1, Figure 2), but no impacts predicted as no habitat loss in this area.

Species/ Species Groups	Legally Protected Species	Species of Principal Importance	Other Notable Species	Present	Present / Potentially Present in Wider Zone of Influence	Supporting Comments
Great crested newt <i>Triturus cristatus</i>	✓	✓	✓	x	?	Two granted European Protected Species Mitigation Licences for great crested newt within 1km of the Wheeler's Hill and Cranham Road land, (2014-5374-EPS-MIT located 350 m south at the western end of the Wheeler's Hill and Cranham Road land and 2017-27809-EPS-MIT (a quarry) located 175 m south at the eastern end of the Wheeler's Hill and Cranham Road land) indicating the presence of this species in the wider landscape. Great crested newt is unlikely to be impacted by the carriageway widening due to minimal sub-optimal habitat loss along the roadside only.
Invasive non- native species (INNS)	x	x	✓	✓	✓	Giant hogweed was recorded during the field survey in two locations along the Wheeler's Hill and Cranham Road land at T5 (see Figure 2). No impacts are predicted in these locations, but if this plant spreads to the north side of the road then precautions should be taken to ensure that this species is not spread further as a result of the carriageway widening, particularly prior to moving contaminated soil or plant cuttings. Eradication of this species is proposed to prevent it spreading along the Scheme.
Reptiles	✓	✓	x	?	?	Some reptile habitat of limited suitability across the Wheeler's Hill and Cranham Road land, comprising small areas of grass verges and woodland edge habitats. Due to minimal land take adjacent to the carriageway reptiles are unlikely to be of relevance to the carriageway widening.

Key to symbols: ✓ = yes, x = no, ? = possibly, see Supporting Comments for further rationale.

Species present on Site are those for which recent direct observation or field signs confirmed presence. Species which are possibly present are those for which there is potentially suitable habitat based on the results of the Phase 1 Habitat survey, or this combined with desk study records.

Legally protected species are those listed under Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended); and, Schedules 2 and 4 of The Conservation of Habitat & Species Regulations 2018.

Species of Principal Importance as those listed under Section 41 of the NERC Act. Planning Authorities have a legal duty under Section 40 of the same Act to consider such species when determining planning applications.

Other notable species include native species of conservation concern listed in the LBAP (except species that are also of Principal Importance), those that are Nationally Rare, Scarce or Red Data List, and non-native controlled weed species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4 Discussion

4.1.1 This section identifies any constraints and requirements for further survey as a result of the proposed carriageway widening along Wheeler's Hill and Cranham Road, which is restricted to the existing carriageway and narrow sections of widening in localised areas (see Figure 1).

4.2 Designated sites

4.2.1 Due to the minimal habitat loss and the temporary nature of the works as part of the carriageway widening, there are no impacts pathways identified on designated sites.

4.3 Habitats

4.3.1 There will be a minor loss of species poor grassland along roadside verges and potential minor tree/scrub clearance. There will be no impact to notable habitats within the Wheeler's Hill and Cranham Road land such as Ancient and/or Species-rich Hedgerows, Standing Open Waters / Ponds and Lowland Mixed Deciduous Woodland.

4.4 Species

Badger

4.4.1 Whilst no signs of badger were record along the Wheeler's Hill and Cranham Road land or relevant adjacent land, their presence in the wider area is likely. Given the highly mobile nature of this species, further surveys will be required after any DCO is granted and prior to commencing the carriageway widening to determine the potential constraints and whether mitigation and/or relevant licences are required to avoid impacts to badgers or their setts.

Bats

4.4.2 No trees or structures suitable for roosting bats are likely to be impacted by the carriageway widening. In the unlikely event the carriageway widening requires the removal of the trees identified or other mature trees in adjacent hedges/woodland then a survey to assess the presence or likely absence of roosting bats is required.

Breeding Birds

4.4.3 Habitats occurring within the Site are likely to support nesting birds during the breeding season. The carriageway widening has the potential to result in the minor direct loss of habitat used by protected and notable bird species or potential disturbance to adjacent nesting birds, particularly where any scrub/tree clearance is required. As proposed in the ES, in general, any site clearance work should seek to avoid the breeding bird season (the breeding season is defined as March to August inclusive) or have measures in places to avoid disturbance of active nests/breeding sites during this breeding season.

Flora

- 4.4.4 Some habitats within the Wheeler's Hill and Cranham Road land have the potential to support notable flora species, such as those associated with semi-improved grassland to the west of the Wheeler's Hill and Cranham Road land (T1, Figure 2). No impacts are predicted based on the current carriageway widening proposals.

Great Crested Newt

- 4.4.5 No impacts are predicted to great crested newt, as only a limited area of sub-optimal terrestrial habitat is present alongside the carriageway and minimal habitat loss is predicted, including no loss on the southern side of the road closest to the quarry located 175-m south-east that has a breeding population of this species. This minor loss of sub-optimal habitat would not trigger a requirement for licence, but due to the low risk of presence, a watching brief during ground clearance work is proposed.

Invasive Non-native Species

- 4.4.6 During the survey giant hogweed was recorded on the Wheeler's Hill and Cranham Road land (T5, Figure 2). Eradication of this species is proposed. This would be undertaken by either chopping through the top of the tap roots or treating with glyphosate herbicide and spraying the regrowth next spring. To leave the plants risks seeds being picked up on vehicles etc. and spread along the road. If this is not currently possible then an updated survey will be required prior to work to check if it has spread into the area of Wheeler's Hill and Cranham Road land that is subject to any carriageway widening work. Biosecurity measures will need to be put in place to prevent the spread of invasive plant species to and from the Wheeler's Hill and Cranham Road land, particularly in relation to any removal of material and imported aggregate for access tracks and from offsite plant bringing in seed or propagules of invasive species.

Reptiles

- 4.4.7 No impacts are predicted, as only a limited area of suitable terrestrial habitat is present alongside the carriageway and minimal habitat loss is predicted. Due to the low risk of presence of a transitory reptile a watching brief during ground clearance work is proposed to avoid killing or injuring reptiles.

5 Conclusions

- 5.1.1 With the exception of the presence of the non-native giant hogweed, there are no other changes to the impacts, mitigation measures or conclusions predicted as a result of this survey and the ES for the Scheme remains valid. Paragraph 8.8.17 of Chapter 8 of the ES [APP-040] already includes sufficient control measures for invasive species, which are relevant to giant hogweed. These mitigation measures are secured through the Outline CEMP [Table 3-3, APP-214] and Decommissioning Strategy [APP-216].

5.1.2 The following protected species' considerations are required prior to starting construction on the Scheme. These are already mentioned in the ES:


- Badger – updated survey to determine location of any new badger setts.
- Breeding birds – timing of vegetation clearance to avoid breeding season or measures in place to avoid disturbance.
- Great crested newt and reptiles – watching brief by an ecologist during site clearance work.
- Invasive non-native species – updated survey to determine extent of giant hogweed and eradication of this species.




5.1.3 The outlined constraints will need to be reassessed if the design and layout of the carriageway widening works proposed are changed prior to starting work or if there are any significant changes in the use or management of the land that would affect the habitats and species.




Annexes

Annex A –Target Notes & Photographs

(see Locations on Figure 2)

Target Note	Description	Photograph
1	A short section of mown and un-mown relatively diverse semi-improved neutral grassland verge at the western end of the Wheeler's Hill and Cranham Road land at T1 on the northern side of the carriageway. Species include a single pyramidal orchid (<i>Anacamptis pyramidalis</i>) (shown in photograph), Yorkshire fog (<i>Holcus lanatus</i>), yellow oat-grass (<i>Trisetum flavescens</i>), false oat grass (<i>Arrhenatherum elatius</i>), red clover (<i>Trifolium pratensis</i>), hop-trefoil (<i>Trifolium campestre</i>), yellow-wort (<i>Blackstonia perfoliata</i>), rough meadow grass (<i>Poa trivialis</i>), perennial rye-grass (<i>Lolium perenne</i>), wild carrot (<i>Daucus carota</i>), cock's-foot (<i>Dactylis glomerata</i>), cow parsley (<i>Anthriscus sylvestris</i>) and common bent (<i>Agrostis capillaris</i>).	

Target Note	Description	Photograph
2	Oak tree (<i>Quercus robur</i>) with low bat roost suitability.	
3	Ash trees (<i>Fraxinus excelsior</i>) with negligible to low bat roost suitability	
4	Oak with high bat roost suitability	

Target Note	Description	Photograph
5	The invasive giant hogweed (<i>Heracleum mantegazzianum</i>) present in two locations south of the carriageway	
6	Species rich hedge with trees. Woody species recorded within the hedges including pedunculate oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>), horse chestnut (<i>Aesculus hippocastanum</i>), field maple (<i>Acer campestre</i>), hawthorn (<i>Crataegus monogyna</i>), hazel (<i>Corylus avellana</i>), elder (<i>Sambucus nigra</i>), dog rose (<i>Rosa canina</i> aggregate), blackthorn (<i>Prunus spinosa</i>) and elm (<i>Ulmus</i> species).	
7	Example of a private garden with mature woodland and pond	



P1



P2



P3



P4



P5



P6



P7



P8



P9



P10



P11



P12



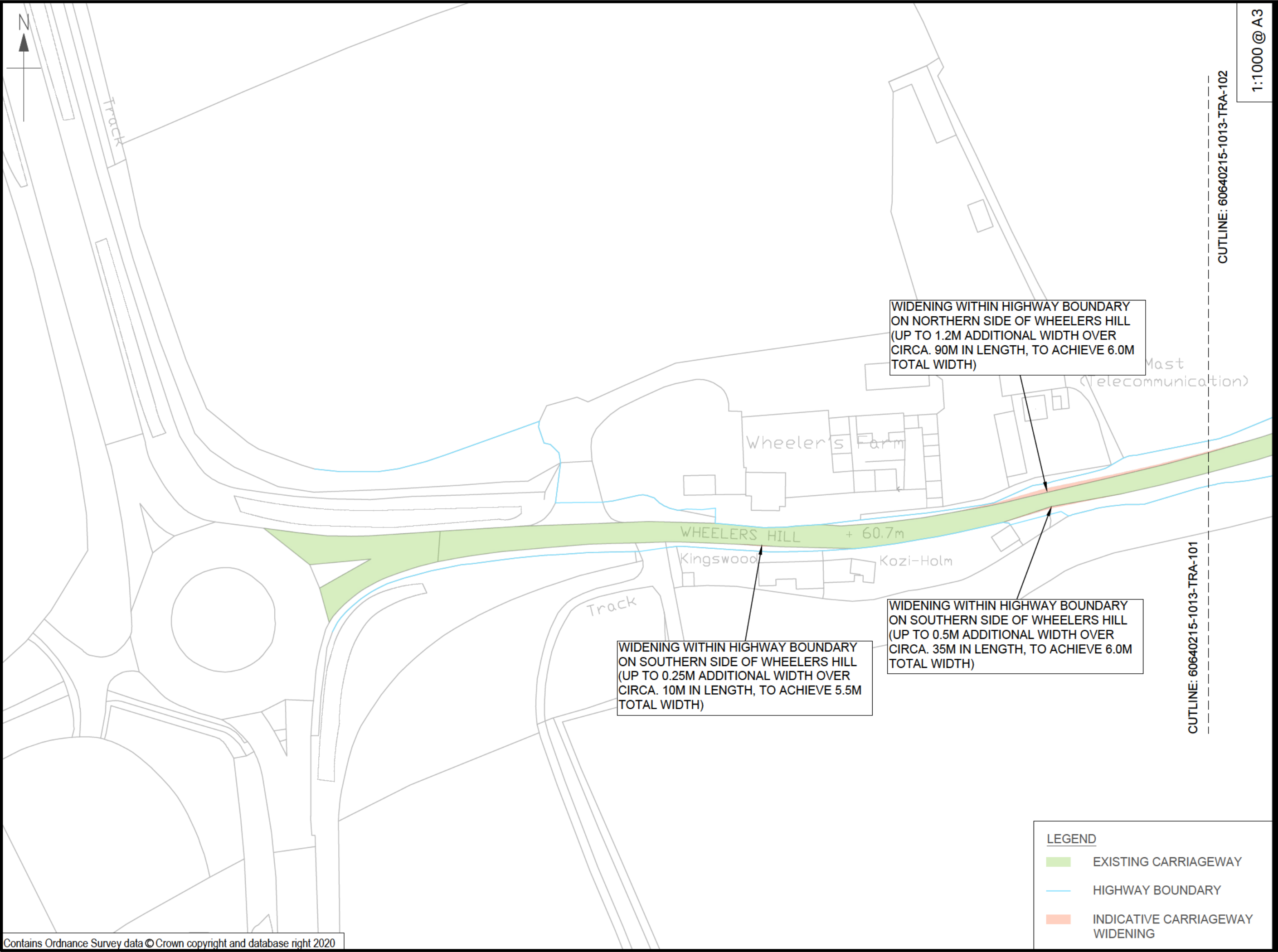
P13

Annex B – Figures

Figure 1. Location and proposed land take



Last saved by: CHRIS BURLTON(2022-02-02) Last Plotted: 2022-02-02
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Project Management Initials: Designer: WR Checked: CB Approved: MW ISO A3 297mm x 420mm
Project: LONGFIELD SOLAR FARM - DETAILED DRAWINGS (ES FIGURES) - 010222.DWG



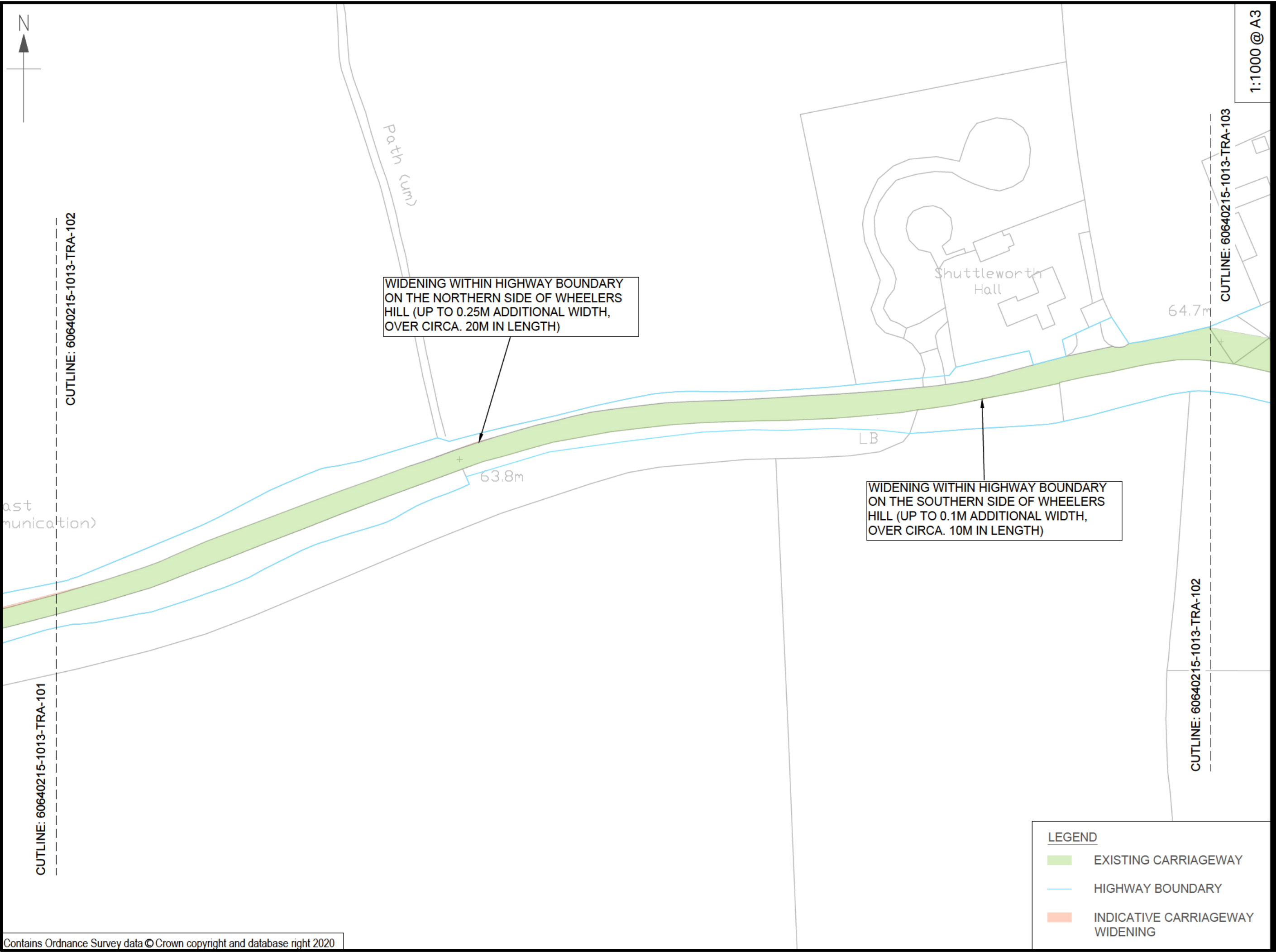
WIDENING WITHIN HIGHWAY BOUNDARY ON NORTHERN SIDE OF WHEELERS HILL (UP TO 1.2M ADDITIONAL WIDTH OVER CIRCA. 90M IN LENGTH, TO ACHIEVE 6.0M TOTAL WIDTH)

WIDENING WITHIN HIGHWAY BOUNDARY ON SOUTHERN SIDE OF WHEELERS HILL (UP TO 0.5M ADDITIONAL WIDTH OVER CIRCA. 35M IN LENGTH, TO ACHIEVE 6.0M TOTAL WIDTH)

WIDENING WITHIN HIGHWAY BOUNDARY ON SOUTHERN SIDE OF WHEELERS HILL (UP TO 0.25M ADDITIONAL WIDTH OVER CIRCA. 10M IN LENGTH, TO ACHIEVE 5.5M TOTAL WIDTH)

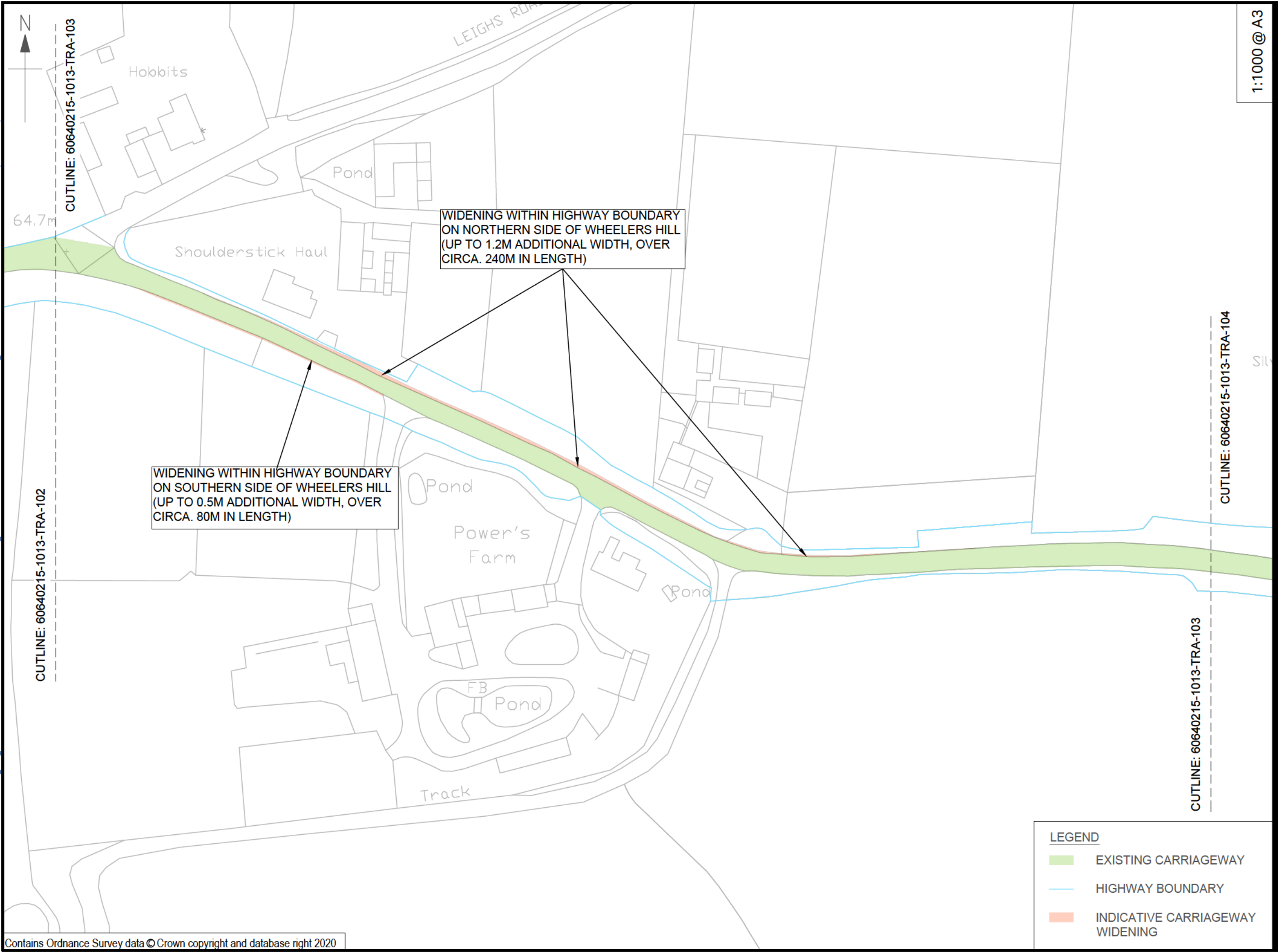
LEGEND	
	EXISTING CARRIAGEWAY
	HIGHWAY BOUNDARY
	INDICATIVE CARRIAGEWAY WIDENING

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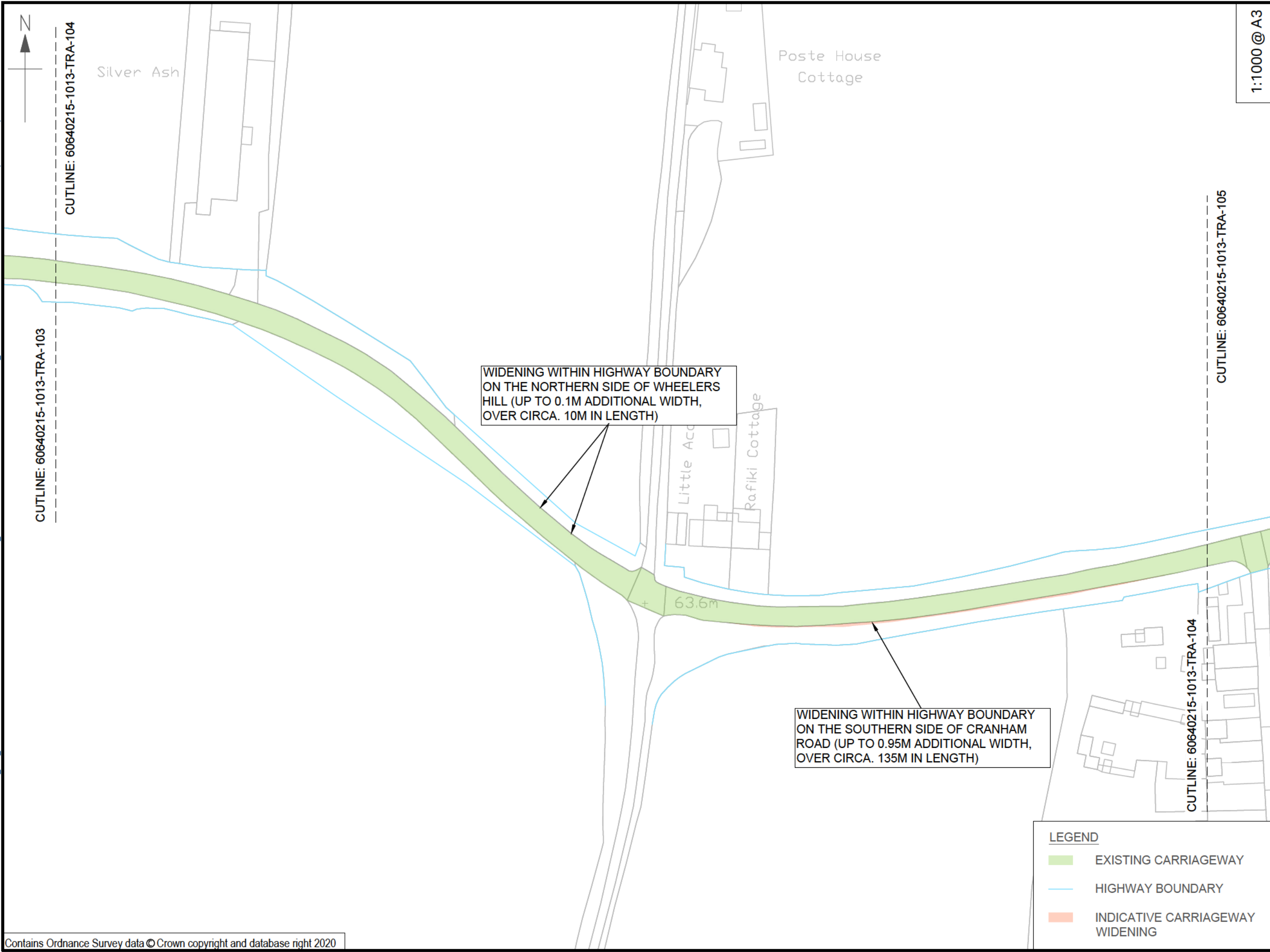


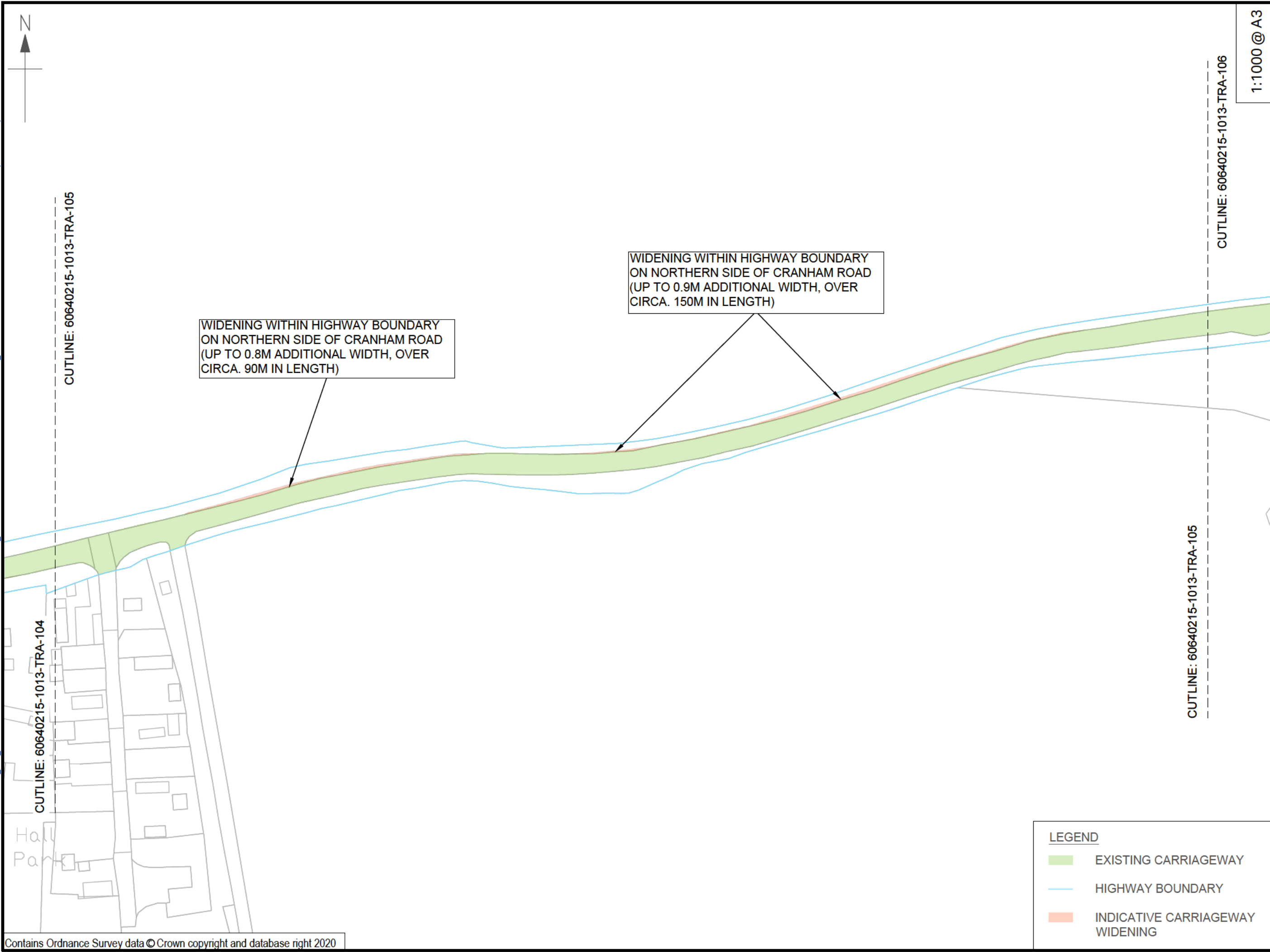
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LEGEND	
	EXISTING CARRIAGEWAY
	HIGHWAY BOUNDARY
	INDICATIVE CARRIAGEWAY WIDENING

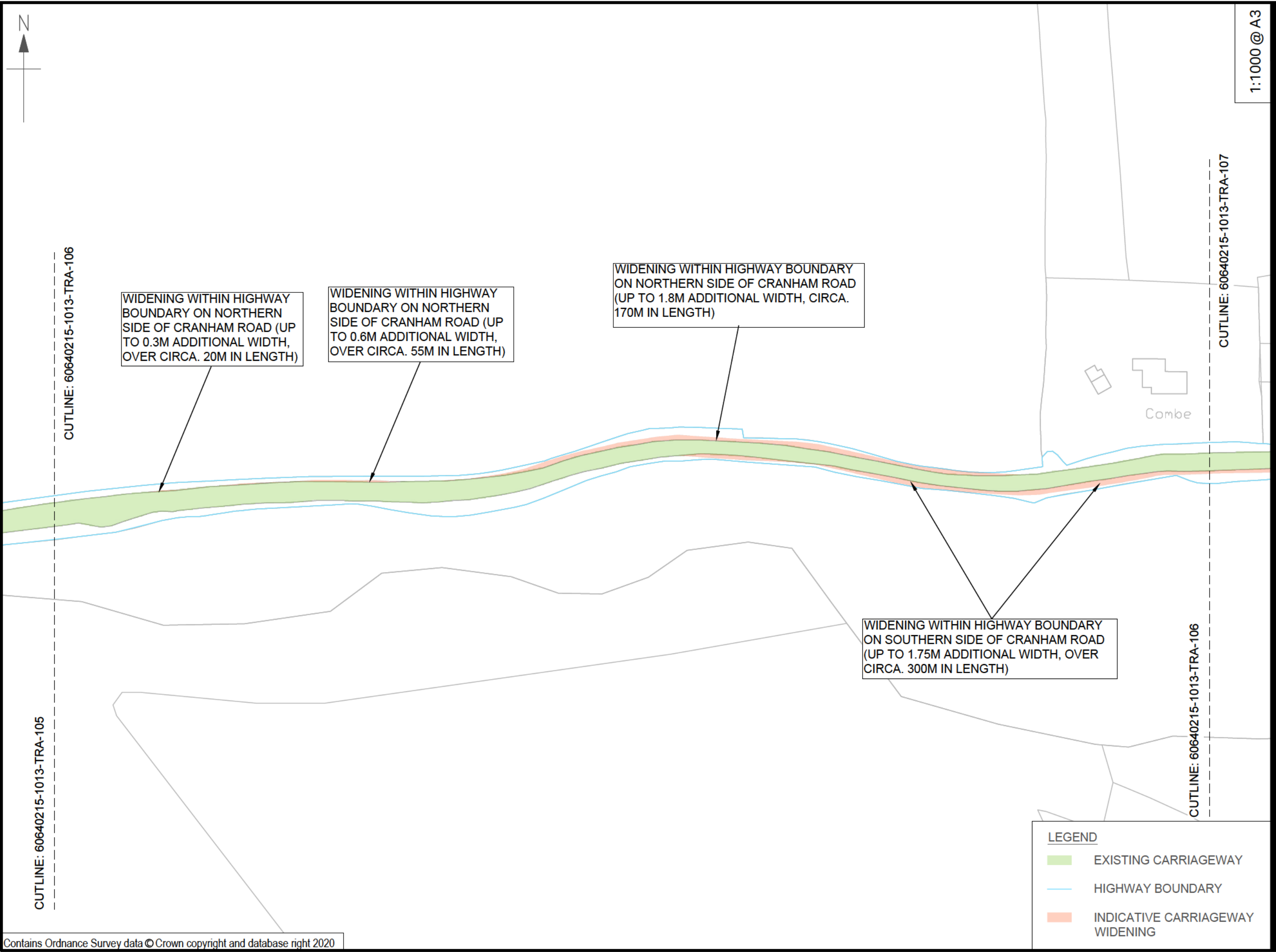


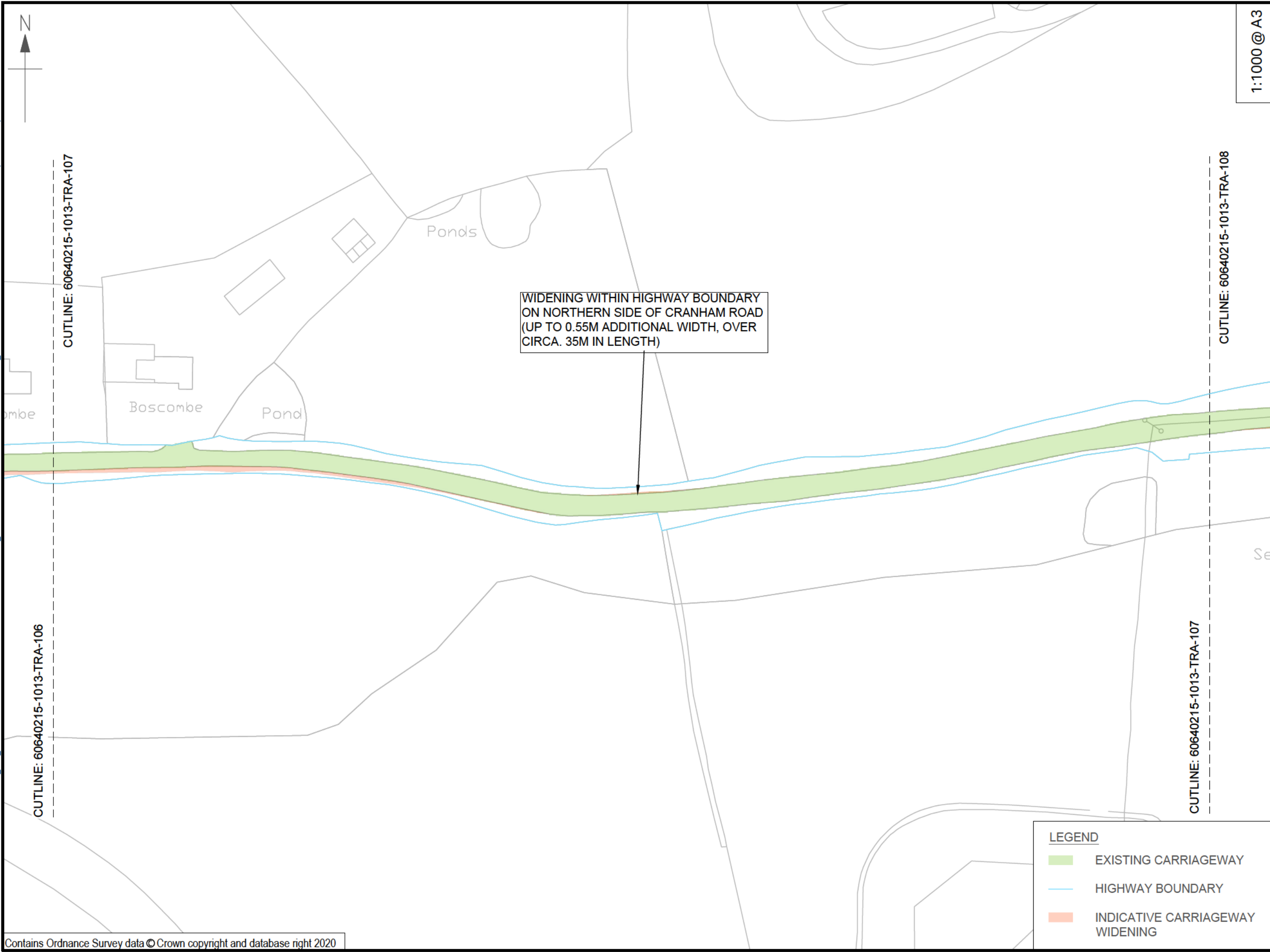
LEGEND	
	EXISTING CARRIAGEWAY
	HIGHWAY BOUNDARY
	INDICATIVE CARRIAGEWAY WIDENING



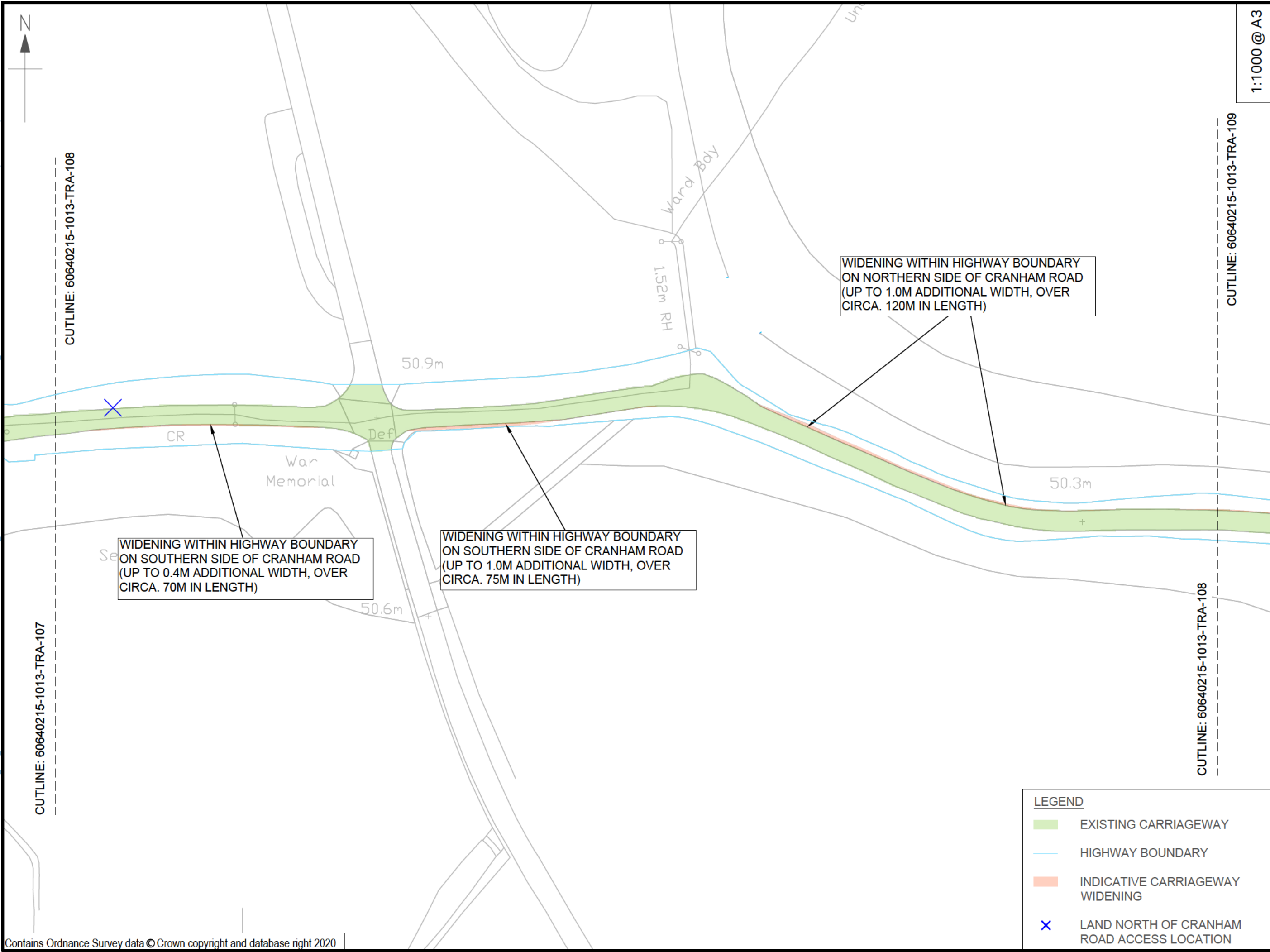


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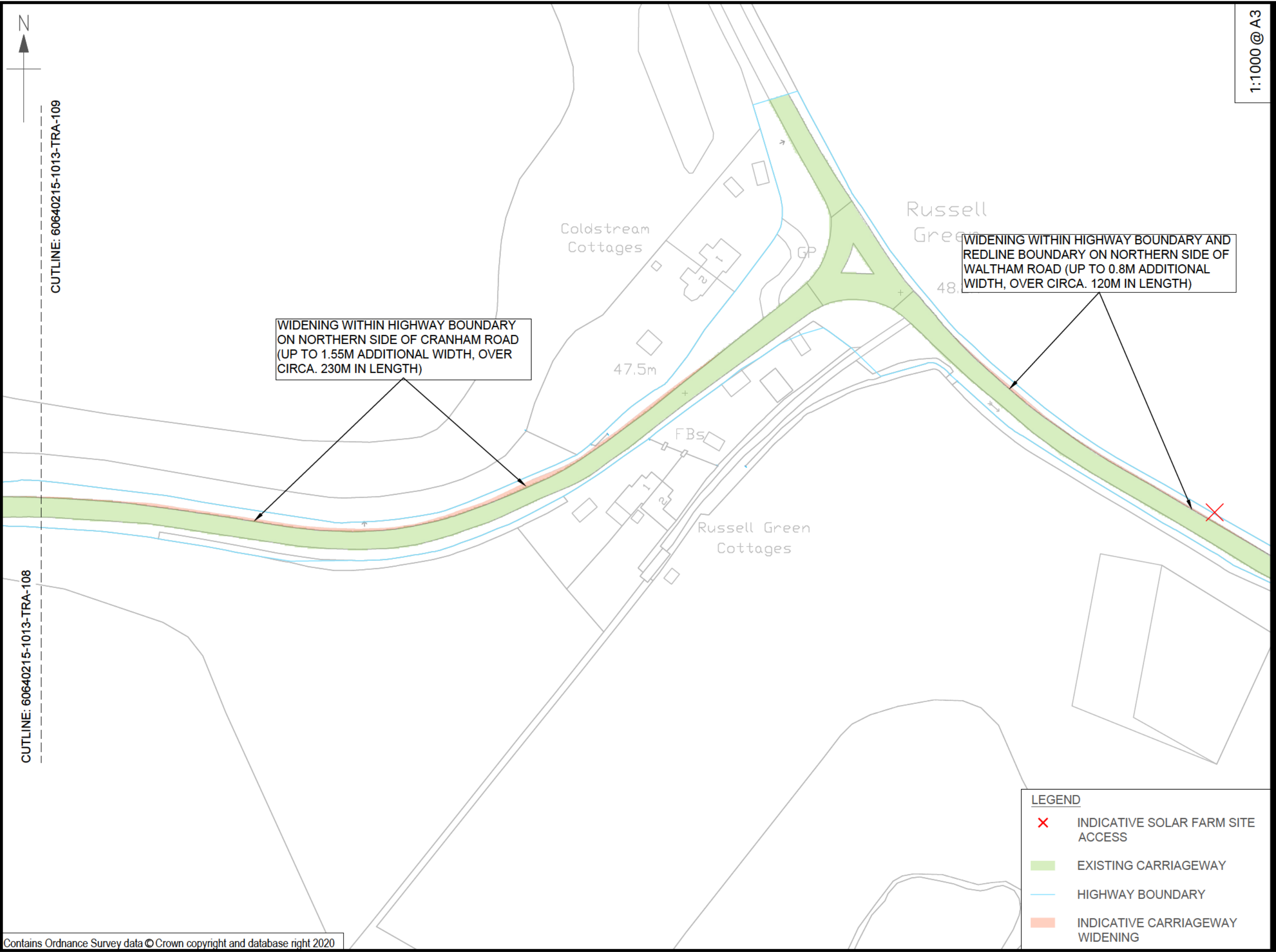


WIDENING WITHIN HIGHWAY BOUNDARY
 ON SOUTHERN SIDE OF CRANHAM ROAD
 (UP TO 0.4M ADDITIONAL WIDTH, OVER
 CIRCA. 70M IN LENGTH)

WIDENING WITHIN HIGHWAY BOUNDARY
 ON SOUTHERN SIDE OF CRANHAM ROAD
 (UP TO 1.0M ADDITIONAL WIDTH, OVER
 CIRCA. 75M IN LENGTH)

WIDENING WITHIN HIGHWAY BOUNDARY
 ON NORTHERN SIDE OF CRANHAM ROAD
 (UP TO 1.0M ADDITIONAL WIDTH, OVER
 CIRCA. 120M IN LENGTH)

LEGEND	
	EXISTING CARRIAGEWAY
	HIGHWAY BOUNDARY
	INDICATIVE CARRIAGEWAY WIDENING
X	LAND NORTH OF CRANHAM ROAD ACCESS LOCATION



WIDENING WITHIN HIGHWAY BOUNDARY
 ON NORTHERN SIDE OF CRANHAM ROAD
 (UP TO 1.55M ADDITIONAL WIDTH, OVER
 CIRCA. 230M IN LENGTH)

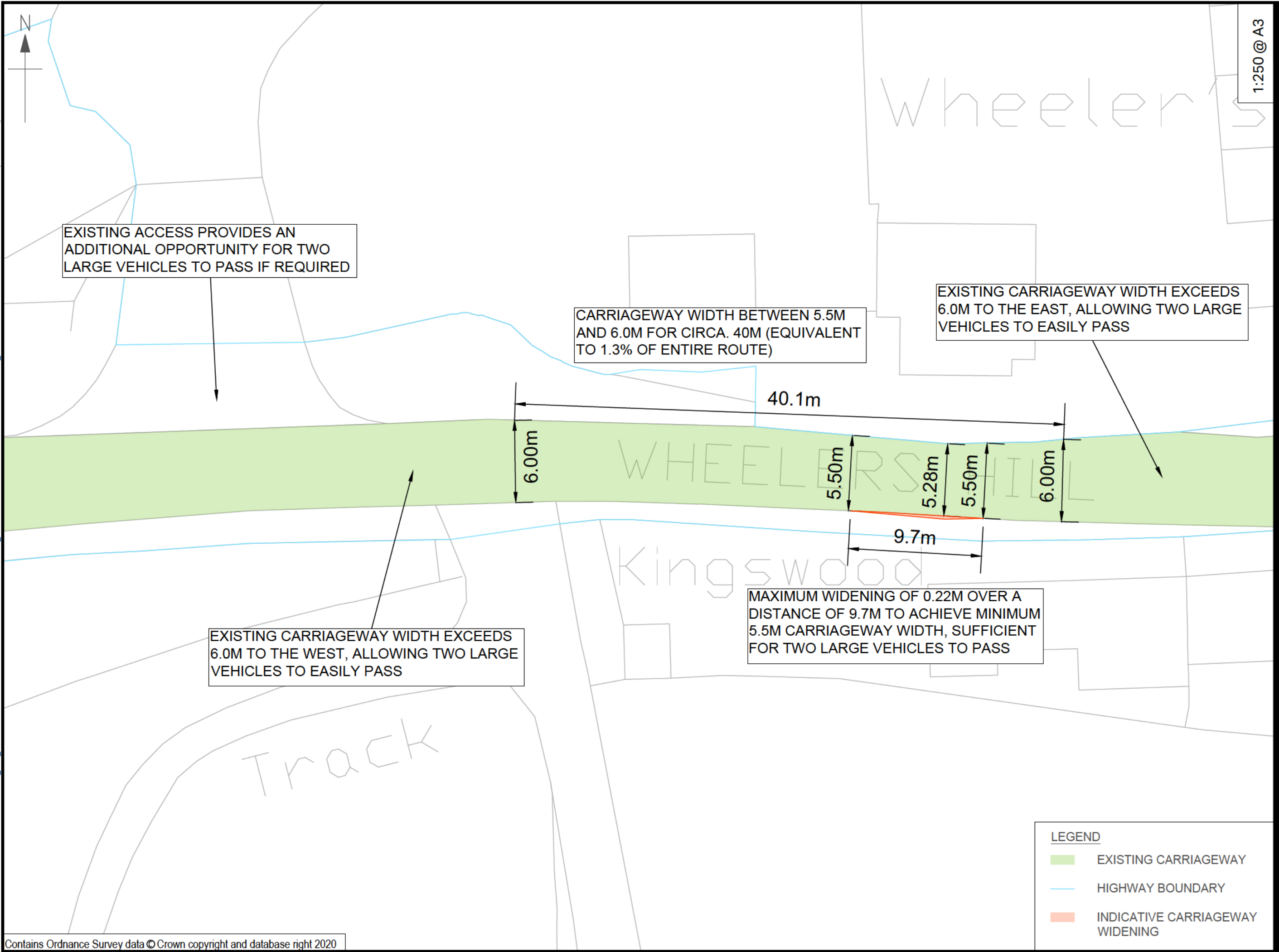
WIDENING WITHIN HIGHWAY BOUNDARY AND
 REDLINE BOUNDARY ON NORTHERN SIDE OF
 WALTHAM ROAD (UP TO 0.8M ADDITIONAL
 WIDTH, OVER CIRCA. 120M IN LENGTH)

LEGEND	
	INDICATIVE SOLAR FARM SITE ACCESS
	EXISTING CARRIAGEWAY
	HIGHWAY BOUNDARY
	INDICATIVE CARRIAGEWAY WIDENING

CUTLINE: 60640215-1013-TRA-108

CUTLINE: 60640215-1013-TRA-109

1:1000 @ A3



EXISTING ACCESS PROVIDES AN ADDITIONAL OPPORTUNITY FOR TWO LARGE VEHICLES TO PASS IF REQUIRED

CARRIAGEWAY WIDTH BETWEEN 5.5M AND 6.0M FOR CIRCA. 40M (EQUIVALENT TO 1.3% OF ENTIRE ROUTE)

EXISTING CARRIAGEWAY WIDTH EXCEEDS 6.0M TO THE EAST, ALLOWING TWO LARGE VEHICLES TO EASILY PASS

EXISTING CARRIAGEWAY WIDTH EXCEEDS 6.0M TO THE WEST, ALLOWING TWO LARGE VEHICLES TO EASILY PASS

MAXIMUM WIDENING OF 0.22M OVER A DISTANCE OF 9.7M TO ACHIEVE MINIMUM 5.5M CARRIAGEWAY WIDTH, SUFFICIENT FOR TWO LARGE VEHICLES TO PASS

LEGEND	
	EXISTING CARRIAGEWAY
	HIGHWAY BOUNDARY
	INDICATIVE CARRIAGEWAY WIDENING

Figure 2. Phase 1 habitat map

PROJECT

Longfield
Solar Farm,
Essex

CLIENT

Longfield
Solar Energy
Farm Limited

CONSULTANT

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LEGEND

- Redline boundary
- Highway boundary
- Broadleaved plantation woodland
- SI Neutral grassland - semi-improved
- I Improved grassland
- SI Poor semi-improved grassland
- A Arable
- Introduced shrub
- Building
- Other habitat
- Hard surface
- Dry ditch
- Intact species-poor hedge
- Broadleaved tree
- Target note
- Photograph location, with reference number

NOTES

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ISSUE PURPOSE

Ecological Walkover Survey

PROJECT NUMBER

60624362

SHEET TITLE

Wheeler's Hill / Cranham Road, Phase 1 Habitat Survey.
Page 1 of 4

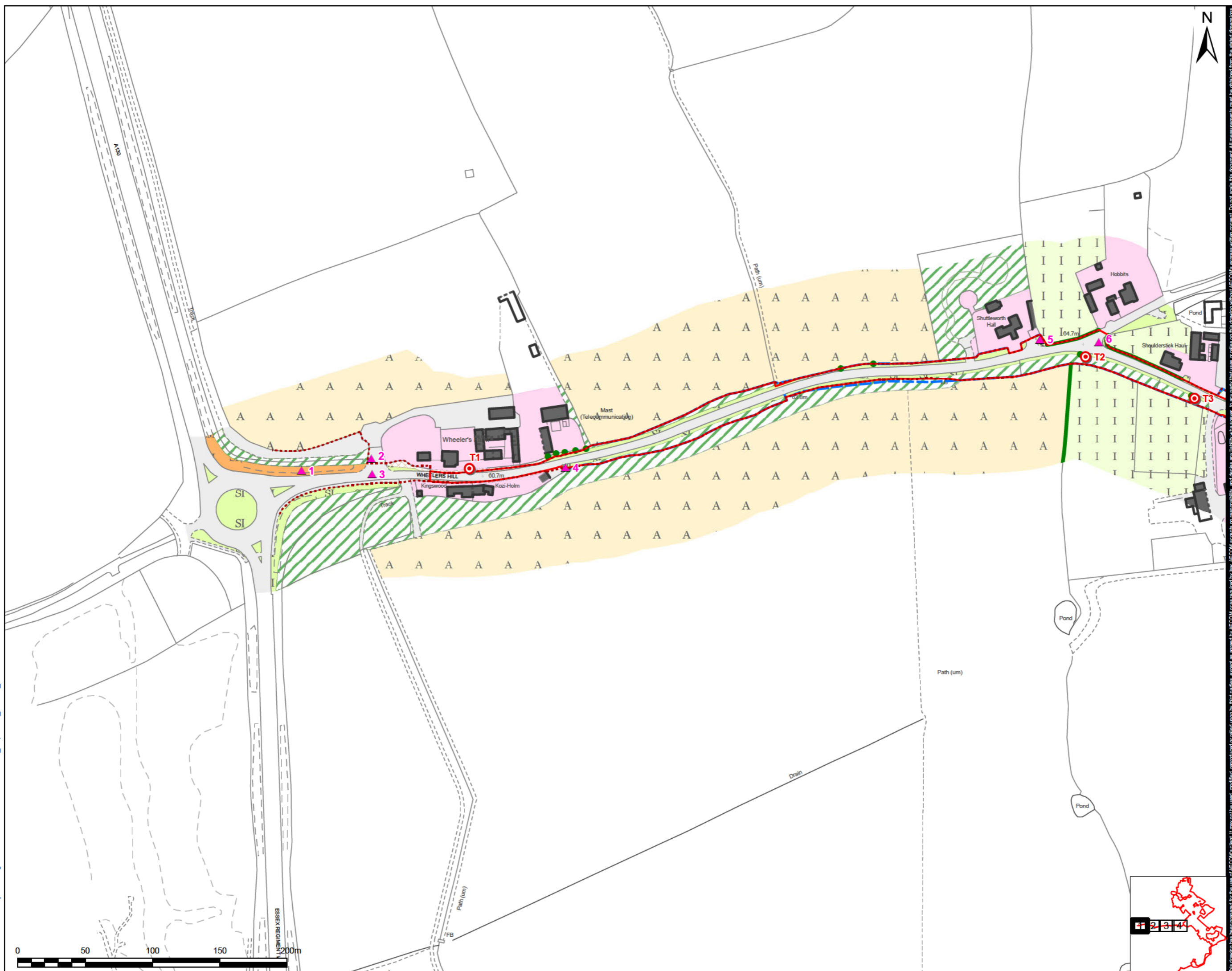
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Figure 2 Sheet 2.1



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PROJECT

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CLIENT

Longfield Solar Energy Farm Limited

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LEGEND

- Redline boundary
- Highway boundary
- Broadleaved plantation woodland
- Improved grassland
- Poor semi-improved grassland
- Tall ruderal
- I2.1 - Quarry
- Arable
- Amenity grassland
- Introduced shrub
- Building
- Other habitat
- Hard surface
- Dry ditch
- Intact species-poor hedge
- Native species-rich hedge with trees
- Broadleaved tree
- x Scattered scrub
- Target note
- ▲ Photograph location, with reference number

NOTES

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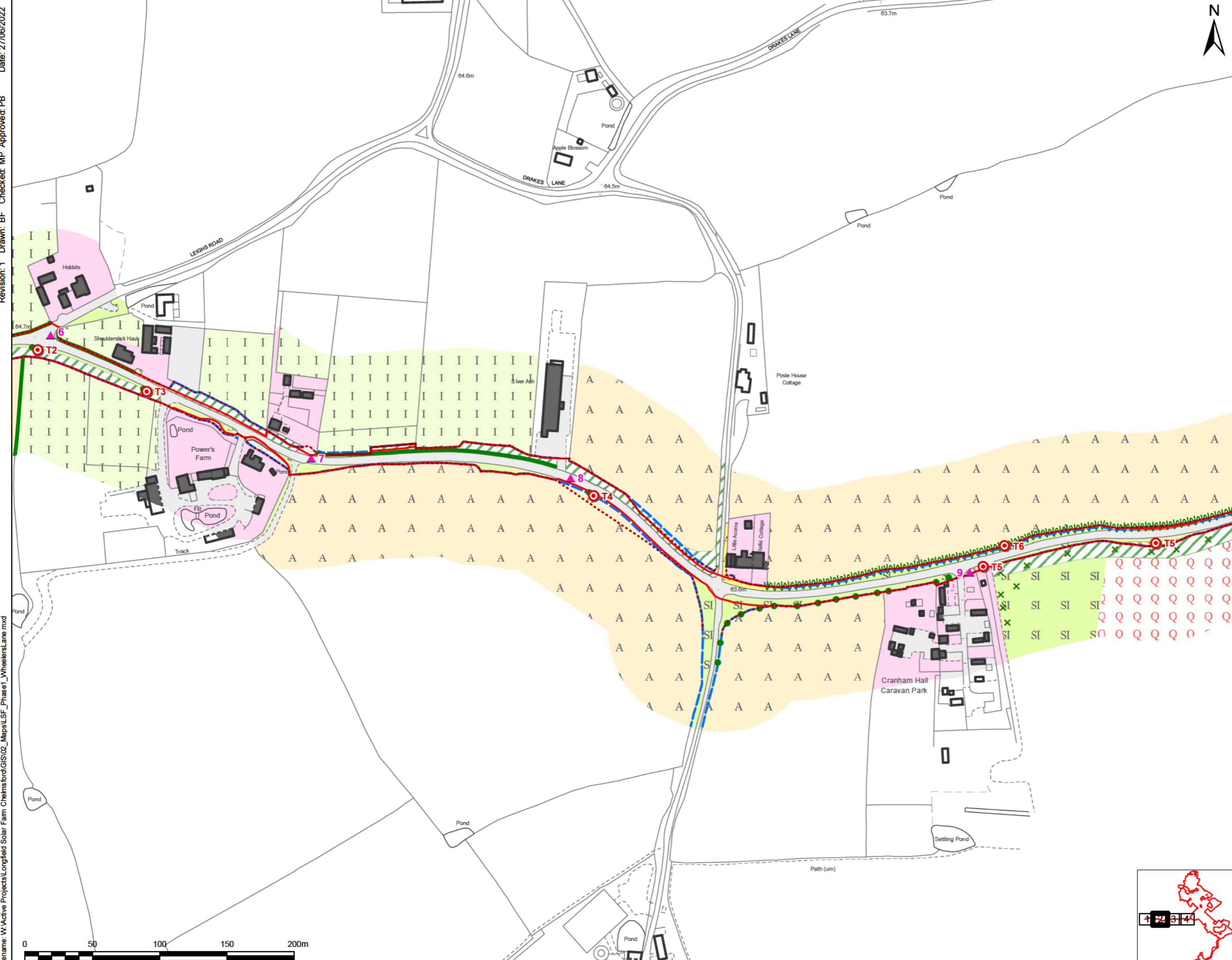
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Page 2 of 4

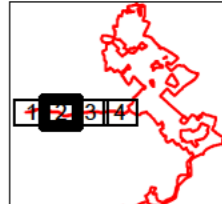
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Figure 2.2



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LEGEND

- Redline boundary
- Highway boundary
- Broadleaved plantation woodland
- Poor semi-improved grassland
- Tall ruderal
- Q I2.1 - Quarry
- A Arable
- Building
- Other habitat
- Hard surface
- Dry ditch
- Intact species-poor hedge
- Native species-rich hedge with trees
- Broadleaved tree
- x Scattered scrub
- ⊙ Target note

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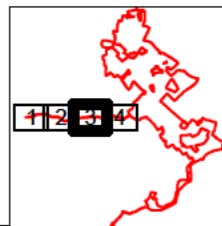
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Wheeler's Hill / Cranham Road, Phase 1 Habitat Survey.
Page 3 of 4

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Figure 2.3



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LEGEND

- Redline boundary
- Highway boundary
- Broadleaved plantation woodland
- Dense Scrub
- Neutral grassland - semi-improved
- Improved grassland
- Poor semi-improved grassland
- Standing water
- I2.1 - Quarry
- Arable
- Amenity grassland
- Building
- Bare ground
- Other habitat
- Hard surface
- Dry ditch
- Fence
- Intact species-poor hedge
- Native species-rich hedge with trees
- Scattered scrub
- Photograph location, with reference number

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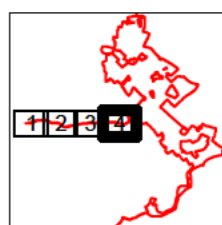
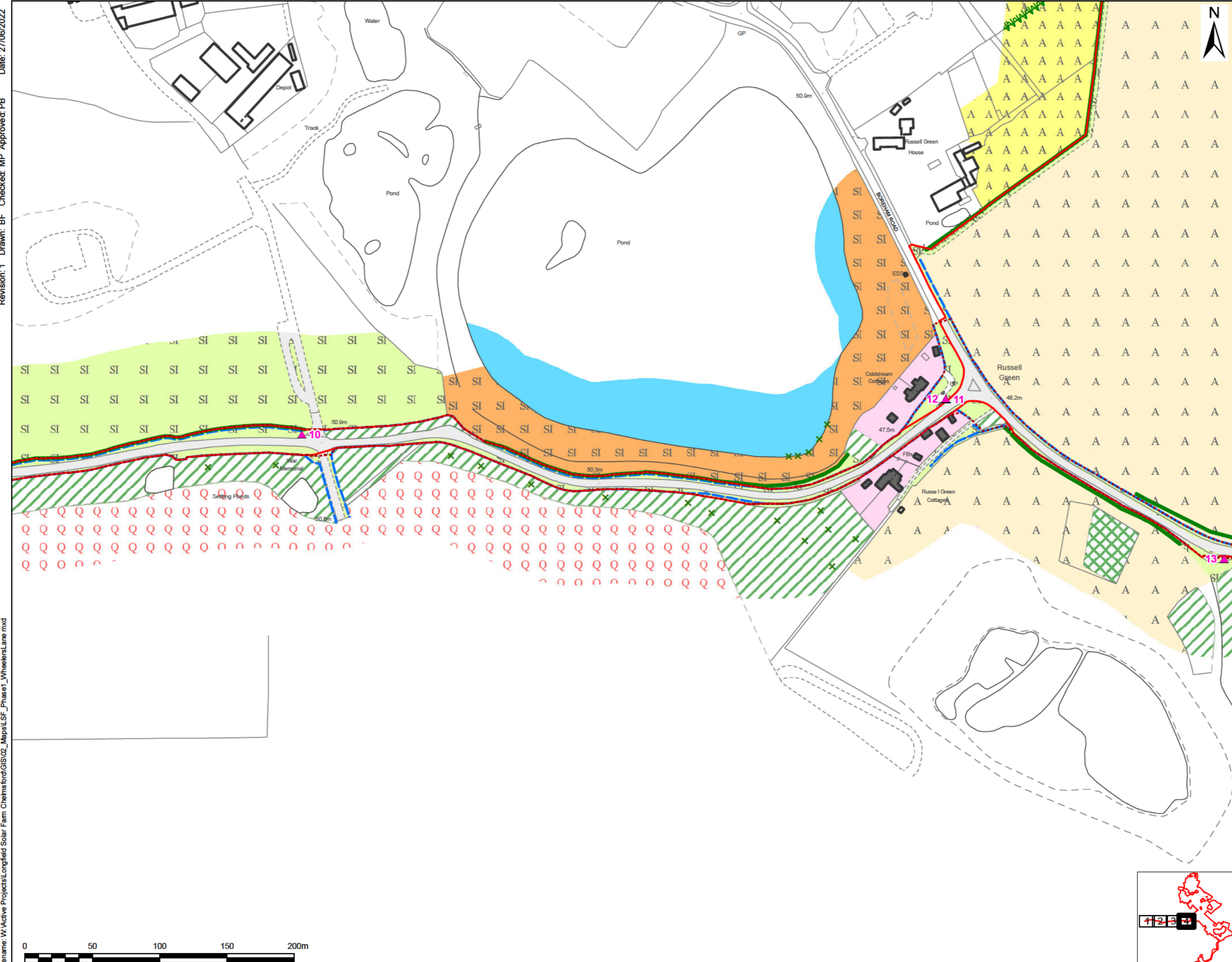
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Wheeler's Hill / Cranham Road, Phase 1 Habitat Survey.
Page 4 of 4

SHEET NUMBER

Figure 2.4



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