



Norfolk County Council

Long Stratton Bypass

Walking, Cycling and Horse-Riding Detailed Design
Stage Review Report





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Review Report

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WSP

62-64 Hills Road

Cambridge

Cambridgeshire

CB2 1LA

Phone: +44 1223 558 050

Fax: +44 1223 558 051

WSP.com

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1 Scheme description and background

1.1 Background

- 1.1.1. The Long Stratton Bypass is a highway improvement scheme that will have a permanent impact on the Major Road Network and local highway networks. The LSB highway design has been completed in accordance with DMRB requirements, therefore, the GG 142 Walking, Cycling and Horse Riding Assessment and Review (WCHAR) has been applied.
- 1.1.2. A Walking, Cycling and Horse Riding Assessment Report (WCHAR) was prepared in July 2022, in accordance with GG 142, which compiled evidence on the following:
- Review of walking, cycling and horse-riding policies / strategies;
 - Collision data;
 - Description of public transport facilities;
 - Key trip generators and local amenities;
 - Site visit;
 - Consultation with key stakeholders and user groups;
 - Description / review of existing walking, cycling and horse-riding network facilities at a local and county wide (strategic) level;
 - Collation and analysis of walking, cycling and horse-riding user data; and
 - Evidence of consultation with local user groups and the wider public.
- 1.1.3. From the Assessment Report, 25 opportunities were identified for the Design Team, as those that should be considered for packaging with the Long Stratton Bypass for the benefit of pedestrians, cyclists and equestrians.
- 1.1.4. As written within GG 142, for a large scheme a Review Report will be created at the end of the preliminary design stage and before commencement of detailed design, followed by a further Review Report at the end of the detailed design phase (before construction commences). The first Review Report (February 2023) identified 7 further opportunities for the scheme.
- 1.1.5. This 2nd Review Report has been produced at the end of the detailed design stage based on the most recent drawings produced (enclosed in **Appendix A**).

1.2 The proposed scheme

- 1.2.1. The preferred route involves the construction of a 4km long single carriageway bypass on the eastern side of Long Stratton. This will remove through-traffic, including HGVs from the centre of Long Stratton, reducing the congestion, queuing, delays and provide a new, more efficient route to traffic. The scheme will also create opportunities to further improve conditions for people walking, cycling, horse riders and public transport.

1.3 The review team

- 1.3.1. The WCHAR Review Team remains the same as that of the WCHAR Assessment Team, consisting of the Lead Assessor, Paula Cuthbertson, and additional Assessor, Hattie Gibbs.

1.4 The study area

- 1.4.1. The study area is shown in **Figure 1**. The requirements of GG 142 are for a minimum 5km radius from the scheme; this encompasses the study the residential areas of Long Stratton and a number of smaller villages in Southern Norfolk.

2 Review of WCHAR Assessment opportunities

2.1 Introduction

2.1.1. This chapter provides a summary of the opportunities identified as part of the Assessment Report and the actions taken or outcomes related to these during the detailed design phase of the highway scheme, split into the following categories:

- General Opportunities – those that apply to all users;
- Strategic Opportunities – those that seek to improve connections in the wider study area;
- Pedestrian Opportunities;
- Cyclist Opportunities; and
- Equestrian Opportunities.

2.1.2. Each opportunity has been reviewed below during the context of detailed design phase. For information on how the opportunities were reviewed in the context of the preliminary design stage, the first Review Report (*70039894-WSP-WCHAR-002, February 2023*) should be viewed. A plan showing the location of the identified opportunities is included in **Appendix B**.

2.1.3. The opportunities have been assigned the following categories to highlight if they have been realised during the detailed design stage:

- **Green** – this opportunity has been fully realised within the scheme;
- **Amber** – this opportunity has been partially realised within the scheme (this could be due to the opportunity being taken forward by alternative promoters e.g. residential developers); and
- **Red** – this opportunity has not been included within the scheme.

2.2 General opportunities

Opportunity 1: Incorporate multi-user routes that are inclusive and accessible for all non-motorised users within the scheme

2.2.1. Address the needs and access requirements of all users, to ensure that all pedestrians, cyclists and equestrians can access existing and new routes.

2.2.2. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - Multi-user routes have been created to support increased usage by pedestrians and cyclists; to the north of the scheme a shared pedestrian and cycle bridge will be provided over the bypass alignment.

Opportunity 2: Avoid severance of existing walking, cycling and equestrian routes or minimise diversion length where severance cannot be avoided

2.2.3. Where viable, severance of existing routes should be avoided. Where severance is unavoidable, mitigation measures should be added to reduce the impact caused by the project.

2.2.4. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**
 - Grade separated crossings are to be provided over the bypass at Hall Lane and Church Lane. Where Public Rights of Way routes intersect with drainage features, a suitable crossing arrangement would be provided, such as for Footpaths 26 and 21.
 - The proposed diversions and additional NMU facilities help to join-up the local network and reduce the impact caused by the project. E.g. FP26 (south of Parkers Lane), FP21 (north of Parkers Lane), FP15 & FP16 (north of Hall Lane), FP13 (north of Edges Lane) and FP7 (south of Church Lane).

Opportunity 3: Creation of a more connected and navigable Public Rights of Way (PROW) network

2.2.5. Connectivity of PROWs should be addressed within by the scheme, linking key desire lines to encourage the greatest level of use. This includes improved connectivity for residents along Church Lane towards the amenities in Long Stratton town centre and improved access to Footpath 26 for further travel on the PROW network.

2.2.6. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - Consistent with the opportunity identified within the WCHAR, access to Footpath 26 will be improved as part of the bypass proposals with the former section of the route that connects to the existing A140 through private properties to realigned to the north (outside private properties), travelling eastwards and north towards the new roundabout. Users will then cross at the Parkers Lane roundabout for onward travel.
 - A new overbridge is to be constructed for pedestrians and cyclists, accessed off Church Lane, to provide an east-west connection on the Footpath 7 alignment, so no at-grade crossing is required. This will improve travel connections into the town centre and ensure connections with existing amenities east of the bypass.

Opportunity 4: Provision of lighting, where appropriate, on walking, cycling or equestrian routes

2.2.7. Where proportionate and viable, on pedestrian, cyclist and equestrian routes within the 5km study area, lighting should be provided to improve safety and make the routes more attractive to users. However, ecologically sensitive areas should not be lit. There is an opportunity to provide appropriate lighting for users accessing the shared-use route along the west side of the bypass, making it more attractive for use throughout the year and during hours of darkness.

2.2.8. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**
 - Street lighting will not be provided, following guidance set out within South Norfolk Council's Dark Skies policy; it will therefore be limited to urban areas only to reduce impact on the environment and residents. Other forms of lighting are considered to be impractical for the proposed location..

Opportunity 5: Creation of circular routes for recreational journeys

2.2.9. Where practicable, circular routes should be created for all users in addition to more linear 'commuter routes', thus establishing attractive leisure routes. The old A140 alignment would become much more attractive for active/recreational travel when traffic is removed, creating a circular route along the A140, Parkers Lane, the new shared-use route along the bypass and onto Hall Lane. The shared-use route on the western side of the bypass is on development land and is therefore to be delivered as part of future development. Additional circular routes could use Hall Lane, Edges Lane and Footpath 16 then onto the A140. The routes would encourage journeys into the town centre, accessing existing amenities.

2.2.10. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**
 - This has partly been achieved as the proposed changes to the Public Rights of Way network seeks to join up the existing fragmented network and enhance opportunities for circular walks. Although, no specific circular routes have been created for this scheme.

Opportunity 6: Ensure NMU route proposals have a maintenance plan in place

2.2.11. Ensure that existing routes are well maintained and that there is a clear budget in place to support new PROWs proposed.

2.2.12. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - The Public Rights of Way team and Highways team within NCC understand the extents of the NMU routes to be adopted. The surfacing requirements of the routes have been considered with maintenance issues in mind. An appropriate maintenance plan is in place to ensure the new and/or improved facilities are maintained to encourage increased use by NMUs.

Opportunity 7: Preservation of A140 layby for active travel

2.2.13. Preserve access to the layby on the A140 outside the water tower, to continue to support walking and cycling trips into and around Long Stratton for access by those who live outside of the town.

The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - The layby will be kept open for use to support walking and cycling trips into and around Long Stratton for those who live outside of the town. There are no further laybys proposed on the mainline bypass.

Opportunity 8: Appropriate bridge parapet heights

2.2.14. Bridge parapet heights should be appropriate for cyclists and horse riders.

2.2.15. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**
 - The scheme is proposing a shared footway/cycleway bridge at Church Lane, with a parapet height of 1.4m above the adjacent deck surface, which is compliant with LTN1/20 guidance for cyclists.
 - The Hall Lane Overbridge has a parapet height of 1.4m high which is compliant with LTN1/20 guidance for cyclists.
 - The use of mesh screens to increase the parapet height to 1.8m was explored for Hall Lane to make the overbridge suitable for equestrian use. This has not been taken forward during the detailed design stage, as the level of traffic expected is to have low vehicle flows, making it suitable for equestrians to travel on the carriageway.

2.3 Strategic opportunities

Opportunity 9: Provide NMU facilities along the Long Stratton Bypass alignment

2.3.1. Creation of a shared use footway/cycleway along the length of the Long Stratton Bypass alignment, connecting existing severed routes and providing a continuous north-south route for NMUs.

2.3.2. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**

- The proposed shared-use facility on the western side of the bypass is to be delivered as part of the wider masterplan, outside of the scope of the bypass as the need for this will be triggered by occupation of the proposed housing, hence it is not funded by DfT as part of the highway proposals. However the bypass proposals are compatible with this future route.

Opportunity 10: Close Parker’s Lane to vehicles (except for access)

2.3.3. Parker’s Lane is 2.8m wide, with a very low number of vehicular trips (Site 10: 12 vehicle trips in March and 32 vehicle trips in October 2021 per day, compared to 33 and 16 NMU trips on average per day in March and October 2021 respectively). Therefore, there is potential to close access to vehicular traffic (except for access e.g., farming) and preserve access for NMUs. Boudicca Way is accessed from Parker’s Lane so there is further incentive to reduce traffic and increase NMU usage on the road.

2.3.4. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - Parkers Lane will be severed by the bypass alignment and will be converted to a “No through road for vehicular traffic (except for access)” on the east and west sides, with turning heads provided. NMU access rights will be retained. The road would remain as a public highway but with vehicle rights restricted via a Traffic Regulation Order. This would provide an opportunity for prioritising walking and cycling, with an east west connection, as users can cross at the Parkers Lane roundabout.

Opportunity 11: Introduce speed reduction measures to Hall Lane

2.3.5. Hall Lane is located to the south-east of Long Stratton and is current 4.5m wide with very few passing places. The 2021 surveys (Site 7) recorded 93 in March and 54 in October NMU trips and 547 (March) and 623 (October) average vehicle trips per day. A quiet lane requires vehicle usage of less than 1,000 vehicles per day and low speeds less than 35mph. Low usage was observed during the two survey periods. This would create an opportunity to improve the east-west route into Long Stratton and make it safer for pedestrians and cyclists. This would require a speed limit of 30mph or less.

2.3.6. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**
 - A speed reduction of 40mph is proposed at Hall Lane, to align with the bridge design speed.

Opportunity 12: Dedicate a quiet lane on Edge's Lane

- 2.3.7. There is an opportunity to dedicate a quiet lane for pedestrians and cyclists, as the route was observed to have low vehicle usage of less than 1,000 vehicles per day. 272 Non-Motorised Users were observed in March and 183 in October in the 2021 surveys (Site 4) on an average day. The bypass will sever Edges Lane, so the route, east or west, should be preserved as far as possible to retain this level of usage, linking up the existing provision from Hill Farm Road. This would require a speed limit of 30mph or less.
- 2.3.8. The action taken for the opportunity during the detailed design stage is:
- Outcome: **Amber**
 - Edge's Lane will not be designated as a quiet lane as the route will be a No Through Road for vehicular traffic and a turning head is to be provided. The route will remain accessible to NMUs, as bollards will be in place at the junction with Hill Farm Road.

Opportunity 13: Sustainable connections to Tasburgh

- 2.3.9. Consistent with the outcome documented within the first Review Report, this Opportunity will not be explored further as part of the Long Stratton Bypass, this has been passed onto an alternative project for consideration.

Opportunity 14: LTN 1/20 compliance review

- 2.3.10. The WCHAR Assessment report does not constitute a full LTN1/20 compliance review of the scheme. There is an opportunity to carry out a more detailed review with this guidance in mind, seeking to future proof the scheme and enhance active travel further.
- 2.3.11. The action taken for the opportunity during the detailed design stage is:
- Outcome: **Amber**
 - A review was carried out within the first Review Report, in the context of the LTN 1/20 guidance, and where reasonably practical the design has been updated.

2.4 Equestrian opportunities

Opportunity 15: Provide improved facilities for equestrian movements along Stratton Lane

- 2.4.1. During the 2021 site visit, there was evidence of equestrian usage on Stratton Lane, therefore, there is an opportunity to create an improved on-road route (suitable also for

pedestrians and cyclists) on Stratton Lane. This would also create a circular route via Stratton Lane, Church Lane, Norwich Road and Edge's Lane, where there are currently limited facilities for equestrians. A quiet lane could be introduced as low vehicle flows were observed during the surveys (Site 3) in March 2021, 39 vehicles and 62 vehicles in October 2021 on average per day. This would require a reduced speed limit of 30mph.

2.4.2. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**
 - Stratton Lane will remain open for vehicles, however due to low forecast flows, no specific quiet lane designation is required.

Opportunity 16: Equestrian waiting areas

2.4.3. Where horse riders could cross roads in proximity to the bypass, there should be an appropriately large, fenced waiting area until the traffic is clear.

2.4.4. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Red**
 - No equestrian-specific waiting areas are proposed, as once the proposed residential development is in place, it is unlikely that equestrians would seek to cross the bypass to access the town centre, as there are no Restricted Byways to the west of the A140 in close proximity, that would attract crossing movements.

2.5 Pedestrian opportunities

Opportunity 17: Improved pedestrian facilities on Church Lane

2.5.1. The survey data (Site 1) from 2021 indicates that on an average day there were 64 (March) and 33 (October) NMU trips on Church Lane. There is an opportunity to provide a dedicated section for pedestrians to FP6.

2.5.2. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - The delivery of the bypass will create a No Through Road at Church Lane, thereby reducing vehicle flows. The reduction in traffic along this link will make it attractive for pedestrians to use Church Lane to travel to Footpath 6, without further provisions.
 - Additionally, a new shared-use footway/cycleway overbridge is to be provided which will connect users at Church Lane into the town centre.

Opportunity 18: Access improvements to Footpath 19

- 2.5.3. Consistent with the outcome documented within the first Review Report, this Opportunity will not be explored further as part of the Long Stratton Bypass.

Opportunity 19: Repair damage to Footpath 15 signage

- 2.5.4. Consistent with the outcome documented within the first Review Report, this Opportunity will not be explored further as part of the Long Stratton Bypass.

Opportunity 20: Realign Footpath 13 providing the shortest route

- 2.5.5. There is an opportunity to align FP13 with correctly marked signposts providing the shortest route to connect Edge's Lane and Stratton Lane with a footbridge over the drainage ditch to navigate the users.
- 2.5.6. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - The legal unused section of Footpath 13 is to be stopped up, as well as the Common Law Dedicated footpath to the west of the bypass, with users directed to use the Edges Lane roundabout to access the areas to the east of the bypass. Wayfinding signage will be installed for new route alignment to direct users appropriately.
 - Pedestrian refuge islands will be placed between the carriageway of the bypass on all arms to assist users crossing Edge's Lane and onto their onward routes.

Opportunity 21: Improve signage to Footpath 16 and improve / remove narrow ditch crossings

- 2.5.7. Consistent with the outcome documented within the first Review Report, this Opportunity will not be explored further as part of the Long Stratton Bypass.

Opportunity 22: Improve access to Footpath 26

2.5.8. The current pedestrian route is shown to travel through private property, with no wayfinding signage. An opportunity is to realign the footpath around the private property and add wayfinding signage from the existing A140 Ipswich Road.

2.5.9. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - The outcome remains consistent with the first Review Report: access to Footpath 26 will be improved as part of the bypass proposals with the former section of the route that connects to the existing A140 through private properties to be realigned further north, travelling eastwards to link with the diverted PROW route. Users will then cross at the Parkers Lane roundabout for onward travel. Wayfinding signage will be installed for pedestrians and crossing facilities will be provided where required, where the route crosses the drainage features. This will enable users to avoid the private property.

Opportunity 23: Provide crossing facilities for Footpath 7 as it meets the Bypass alignment

2.5.10. Ensure that Footpath 7 is not severed by the Bypass alignment by providing crossing facilities / NMU bridge to ensure trips can still be made from the north of the village. 2021 surveys (Site 2) record an average of 88 NMUs in March and 70 NMUs in October using the route per day, suggesting good use of the route.

2.5.11. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Green**
 - A new shared-use pedestrian / cyclist overbridge is to be provided which will connect users on Church Lane into the town centre and to the facility along the proposed bypass alignment. Appropriate signage will be placed to direct users to the new facility and into to the town centre.

2.6 Cyclist opportunities

Opportunity 24: Upgrade Footpath 21 to shared use footway / cycleway

- 2.6.1. The 2021 survey indicated a low level of usage, possibly due to the poor access from the A140. Improving access through the new residential development area once built could enhance usage, alongside an upgrade to accommodate cyclists and pedestrians.
- 2.6.2. The action taken for the opportunity during the detailed design stage is:
- Outcome: **Amber**
 - Footpath 21 is situated in the middle of an existing agricultural field, which is being retained by the landowner for farming use and is therefore not suitable for creating a shared-use facility. To the west of the bypass, the Footpath is replaced with a footway linking the old A140 to the bypass.
 - However, a new 3m wide shared use facility footpath is being provided on the western side of the bypass by the mixed-use development promoters, on the southern side of Parkers Lane. A further connection to the eastern section of Parkers Lane has been explored through the utilisation of the lagoon access track, however, this will not be taken forward due to health and safety concerns. As adequate separation cannot be created between users and the pond.

Opportunity 25: Improved town centre cycle facilities

- 2.6.3. Improve cycle facilities in Long Stratton Town Centre - addition of crossings and more/improved cycle parking at key destinations.
- 2.6.4. The action taken for the opportunity during the detailed design stage is:
- Outcome: **Amber**
 - This has been considered but is more relevant to the wider masterplan development proposals coming forward which would increase demand for usage of the town centre by cyclists. This Opportunity will not be explored further as part of the Long Stratton Bypass.

3 Review of preliminary design stage opportunities

3.1 Introduction

- 3.1.1. Additional opportunities have been identified at the end of the preliminary design stage and before the commencement of the detailed design stage. The opportunities have been developed through discussions with the Lead Assessor and the wider design team.
- 3.1.2. The opportunities have been assigned the following categories to highlight if they have been realised during the detailed design stage:
- **Green** – this opportunity has been fully realised within the scheme;
 - **Amber** – this opportunity has been partially realised within the scheme (this could be due to the opportunity being taken forward by alternative promoters e.g. residential developers); and
 - **Red** – this opportunity has not been included within the scheme.

3.2 Further general opportunities

Opportunity 26: New routes, where traffic flows are predicted to exceed 2,000 daily movements, should be segregated where they interact with mixed traffic, to protect vulnerable road users

- 3.2.1. This opportunity was identified following the LTN 1/20 compliance review, within the ‘Safe’ principle.
- 3.2.2. The action taken for the opportunity during the detailed design stage is:
- Outcome: **Amber**
 - Consistent with the first Review Report, cycleways along Ipswich Road will not be introduced as part of the bypass scheme and instead have been shared with the developers of the proposed housing developments, as the bypass scheme does not directly increase travel demand but may allow suppressed demand to be increased by reducing traffic on the former A140.
 - The width of the Hall Lane overbridge will be 5.5m with a 2.5m wide footway; cyclists and equestrians would then be able to use the Hall Lane carriageway which is expected to experience low traffic conditions.

- The eastern side of Edges Lane will be classified as a ‘No Through Road for Vehicular Traffic’, therefore, a segregated route will not be required. Additionally, the Edges Lane connection to the mixed-use development area is outside the scope of bypass delivery.

Opportunity 27: Ensure suitable widths of routes are provided where shared use routes are proposed to carry up to 300 pedestrians and 300 cyclists per hour

3.2.3. This opportunity was identified following the LTN 1/20 compliance review, within the ‘Comfortable’ principle.

3.2.4. The action taken for the opportunity during the detailed design stage is:

- Outcome: **Amber**
 - The Hall Lane overbridge is designed to have a 2.5m footway in place on the northern side; the predicted flows will be far lower than 300 per hour as defined within LTN 1/20 which suggests when a segregated facility is needed, therefore, it is deemed to be sufficient for shared use on this rural edge.

3.3 Further strategic opportunities

Opportunity 28: Ensure that desire lines crossing the existing A140 Ipswich Road from the proposed mixed-use development to the east and west of the Bypass are catered for to encourage use of sustainable travel

3.3.1. Consistent with the outcome documented within the first Review Report, this Opportunity will not be explored further as part of the Long Stratton Bypass. This Opportunity is more appropriate to be dealt with by the housing development, as increased demand for crossing movements would be generated by the housing scheme, rather than the Long Stratton Bypass scheme.

Opportunity 29: The scheme should seek to provide improved connections to the east of the Bypass, such that existing and future residents have access to the Public Rights of Way and Long Stratton Town Centre

3.3.2. This opportunity was identified following the LTN 1/20 compliance review, within the ‘Coherent’ principle.

3.3.3. The action taken for the opportunity during the detailed design stage is:

■ Outcome: **Green**

- The bypass proposal includes for improved connections to Footpaths 7, 13 and 21, which would improve connections for those living to the east of Long Stratton Town Centre. Linkages to the proposed residential developments will be raised for inclusion with the residential developers.

Opportunity 30: Where crossing points are proposed at the Bypass, where flows are predicted to exceed 8,000 vehicles per day and speed limits are 50mph, signalised or grade separated crossings to be provided

3.3.4. This opportunity was identified following the LTN 1/20 compliance review, within the ‘Safe’ principle.

3.3.5. The action taken for the opportunity during the detailed design stage is:

■ Outcome: **Amber**

- Signalised and grade separated crossing at roundabouts are not proposed as part of the bypass scheme. Ipswich Road and Norwich Road leading into the town centre, will likely experience reduced vehicle flows following the delivery of the bypass. Additionally, providing a signalised crossing at the roundabouts will not help achieve the main objective for the Major Road Network – which is to provide an alternative route around the town, with an enhanced local road network and improved journey time, making the route more reliable, quicker and safer.
- Church Lane will be provided with a grade-separated pedestrian / cyclist bridge across the bypass alignment, creating an opportunity for safe crossing.
- An additional grade separated bridge will also be available where Footpath 7 crosses the proposed bypass alignment.

Opportunity 31: Ensure noise levels from the Bypass do not adversely affect the use and enjoyment of adjacent local non-motorised user routes

3.3.6. This opportunity was identified following the LTN 1/20 compliance review.

3.3.7. The action taken for the opportunity during the detailed design stage is:

■ Outcome: **Green**

- Consistent with the first Review Report, the proposed development on the western side of the bypass will be screened by a 2m high noise bund to minimise impact.
- Additionally, significant landscaping is proposed on the eastern side of the bypass scheme which will help to screen the proposed NMU routes. The landscaping will involve scrubland grassland and wildflower grasslands.

3.4 Further pedestrian opportunities

Opportunity 32: Provide a pedestrian connection from the Church Lane roundabout into the town centre, on the eastern side of the existing A140

- 3.4.1. Consistent with the outcome documented within the first Review Report, this Opportunity will not be explored further as part of the Long Stratton Bypass.

3.5 Further cyclist opportunities

- 3.5.1. No further cyclist opportunities have been identified.

3.6 Further equestrian opportunities

- 3.6.1. No further equestrian opportunities have been identified.

4 Detailed design stage review opportunities

- 4.1.1. This section documents any user-related opportunities identified during the detailed design phase. The opportunities have been developed through discussions with the Lead Assessor and the wider design team.

4.2 General opportunities

Opportunity 33: Create a shared pedestrian / cycle route to connect users travelling eastbound on the A140 to the former Ipswich Road

- 4.2.1. A shared pedestrian and cycle route is proposed to connect the former A140 Ipswich Road to the proposed bypass alignment, to the west of the scheme. This will enable pedestrians and cyclists traveling towards the Town Centre to divert off the bypass alignment and take a shorter route into Long Stratton.
- 4.2.2. The action taken for the opportunity during the detailed design stage is:
- Outcome: Green – this is now included in the scheme

4.3 Strategic opportunities

Opportunity 34: Create a shared use public NMU route along the maintenance access tracks proposed on the east side of the Long Stratton Bypass

- 4.3.1. This Opportunity seeks to make use of the proposed access track to the east of the Long Stratton Bypass alignment and provide new sections to complete a pedestrian and cycle route that runs the length of the bypass, creating a complete north-south link. This would connect into the crossing points at Edge's Lane and Parker's Lane, to improve access into and around Long Stratton.
- 4.3.2. New sections would be required south of the Edge's Lane roundabout, south of the Hall Lane overbridge and a crossing point created at the southern end of the bypass to connect users with the former Ipswich Road.
- 4.3.3. The action taken for the opportunity during the detailed design stage is:
- Outcome: Red – Not to be Taken Forward

- This is discounted because there are health and safety issues associated with placing vulnerable users in close proximity to drainage basins and potential conflicts with maintenance vehicles.

Opportunity 35: Connect Wacton RB38, RB42 and RB40 with Pulham Market FP1

- 4.3.4. This Opportunity seeks to provide a connection between existing PROWs (Wacton Restricted Byway 38, Wacton Restricted Byway 42, Wacton Restricted Byway 40 and Pulham Market Footpath 1. The new link would be along the western boundary of the existing drain towards the Ipswich Road. An informal crossing point with dropped kerbs could be provided to allow for users to cross from Wacton RB40 to Pulham Market FP1, for onward connections to Parker's Lane.
- 4.3.5. The action taken for the opportunity during the detailed design stage is:
- Outcome: Amber – To be considered by others
 - This is discounted because it goes beyond the red line boundary of the proposed scheme and impacts on third party landowners who were not consulted as part of the planning application. This could however, in future be considered by the Public Rights of Way team.

Opportunity 36: Connect the Church Lane overbridge NMU route to the maintenance track turning head to the east of the Long Stratton Bypass

- 4.3.6. This Opportunity considers a pedestrian and cycle connection between the proposed NMU overbridge at Church Lane, towards the proposed access tracks to the east of the Long Stratton Bypass alignment. This would create a north-south link from Church Lane to Edge's Lane, improving access into and around Long Stratton.
- 4.3.7. The action taken for the opportunity during the detailed design stage is:
- Outcome: Red – Not to be Taken Forward
 - This is discounted because there are health and safety issues associated with placing vulnerable users in close proximity to drainage basins and potential conflicts with maintenance vehicles.

4.4 Pedestrian opportunities

- 4.4.1. There have been no significant changes to the design, therefore, no further pedestrian opportunities have been identified.

4.5 Cyclist opportunities

- 4.5.1. There have been no significant changes to the design, therefore, no further cyclist opportunities have been identified.

4.6 Equestrian opportunities

- 4.6.1. There have been no significant changes to the design, therefore, no further equestrian opportunities have been identified.

5 Conclusion and next steps

- 5.1.1. WSP have been appointed by Norfolk County Council (NCC) to provide transport consultancy guidance for the proposed Long Stratton Bypass.
- 5.1.2. A Walking, Cycling and Horse-Riding Assessment Report (WCHAR) was produced in July 2022 at the preliminary design stage, in accordance with DMRB GG 142, ahead of the design work to identify the likely volumes variety, infrastructure and needs of existing non-motorised users within the 5km study area of the proposed scheme. The findings of the WCHAR have been used to inform the design of the proposed scheme.
- 5.1.3. The first WCHAR Review Report was produced at the preliminary design stage in February 2023, within the required 12 months period, following the completion of the Assessment Report.
- 5.1.4. This second Review Report has been produced during the detailed design stage to continue to document the origin of proposals and provide an audit on those taken forward or discontinued.

6 WCHAR review team statement

6.1.1. As Lead Assessor, I confirm that this Walking, Cycling and Horse-Riding Review Report has been compiled in accordance with DMRB GG142 and thus records all design team deliberations and decisions relating to walking, cycling and horse-riding issues and opportunities.

6.1.2. The Walking, Cycling and Horse-Riding Review was undertaken by the following team:

Walking, cycling and horse-riding lead assessor

Paula Cuthbertson

Associate Director

WSP, Cambridge

Walking, cycling and horse-riding assessor

Hattie Gibbs

Senior Engineer

WSP, Cambridge

6.1.3. As the design team leader, I confirm that the review has been undertaken at the appropriate stage of the highway scheme development.

6.1.4. I confirm that in my professional opinion the appointed Lead Assessor has the appropriate experience for the role making reference to the expected competencies contained in GG 142.

Design team leader

Rod Kelly

Team Manager, Highways

Norfolk County Council

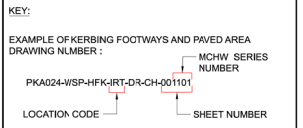


Appendix A – Proposed Long Stratton Bypass Layout

The plans used to produce this Review Report, developed for the Detailed Design phase, are included within this report.



- NOTES:
- DO NOT SCALE FROM THIS DRAWING.
 - THIS DRAWING TO BE PRINTED IN COLOUR.
 - LOCATION OF VIEWPORTS SHOWN WITHIN THE SCHEME EXTENTS DRAWN AT 1:500 SCALE, INCLUDING THE HON, HSC, HFE, HPV, HFK, HKM SERIES DRAWINGS.



- IRT - IPSWICH ROAD TIE-IN.
- ML1_JR - IPSWICH ROAD.
- ML1 - MAIN LINE SECTION 1 (BETWEEN IPSWICH ROAD TIE-IN AND PARKER'S LANE ROUNDABOUT).
- ML1_OP - OLD PARKER'S LANE.
- ML1 - OLD PARKER'S LANE.
- RPL - PARKER'S LANE ROUNDABOUT.
- PLJ - PARKER'S LANE JUNCTION (FROM PLR TO JUNCTION WITH IPSWICH ROAD).
- ML2 - MAIN LINE SECTION 2 (BETWEEN PARKER'S LANE ROUNDABOUT AND HALL LANE OVERBRIDGE).
- BHL - HALL LANE OVERBRIDGE.
- SLJ - STAR LANE (INCLUDING JUNCTION WITH IPSWICH ROAD).
- ML3 - MAIN LINE SECTION 3 (BETWEEN HALL LANE OVERBRIDGE AND RHEES GREEN ROUNDABOUT).
- RRG - RHEES GREEN ROUNDABOUT.
- RRG - EL - EDGES LANE.
- ML4 - MAIN LINE SECTION 4 (BETWEEN RHEES GREEN ROUNDABOUT AND CHURCH LANE OVERBRIDGE).
- ML5 - MAIN LINE 5 (BETWEEN CHURCH LANE OVERBRIDGE AND NORTHERN TIE-IN).
- BCL - CHURCH LANE OVERBRIDGE.
- ML5_CL - CHURCH LANE LINK (INCLUDING THE JUNCTION CHURCH LANE).
- NTI - NORTHERN TIE-IN.
- NTL_NR - NORWICH ROAD.

Rev.	Date	Description	Drawn/Chk	RC	JN	App'd
C01	2023/05/17	For Tender				



Project Title: PKA024
Long Stratton Bypass

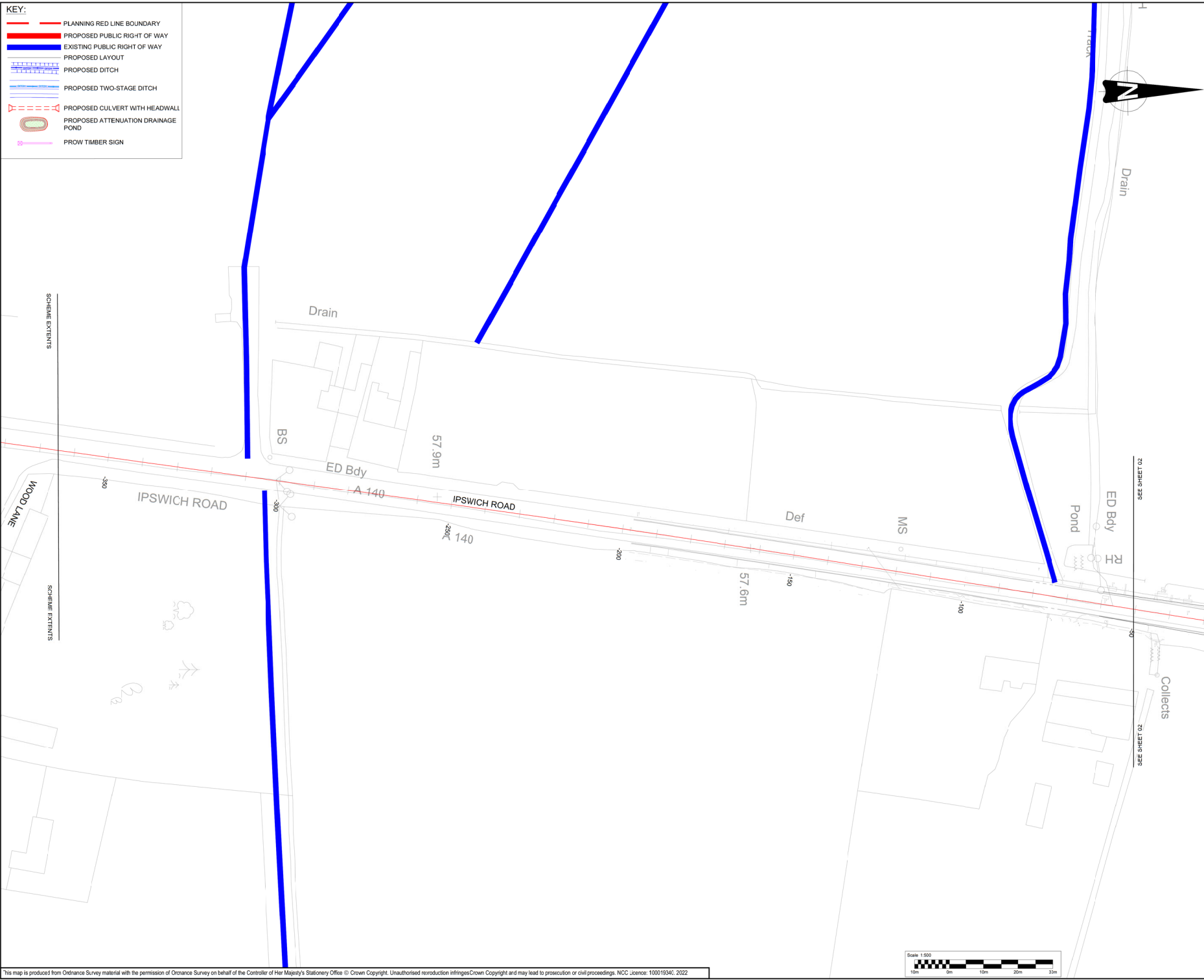
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Subsidiary	Status	Accepted (by Client)			Stage
AS					5
Drawing Number	PKA024-WSP-GEN-LSB-DR-CH-000001				Revision
					C01

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KEY:

	PLANNING RED LINE BOUNDARY
	PROPOSED PUBLIC RIGHT OF WAY
	EXISTING PUBLIC RIGHT OF WAY
	PROPOSED LAYOUT
	PROPOSED DITCH
	PROPOSED TWO-STAGE DITCH
	PROPOSED CULVERT WITH HEADWALL
	PROPOSED ATTENUATION DRAINAGE POND
	PROW TIMBER SIGN



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CD1	2023/05/17	For Tender	RC	JN
Rev.	Date	Description	Drawn/Chk	Appr'd

Client

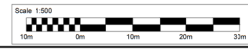
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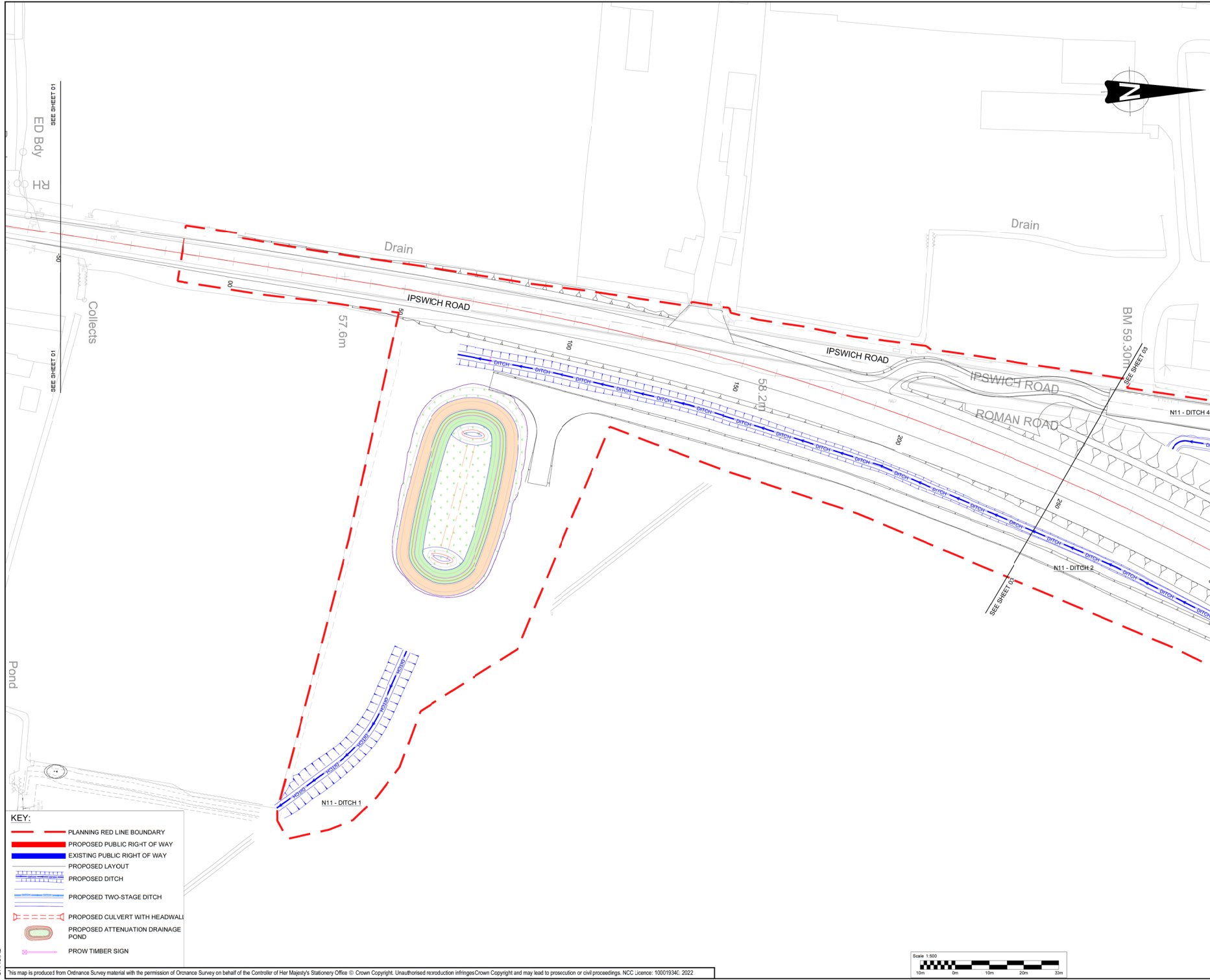
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Drawing Title: Detailed Design PROW Diversion Drawings Sheet 1 of 23

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Drawing Number	PKA024-WSP-GEN-LSB-DR-CH-000161				Revision
					C01



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Rev.	Date	Description	Drawn	RC	JN
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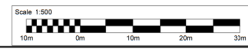
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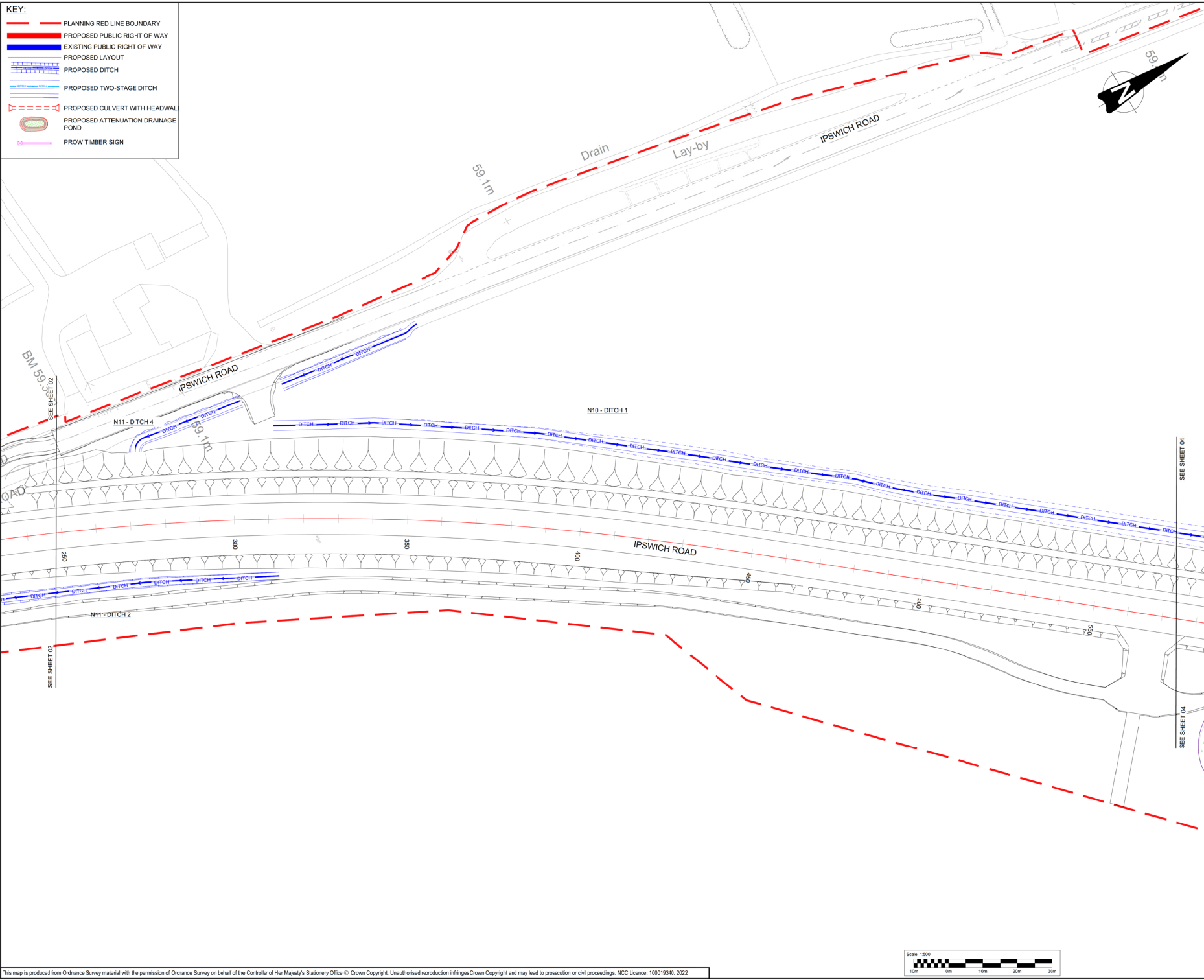
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Drawability	Stake	Accepted (by Client)			Stage
AS					S
Drawing Number	PKA024-WSP-GEN-LSB-DR-CH-000162				Revision
					C01

- KEY:**
- PLANNING RED LINE BOUNDARY
 - PROPOSED PUBLIC RIGHT OF WAY
 - EXISTING PUBLIC RIGHT OF WAY
 - PROPOSED LAYOUT
 - PROPOSED DITCH
 - PROPOSED TWO-STAGE DITCH
 - PROPOSED CULVERT WITH HEADWALL
 - PROPOSED ATTENUATION DRAINAGE POND
 - PROW TIMBER SIGN



KEY:

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Rev	Date	Description	Drawn	App'd
P01	2023/05/17	For Tender	RC	JN

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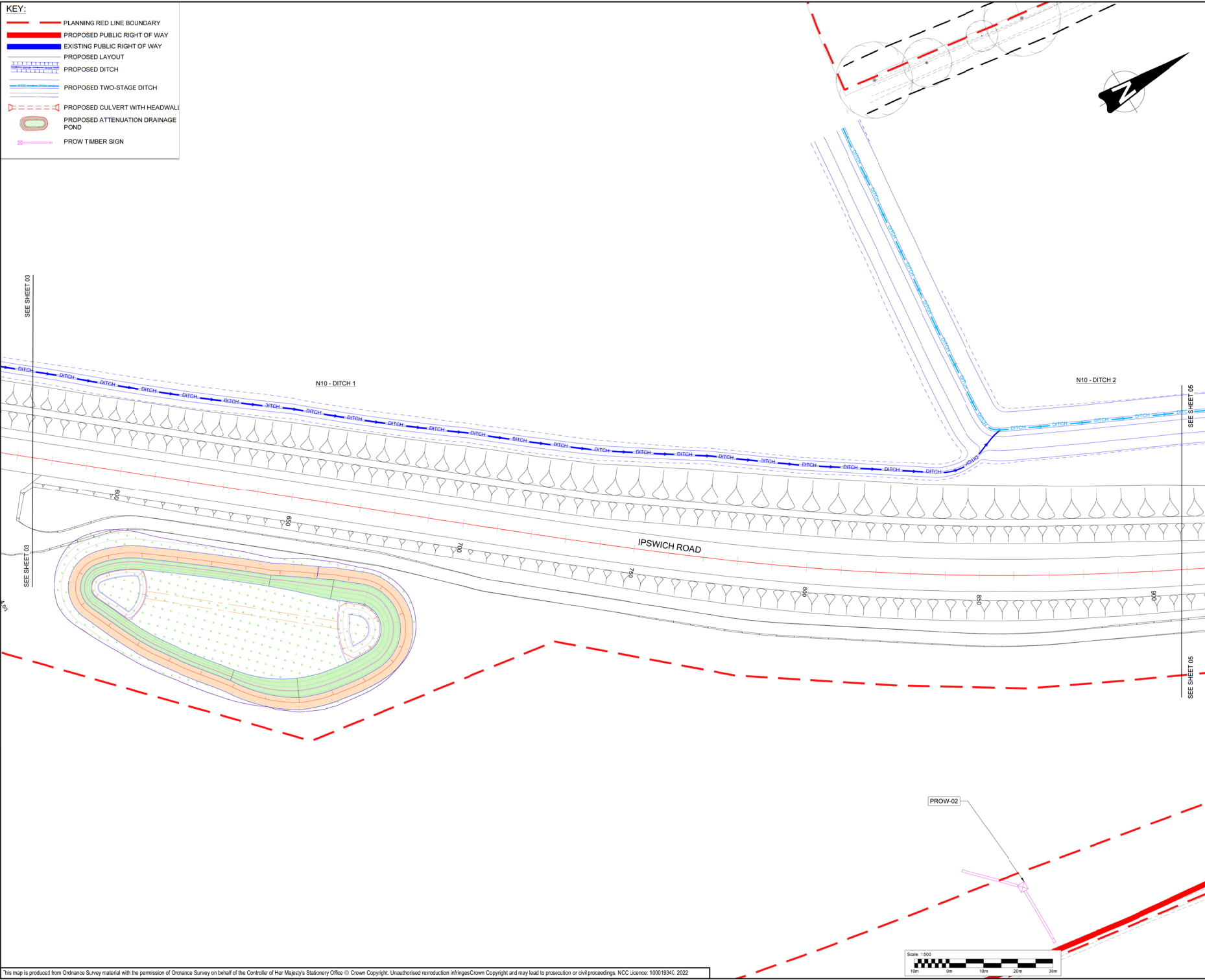
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Drawing Title		Detailed Design PROW Diversion Drawings Sheet 3 of 23			
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Drawability	Drawn	Accepted (by Client)			Stage
A5					5
Drawing Number		PKA024-WSP-GEN-LSB-DR-CH-000163			Revision
					C01

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Rev.	Date	Description	Drawn/Chk	RC	JN
CD1	2023/05/17	For Tender			

Client



Project Title					
PKA024 Long Stratton Bypass					
Drawing Title					
Detailed Design PROW Diversion Drawings Sheet 4 of 23					
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN
Suitability	Stage	Accepted (by Client)			Stage
A5					S
Drawing Number					Revision
PKA024-WSP-GEN-LSB-DR-CH-000164					C01

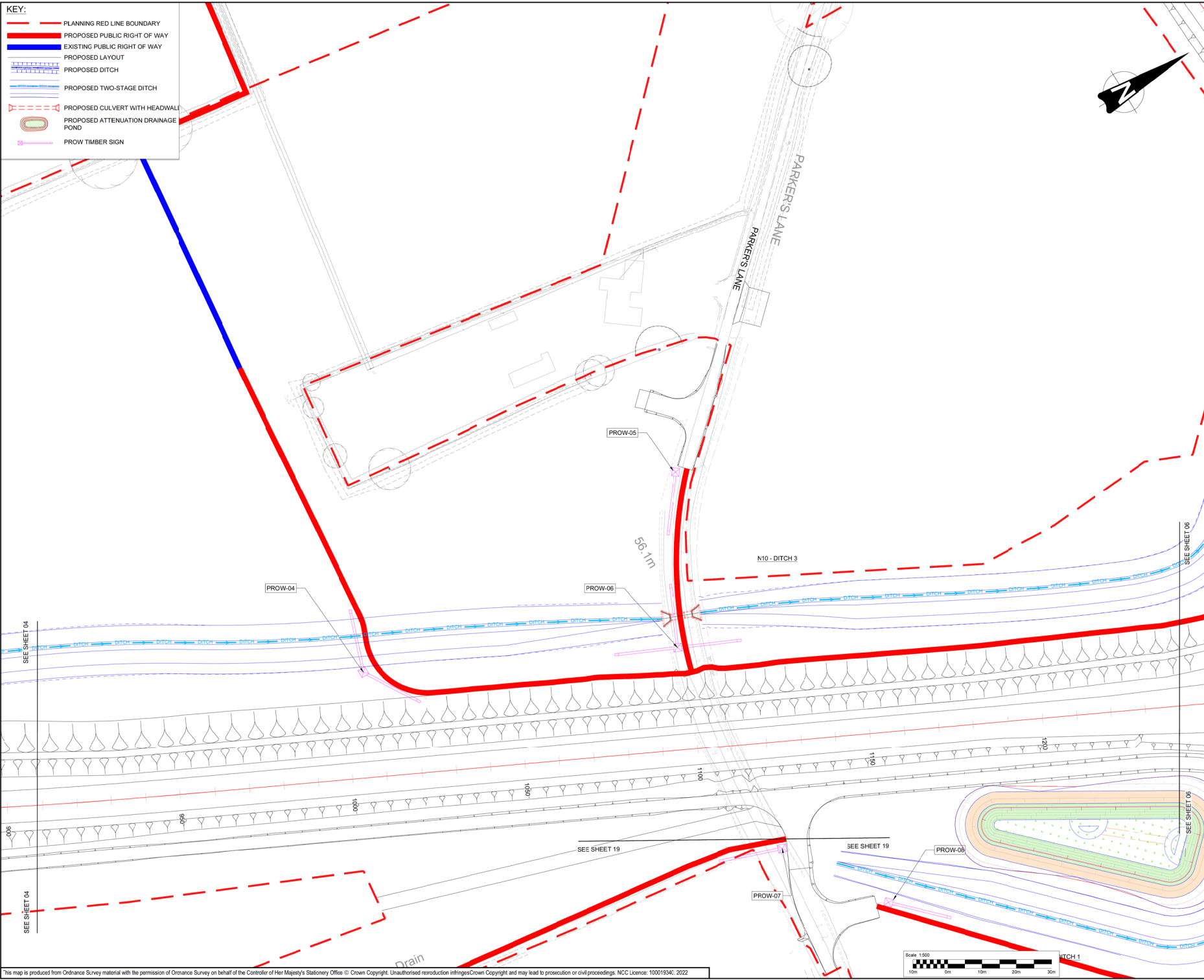
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KEY:

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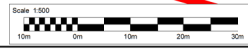
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001	2023/05/17	For Tender			

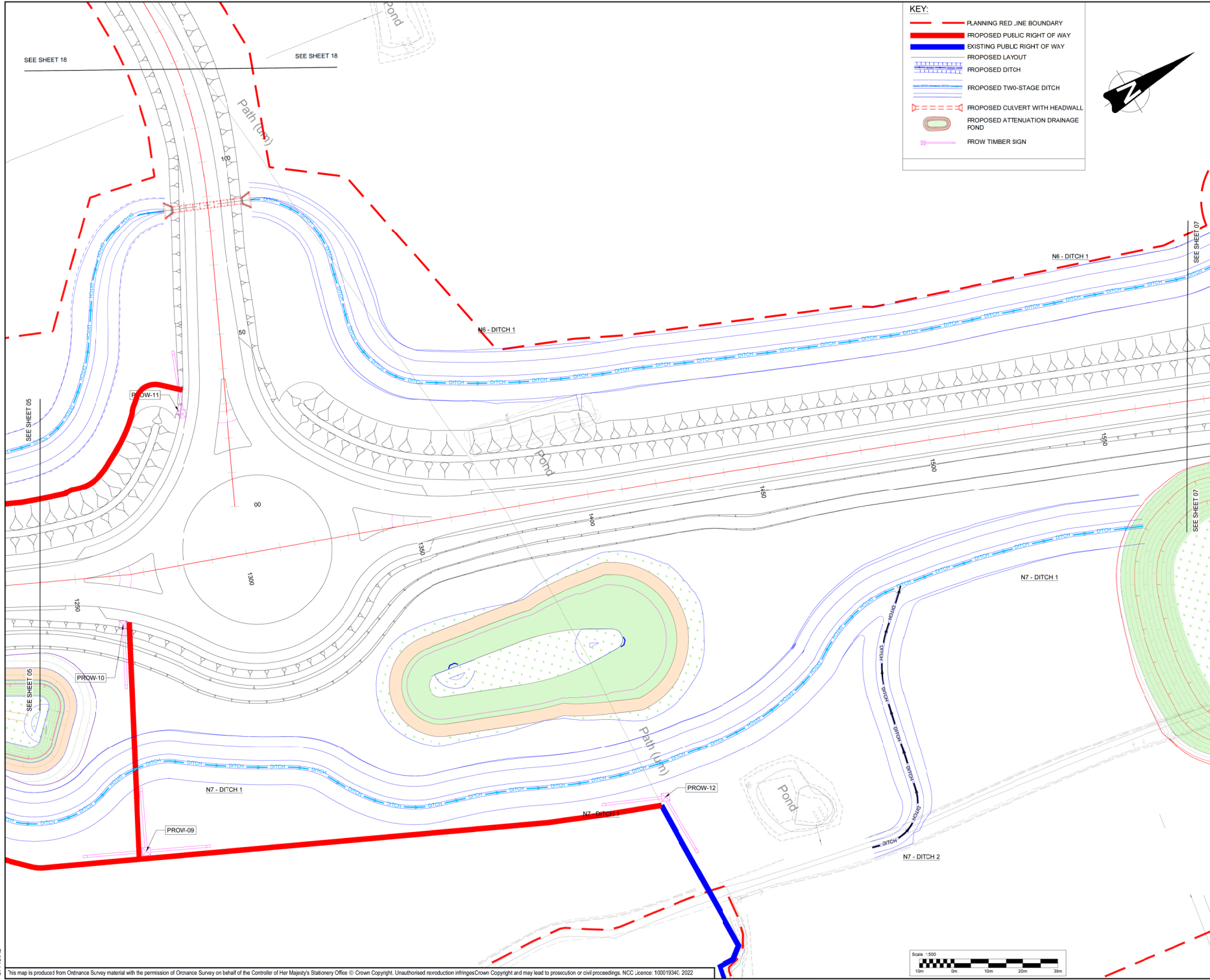
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Drawing Title	Detailed Design PROW Diversion Drawings Sheet 5 of 23

Scale @ A1	Date	Drawn	Check	Approved	Authorised
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					C01





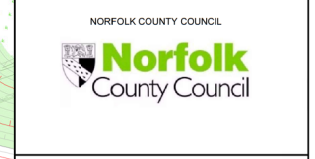
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Rev	Date	Description	Drawn/Chk	RC	JN
CD1	2023/05/17	For Tender			



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Project Title: PKA024 Long Stratton Bypass

Drawing Title: Detailed Design PROW Diversion Drawings Sheet 6 of 23

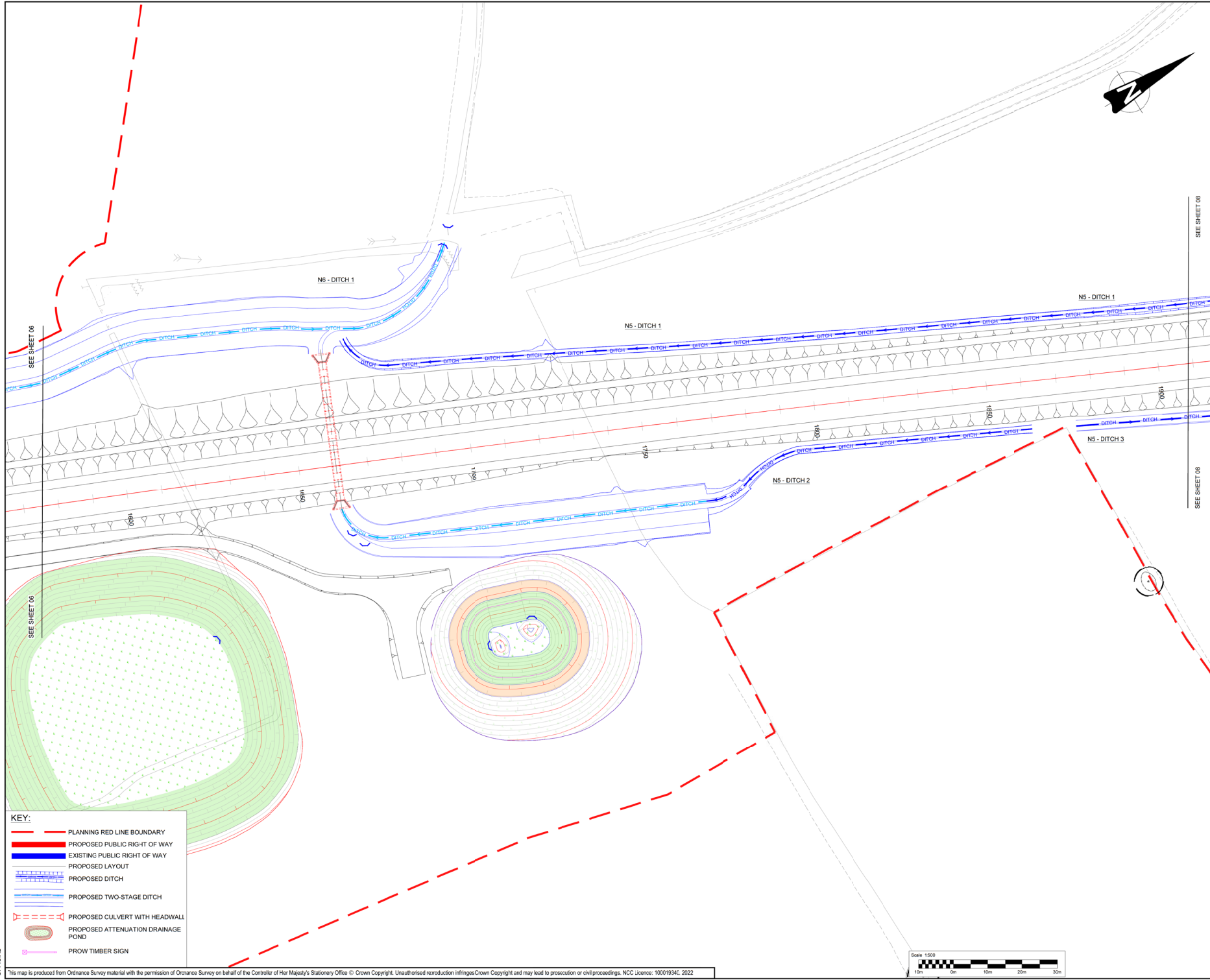
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN

Drawability	Status	Accepted (by Client)	Stage	Revision
AS			5	

Drawing Number: PKA024-WSP-GEN-LSB-DR-CH-000166

Revision: C01

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- NOTES:**
- DO NOT SCALE FROM THIS DRAWING.
 - THIS DRAWING TO BE PRINTED IN COLOUR.
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 - DESIGN PROPOSALS MADE ARE BASED ON OS MAPPING AND A TOPOGRAPHICAL SURVEY (PKA024-WSP-VTO-LSB-M3-VT-000001) PROVIDED ON NOVEMBER 3, 2022. THE CONTRACTOR IS TO ENSURE THAT THE PROPOSED LAYOUT TIES IN WITH THE EXISTING INFRASTRUCTURE ON SITE.
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Rev.	Date	Description	Drawn/CHK	RC	JN
CD1	2023/05/17	For Tender			

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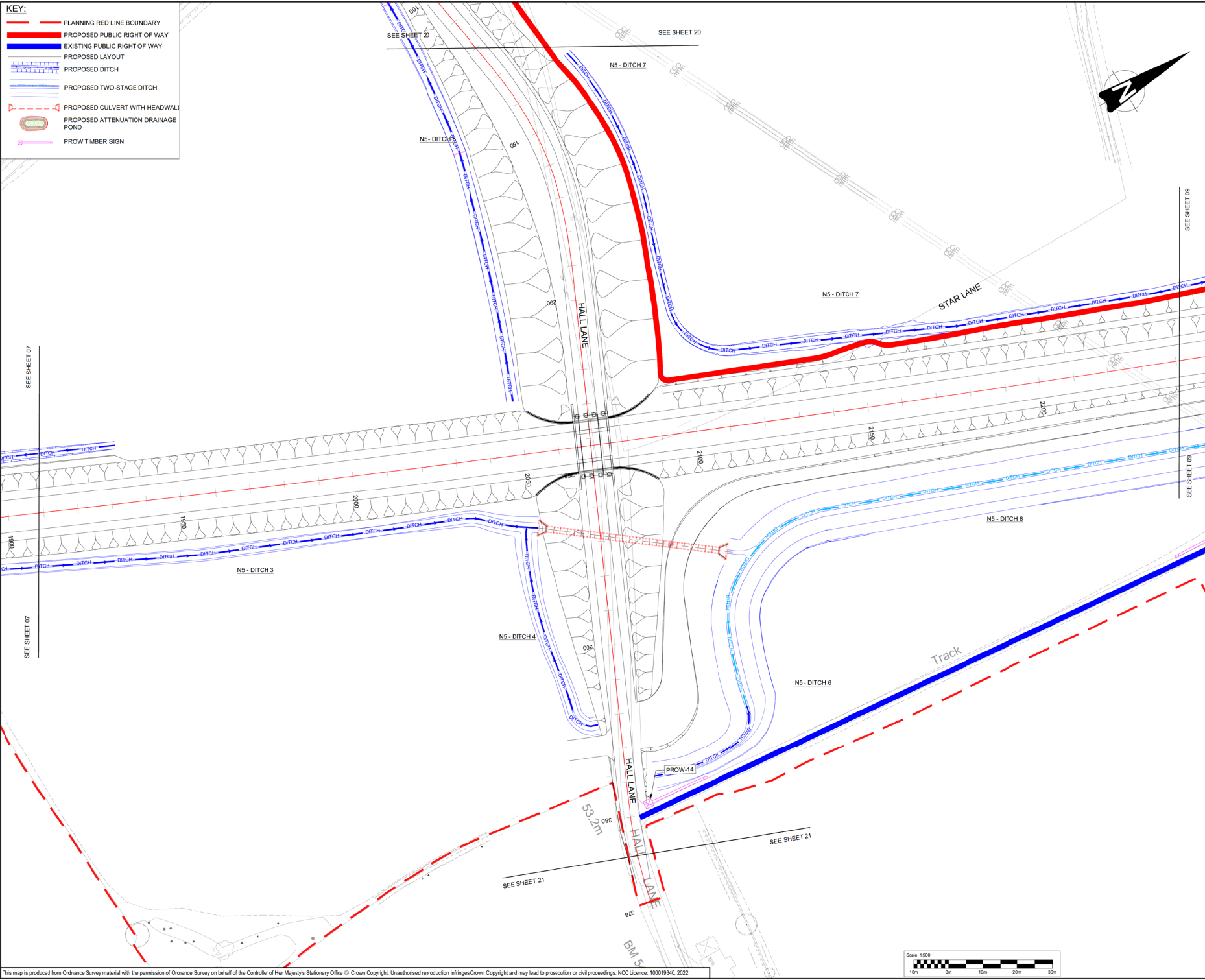
Project Title		PKA024 Long Stratton Bypass			
Drawing Title		Detailed Design PROW Diversion Drawings Sheet 7 of 23			
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN
Drawn	Check	Approved	Authorised		
AS		Accepted (by Client)			S
Drawing Number		PKA024-WSP-GEN-LSB-DR-CH-000167			Revision
					C01

KEY:

- PLANNING RED LINE BOUNDARY
- PROPOSED PUBLIC RIGHT OF WAY
- EXISTING PUBLIC RIGHT OF WAY
- PROPOSED LAYOUT
- PROPOSED DITCH
- PROPOSED TWO-STAGE DITCH
- PROPOSED CULVERT WITH HEADWALL
- PROPOSED ATTENUATION DRAINAGE POND
- PROW TIMBER SIGN

KEY:

- PLANNING RED LINE BOUNDARY
- PROPOSED PUBLIC RIGHT OF WAY
- EXISTING PUBLIC RIGHT OF WAY
- PROPOSED LAYOUT
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- PROPOSED CULVERT WITH HEADWALL
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- PROW TIMBER SIGN



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Rev.	Date	Description	Drawn	Check	App'd
CD1	2023/05/17	For Tender	RC	JN	

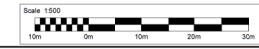
Client

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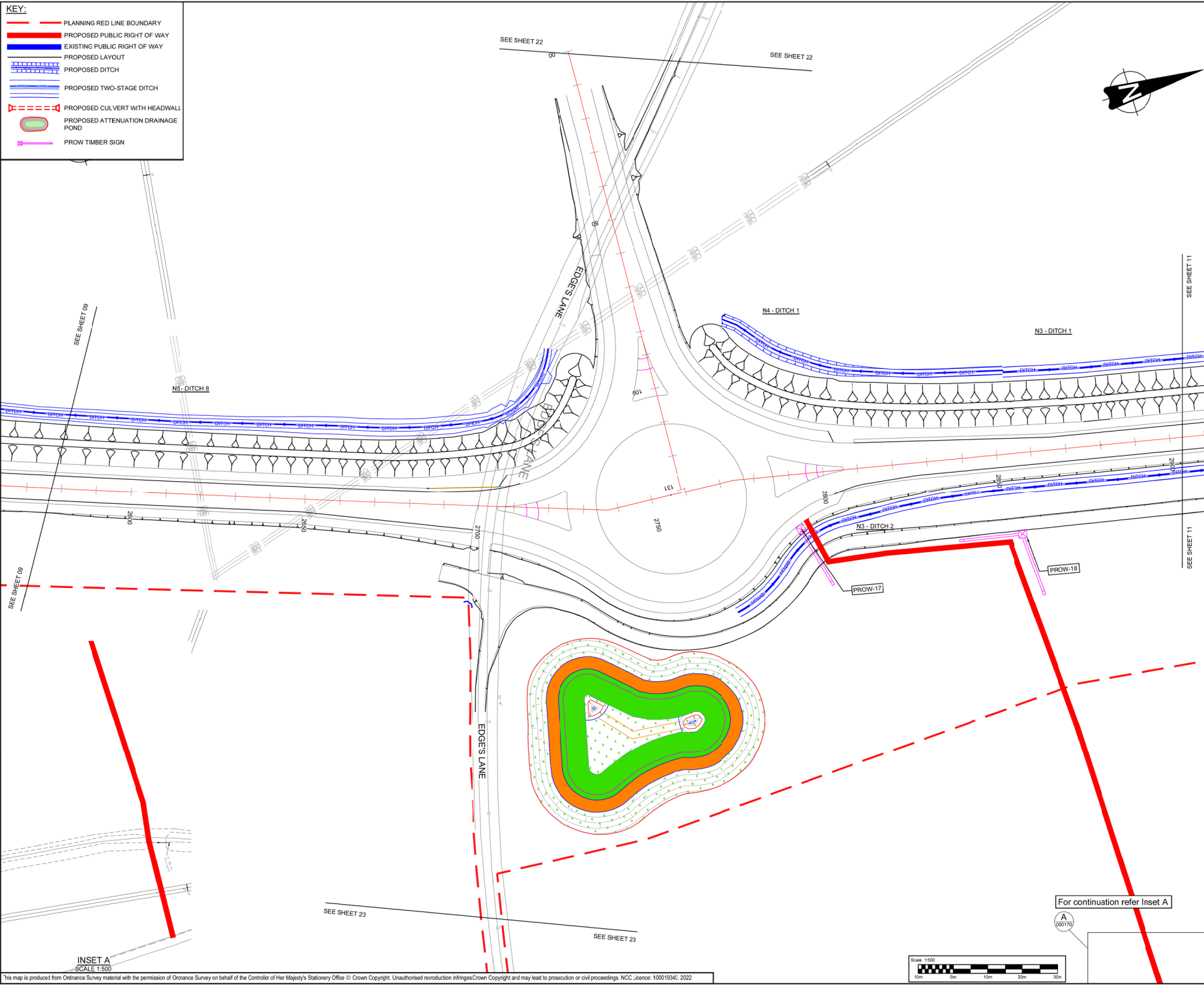
Project Title		PKA024 Long Stratton Bypass			
Drawing Title		Detailed Design PROW Diversion Drawings Sheet 8 of 23			
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN
Suitability	Status	Accepted (by Client)			Stage
A5					5
Drawing Number		PKA024-WSP-GEN-LSB-DR-CH-000168			Revision
					C01

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KEY:

	PLANNING RED LINE BOUNDARY
	PROPOSED PUBLIC RIGHT OF WAY
	EXISTING PUBLIC RIGHT OF WAY
	PROPOSED LAYOUT
	PROPOSED DITCH
	PROPOSED TWO-STAGE DITCH
	PROPOSED CULVERT WITH HEADWALL
	PROPOSED ATTENUATION DRAINAGE POND
	PROW TIMBER SIGN



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Rev.	Date	Description	Drawn/CHK	App'd
CD1	2023/05/17	For Tender	RC	JN

Client

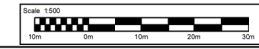
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Project Title: PKA024 Long Stratton Bypass

Drawing Title: Detailed Design PROW Diversion Drawings Sheet 10 of 23

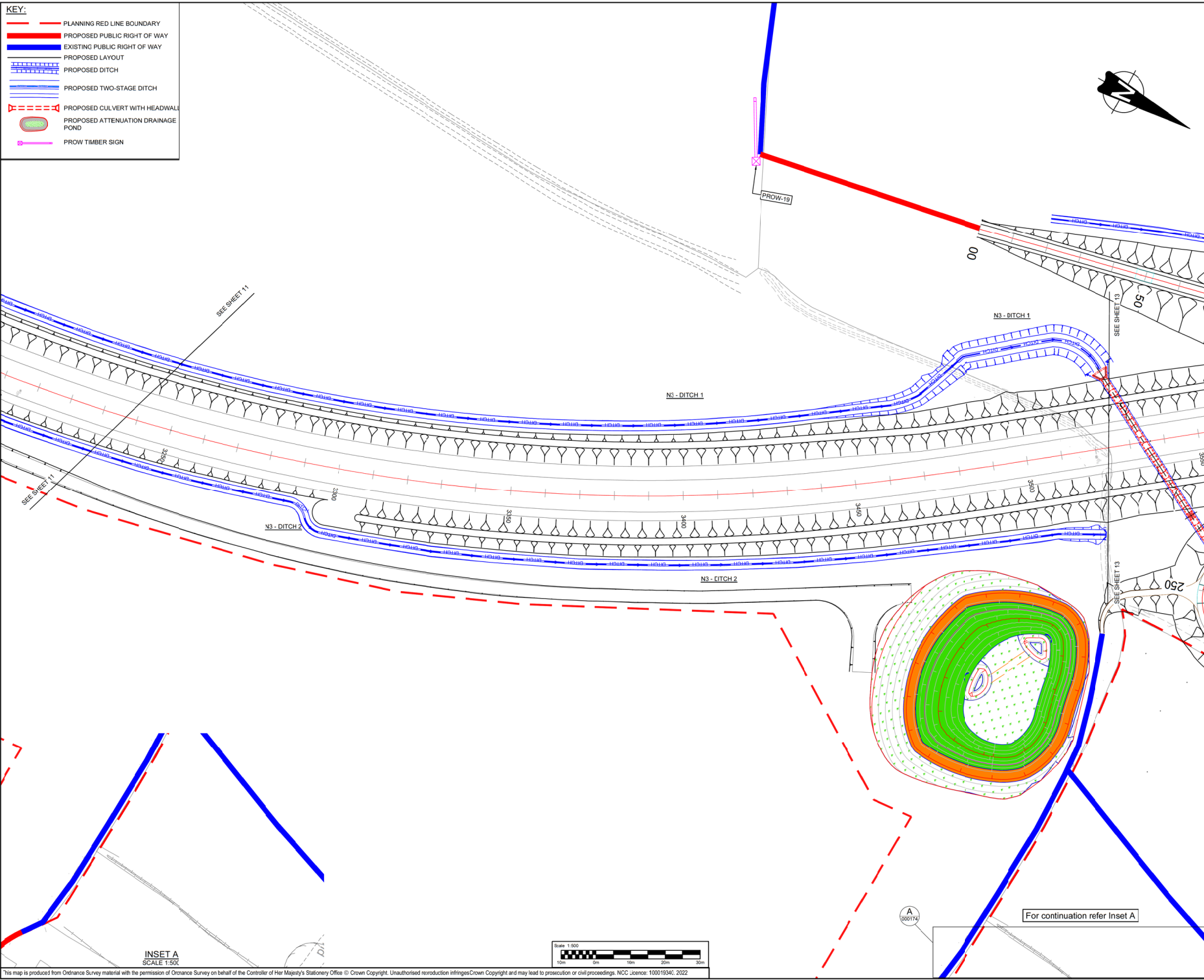
Scale	@ A1	Date	Drawn	Check	Approved	Authorised	
1:500		17/05/2023	NH	SD	RC	JN	
Availability	AS	Stage	Accepted (by Client)			5	
Drawing Number	PKA024-WSP-GEN-LSB-DR-CH-000170					Revision	C01



For continuation refer Inset A

KEY:

- PLANNING RED LINE BOUNDARY
- PROPOSED PUBLIC RIGHT OF WAY
- EXISTING PUBLIC RIGHT OF WAY
- PROPOSED LAYOUT
- PROPOSED DITCH
- PROPOSED TWO-STAGE DITCH
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- PROPOSED ATTENUATION DRAINAGE POND
- PROW TIMBER SIGN

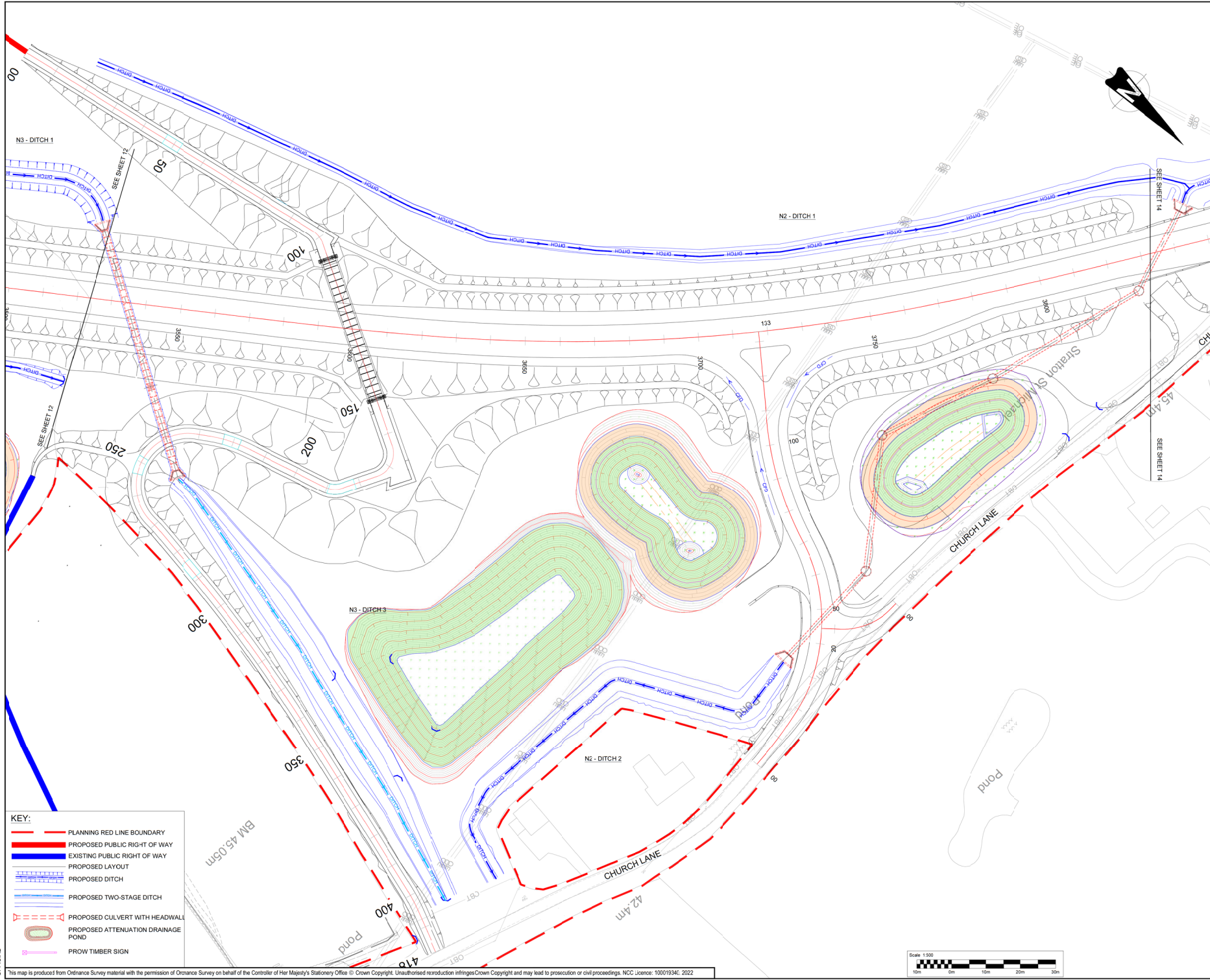


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Rev.	Date	Description	Drawn	Check	Appr'd
CD1	2023/05/17	For Tender	RC	JN	



Project Title		PKA024 Long Stratton Bypass			
Drawing Title		Detailed Design PROW Diversion Drawings Sheet 12 of 23			
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN
Drawn	Check	Approved	Authorised		
A5	Accepted (by Client)			S	
Drawing Number					Revision
PKA024-WSP-GEN-LSB-DR-CH-000112					C01



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CD1	2023/05/17	For Tender	RC	JN
Rev.	Date	Description	Drawn	App'd
			CHK	

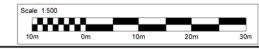
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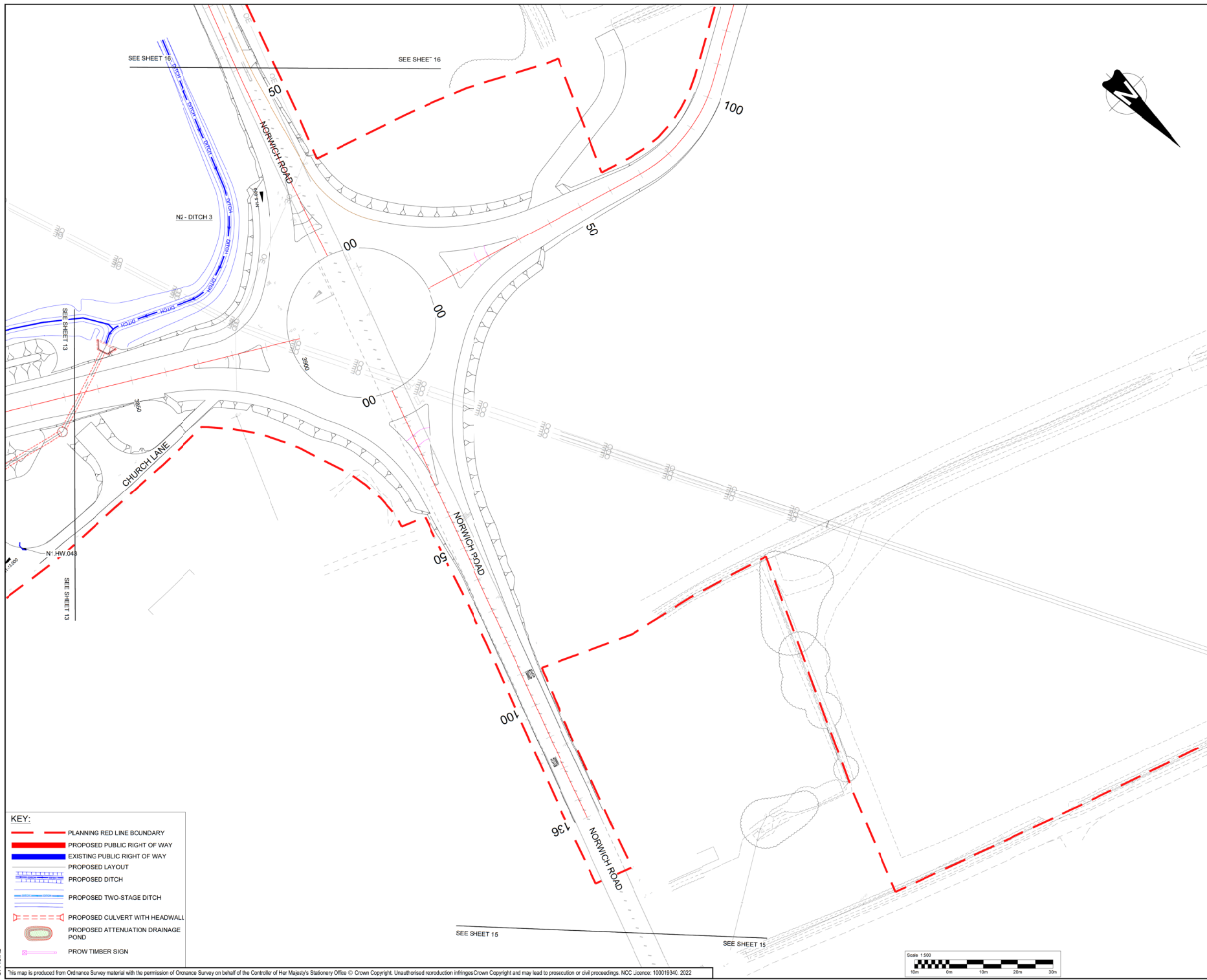
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Project Title		PKA024 Long Straton Bypass			
Drawing Title		Detailed Design PROW Diversion Drawings Sheet 13 of 23			
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN
Drawability	Status	Accepted (by Client)			Stage
A5					5
Drawing Number		PKA024-WSP-GEN-LSB-DR-CH-000173			Revision
					C01

- KEY:**
- PLANNING RED LINE BOUNDARY
 - PROPOSED PUBLIC RIGHT OF WAY
 - EXISTING PUBLIC RIGHT OF WAY
 - PROPOSED LAYOUT
 - PROPOSED DITCH
 - PROPOSED TWO-STAGE DITCH
 - PROPOSED CULVERT WITH HEADWALL
 - PROPOSED ATTENUATION DRAINAGE POND
 - PROW TIMBER SIGN





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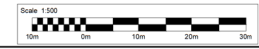
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Project Title		PKA024 Long Stratton Bypass			
Drawing Title		Detailed Design PROW Diversion Drawings Sheet 14 of 23			
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN
Drawn	Checked	Approved	Stage		
AS	Accepted (by Client)		5		
Drawing Number		Revision			
PKA024-WSP-GEN-LSB-DR-CH-000174				C01	

KEY:

- PLANNING RED LINE BOUNDARY
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- EXISTING PUBLIC RIGHT OF WAY
- PROPOSED LAYOUT
- PROPOSED DITCH
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- PROPOSED ATTENUATION DRAINAGE POND
- PROW TIMBER SIGN



OFFICIAL



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Rev.	Date	Description	Des' Csk	RC	JN
CD1	2023/05/17	For Tender			

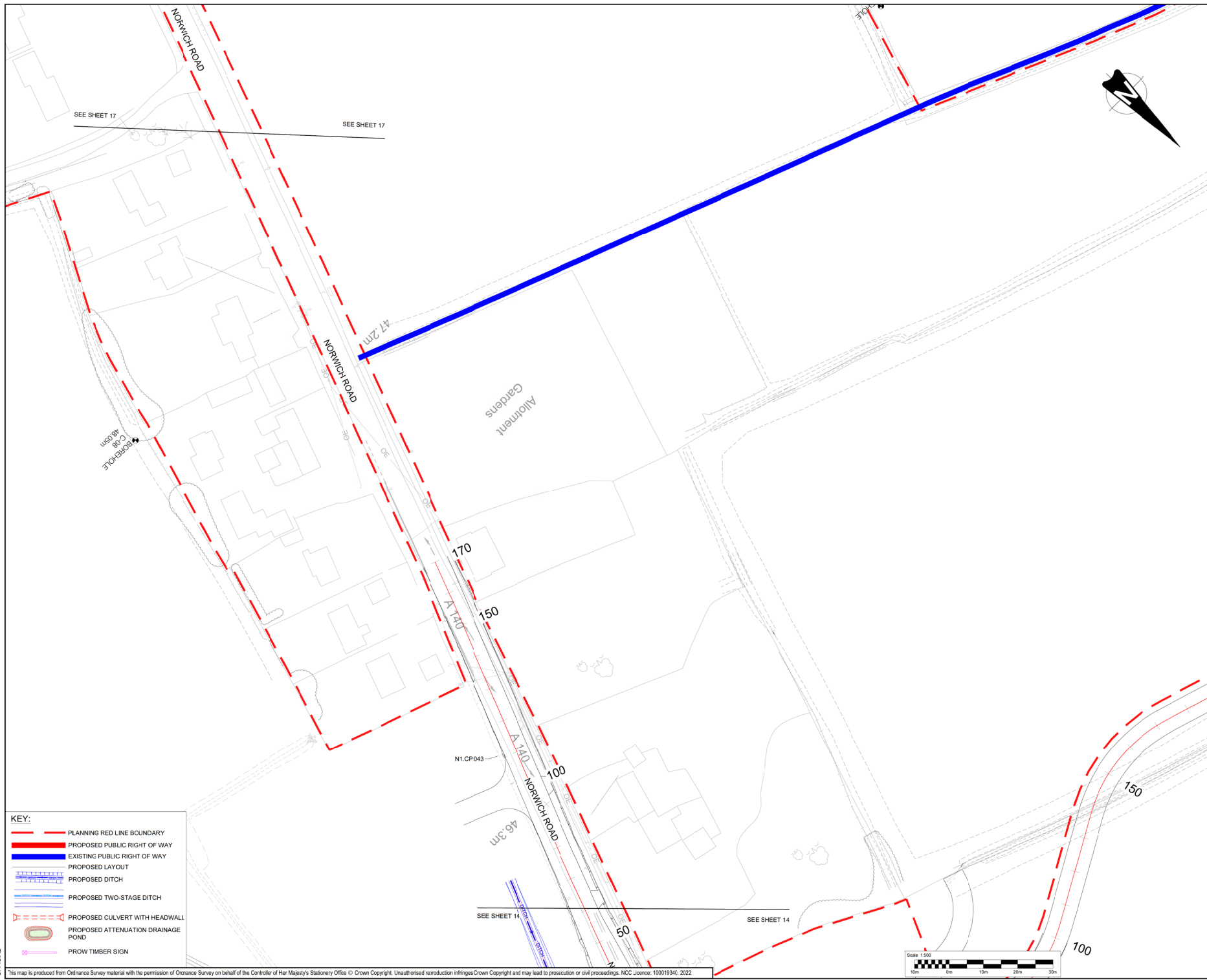
Client

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Project Title		PKA024 Long Stratton Bypass			
Drawing Title		Detailed Design PROW Diversion Drawings Sheet 15 of 23			
Scale @ A1	Date	Drawn	Check	Approved	Authorised
1:500	17/05/2023	NH	SD	RC	JN
Subsidiary	Stage	Accepted (by Client)			Stage
A5					5
Drawing Number		PKA024-WSP-GEN-LSB-DR-CH-000175			Revision
					C01

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Rev.	Date	Description	Drawn	App'd
C01	2023/05/17	For Tender	RC	JN

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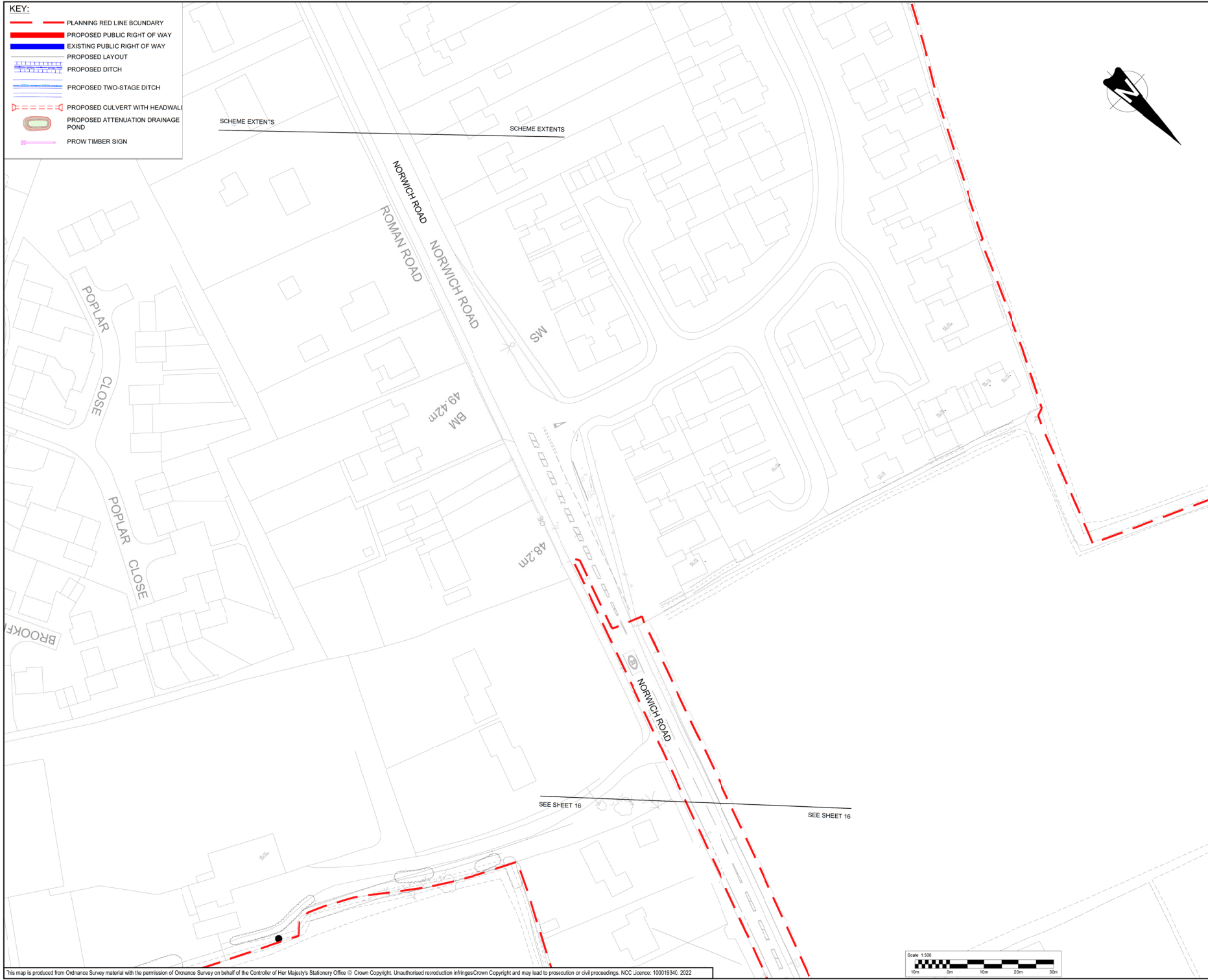
Project Title		PKA024 Long Stratton Bypass	
Drawing Title		Detailed Design PROW Diversion Drawings Sheet 16 of 23	
Scale @ A1	Date	Drawn	Check
1:500	17/05/2023	NH	SD
Authority	Stage	Approved	Authorised
AS	Accepted (by Client)	RC	JN
Drawing Number	Revision	Stage	Revision
PKA024-WSP-GEN-LSB-DR-CH-000176	C01	S	5

- KEY:**
- PLANNING RED LINE BOUNDARY
 - PROPOSED PUBLIC RIGHT OF WAY
 - EXISTING PUBLIC RIGHT OF WAY
 - PROPOSED LAYOUT
 - PROPOSED DITCH
 - PROPOSED TWO-STAGE DITCH
 - PROPOSED CULVERT WITH HEADWALL
 - PROPOSED ATTENUATION DRAINAGE POND
 - PROW TIMBER SIGN

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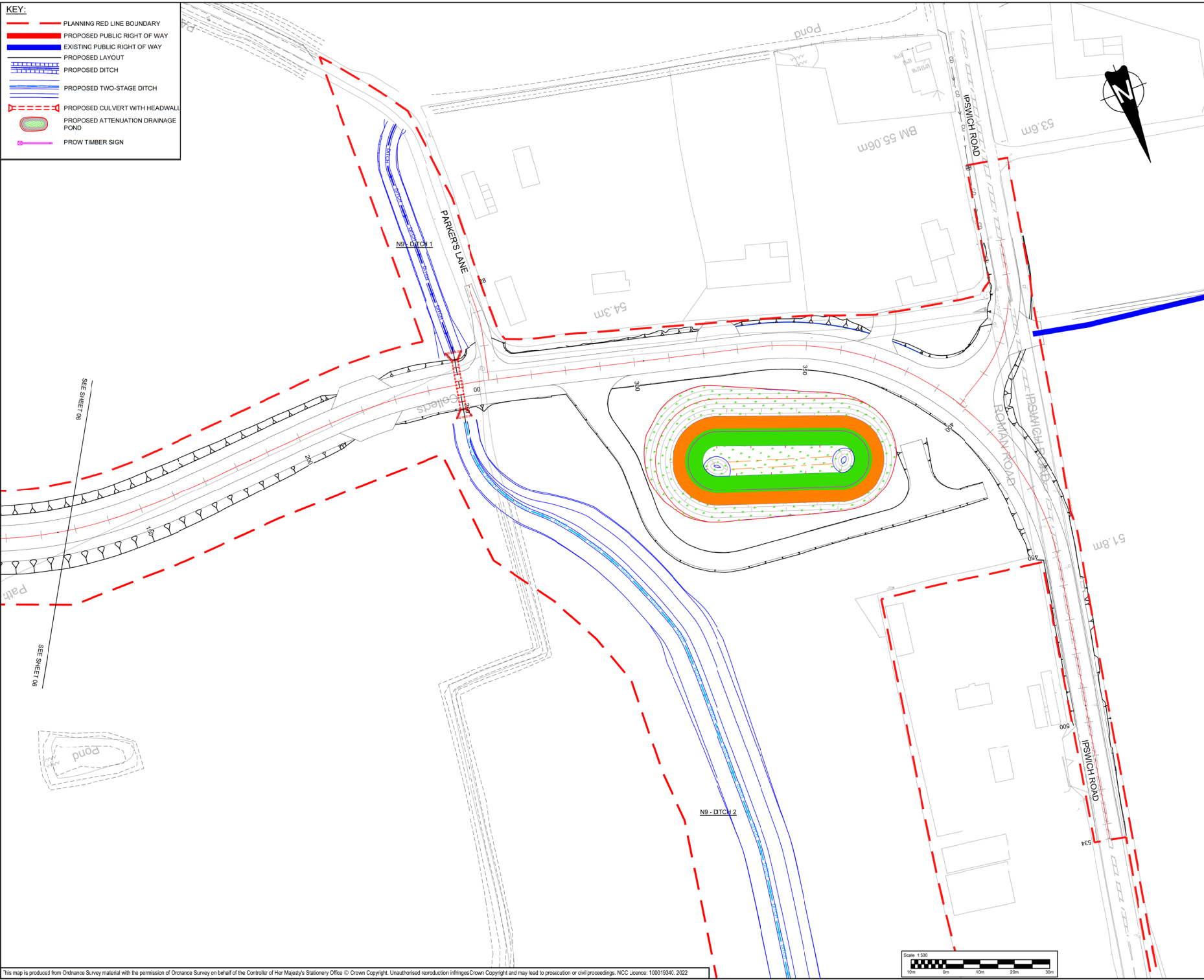
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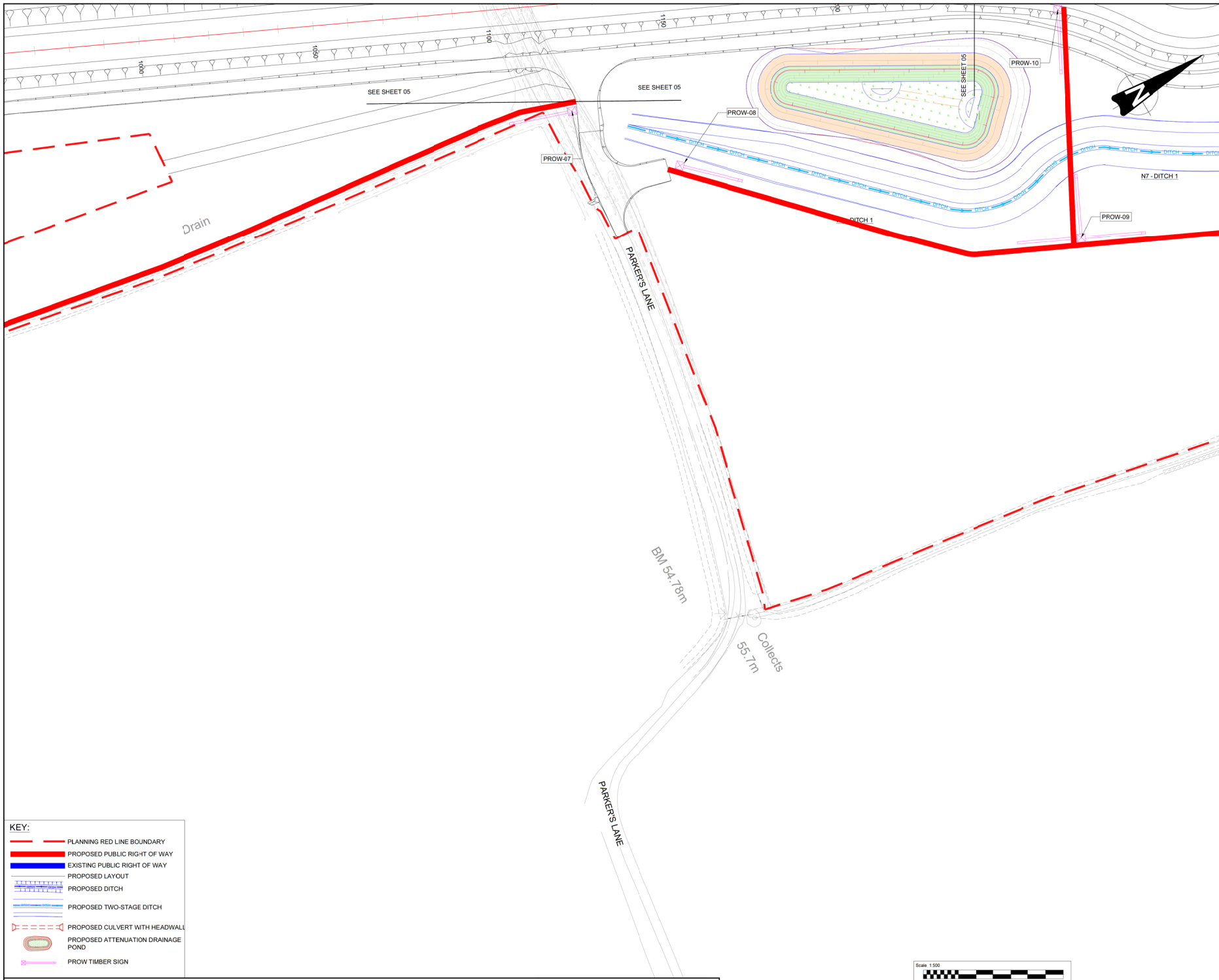
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Suitability	Stage	Accepted (by Client)			Stage
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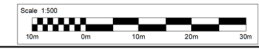
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Appendix B – WCHAR Opportunities Plan

An overview plan has been produced to show the identified opportunities for walking, cycling and horse-riding.

General Opportunities:

- 1: Incorporate multi-user routes that are inclusive and accessible for all non-motorised users within the scheme (not shown).
- 2: Avoid severance of existing walking, cycling and equestrian routes or minimise diversion length where severance cannot be avoided (not shown).
- 3: Creation of a more connected and navigable Public Rights of Way (PROW) network (not shown).
- 4: Provision of lighting, where appropriate, on walking, cycling or equestrian routes (not shown).
- 5: Creation of circular routes for recreational journeys (not shown).
- 6: Ensure NMU route proposals have a maintenance plan in place (not shown).
- 7: Preservation of A140 layby for active travel.
- 8: Appropriate bridge parapet heights (not shown).
- 26: New routes, where traffic flows are predicted to exceed 2,000 daily movements, should be segregated where they interact with mixed traffic, to protect vulnerable users (not shown).
- 27: Ensure suitable widths of routes are provided where shared use routes are proposed to carry up to 330 pedestrians and 300 cyclists per hour (not shown).
- 33: Create a shared pedestrian / cycle route to connect users travelling eastbound on the A140 to the former Ipswich Road.

Strategic Opportunities

- 9: Provide NMU facilities along the Long Stratton Bypass alignment.
- 10: Close Parker's Lane to vehicles and dedicate a footway/cycleway (except for access).
- 11: Introduce speed restriction measures to Hall Lane.
- 12: Dedicate a quiet lane on Edge's Lane.
- 13: Sustainable connections to Tasburgh.
- 14: LTN 1/20 Compliance Review (not shown).
- 28: Ensure that desire lines crossing the existing A140 Ipswich Road from the proposed mixed-use development to the east and west of the Bypass are catered for, to encourage use of sustainable travel (not shown).
- 29: The scheme should seek to provide improved connections to the east of the Bypass, such that existing and future residents have access to the Public Rights of Way and Long Stratton Town Centre (not shown).
- 30: Where crossing points are proposed at the Bypass, where flows are predicted to exceed 8,000 vehicles per day and speed limits are 50mph, signalised or grade separated crossings to be provided (not shown).
- 31: Ensure noise levels from the Bypass do not adversely affect the use and enjoyment of adjacent local non-motorised user routes (not shown).
- 34: Create a shared use public NMU route along the maintenance access tracks proposed on the east side of the Long Stratton Bypass.
- 35: Connect Wacton RB38, RB42 and RB40 with Pulham Market FP1.
- 36: Connect the Church Lane overbridge NMU route to the maintenance track turning head to the east of the Long Stratton Bypass.

Equestrian Opportunities

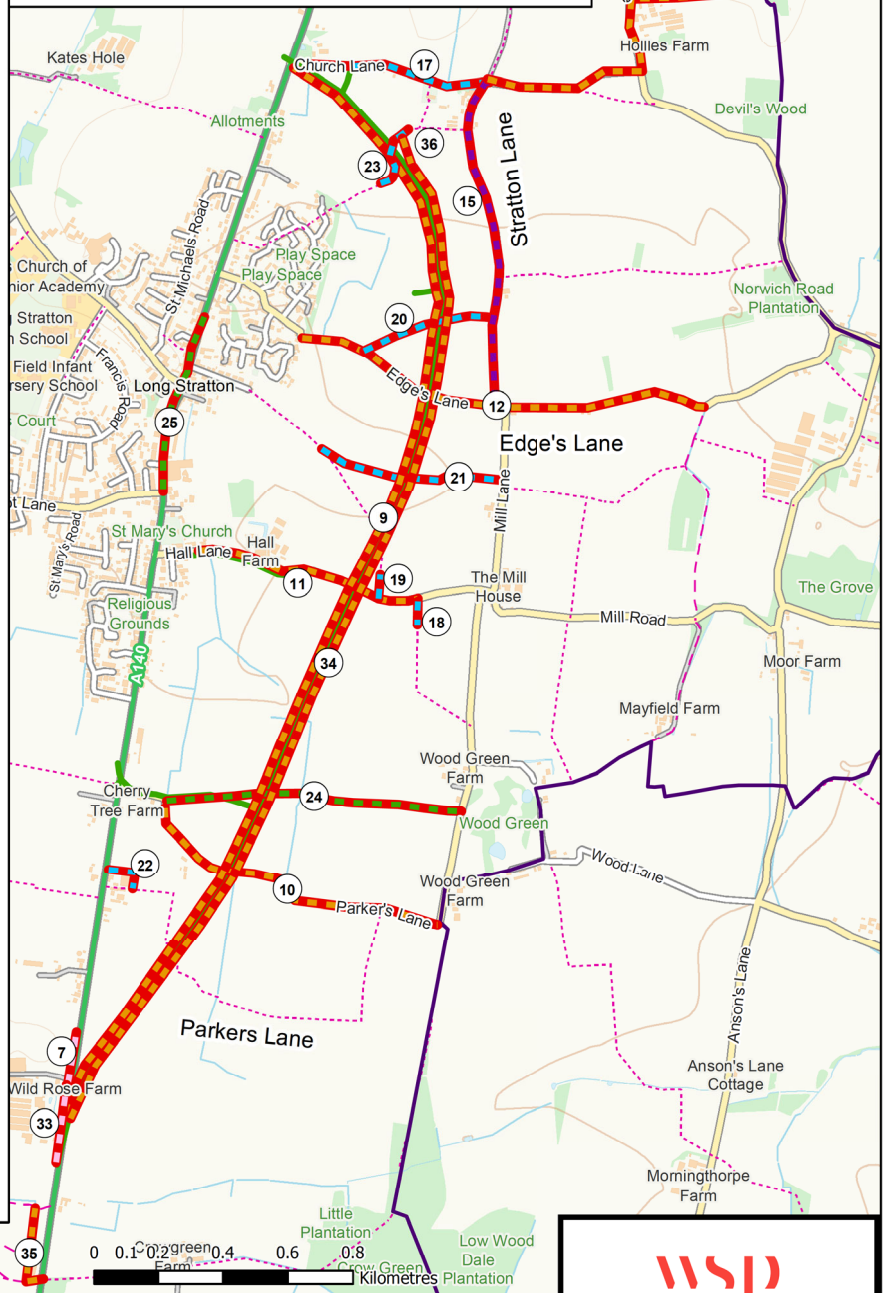
- 15: Provide improved facilities for equestrian movements along Stratton Lane.
- 16: Equestrian waiting areas (not shown).

Pedestrian Opportunities

- 17: Improved pedestrian facilities on Church Lane.
- 18: Access improvements to Footpath 19.
- 19: Repair damage to Footpath 15 signage.
- 20: Realign Footpath 13 providing the shortest route.
- 21: Improve signage to Footpath 16 and improve / remove narrow ditch crossings.
- 22: Improve access to Footpath 26.
- 23: Provide crossing facilities for Footpath 7 as it meets the Bypass alignment.
- 32: Provide a pedestrian connection from the Church Lane roundabout into the town centre, on the eastern side of the existing A140.

Cyclist Opportunities

- 24: Upgrade Footpath 21 to shared-use footway / cycleway.
- 25: Improved town centre cycle facilities.



Key

- Proposed Bypass Route
- Boudicca Way - Norfolk Trail
- 5km Study Area

Public Rights of Way

- - - Bridleway
- · - · - Byway Open to All Traffic
- · - · - Footpath
- · - · - Restricted Byway

User Opportunities

- - - General
- · - · - Equestrian
- · - · - Cyclist
- · - · - Strategic
- · - · - Pedestrian



TITLE:
Long Stratton Bypass

FIGURE No:
Walking, Cycling & Horse Riding Assessment Report
WCHAR Opportunities

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