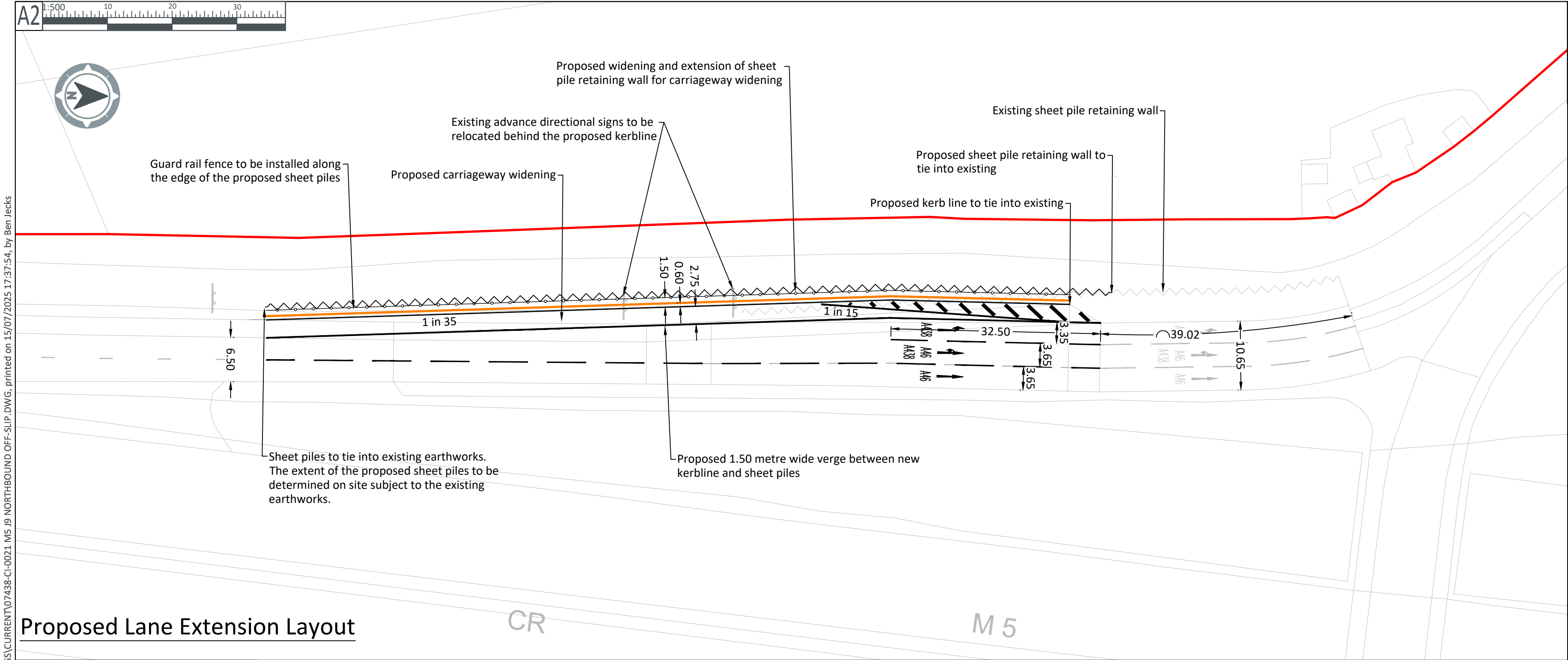
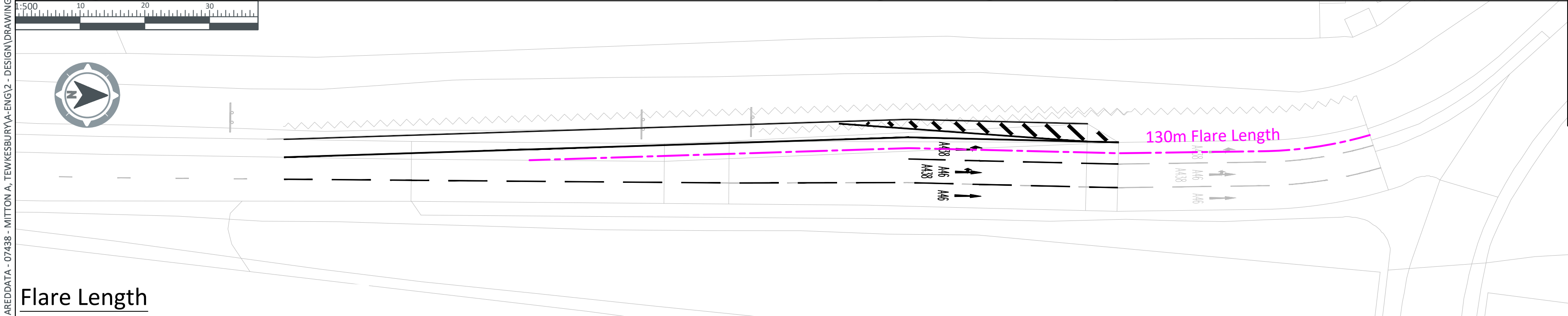


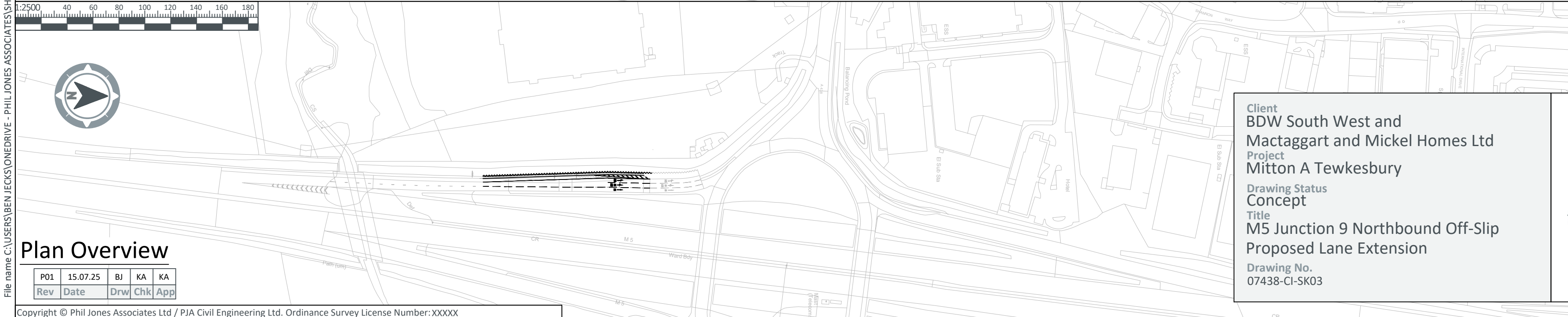
File name C:\Users\BEN JECKS\BEN JECKS\ONEDRIVE - PHIL JONES ASSOCIATES\SHARED\DATA - 07438 - MITTON A, TEWKESBURY\A-ENG\2 - DESIGN\DRAWINGS\CURRENT\07438-CI-0021 M5 J9 NORTHBOUND OFF-SLIP.DWG, printed on 15/07/2025 17:37:54, by Ben Jecks



Proposed Lane Extension Layout



Flare Length



Plan Overview


| | | | | |
|-----|----------|-----|-----|-----|
| P01 | 15.07.25 | BJ | KA | KA |
| Rev | Date | Drw | Chk | App |

CDM Note

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9.

- Key
- National Highways Boundary
 - Proposed Channel/Kerbline
 - Proposed VRS
 - Proposed Guard Rail Fence
 - Proposed Sheet Pile Retaining Wall
 - Proposed Road Markings

- Notes
- Do not scale from this drawing.
 - All dimensions in metres unless stated otherwise.
 - This drawing is based on Desktop Feasibility Study produced by AECOM (ref. 60727755-ACM-GEN-XX-RP-HW-0000001)
 - The drawing details have been composed for assessment purposes only. The drawings should not be used for tendering or construction purposes. The information is subject to change during the detailed design.
 - Any existing details which are shown on this drawing are for guidance only and are to be checked on site.
 - The existing road widths and road layout are based upon satellite imagery referenced from the Desktop Feasibility Study produced by AECOM.
 - The purpose of this drawing is to show the layout for a lane extension to achieve a flare length of 130 metres.
 - The junction has been designed in accordance with CD127 Cross-sections and headrooms, CD109 Highway link design and CD122 Geometric design of grade separated junctions.
 - Road markings have been designed in accordance with Traffic Signs Manual and Traffic Signs Regulations and General Directions 2016.
 - Stopping Sight Distance (SSD) is based on CD109 for a slip road with a design speed of 70kph as per Table 5.4 of CD122.
 - Transition taper of 1 in 35 as per table 2.28 of CD127.

 RISK:Existing underground services and service covers within the works extents which may need re-routing/relocating. These have not been shown on this drawing.

Client
BDW South West and
Mactaggart and Mickel Homes Ltd
Project
Mitton A Tewkesbury
Drawing Status
Concept
Title
M5 Junction 9 Northbound Off-Slip
Proposed Lane Extension
Drawing No.
07438-CI-SK03


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Inset 1



Inset 2



Inset 3

| | | | | |
|-----|----------|-----|-----|-----|
| P01 | 02-07-25 | BJ | KA | KA |
| Rev | Date | Drw | Chk | App |

CDM Note

These drawings have been produced with reference to the CDM Regulations 2015.
Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9.

Key

Proposed Channel/Kerbline

Proposed Red Coloured Surface Treatment

Proposed Rumblewave Surfacing

Proposed White Road Marking

Proposed 40mph Roundel (4300mm)

Existing Road Sign

Notes

1. Do not scale from this drawing.

2. All dimensions in metres unless stated otherwise.

3. All works are proposed to be within the Highway Boundary.

4. This drawing is based on the Topographical survey (ref. UA1255_A) received Jan 2024 and a junction drawing prepared by Icen Projects (ref. 16-T071)

5. The drawing details have been composed for accessibility purposes only. The drawings should not be used for tendering or construction purposes. The information is subject to change during the detailed design.

6. Any existing details which are shown on this drawing are for guidance only and are to be checked on site.

7. The existing road widths are based upon OS mapping.

8. The purpose of this drawing is to show a re-designed junction and traffic calming measures as part of the mitigation for a development.

9. The junction has been designed in accordance with CD123 Geometric Design of At-grade Priority and Signal-controlled Junctions.

10. The traffic calming features have been designed in accordance with LTN 1/07 Traffic Calming and TAL 1/05 Rumblewave Surfacing.

11. Road markings have been designed in accordance with Traffic Signs Manual and Traffic Signs Regulations and General Directions 2016.

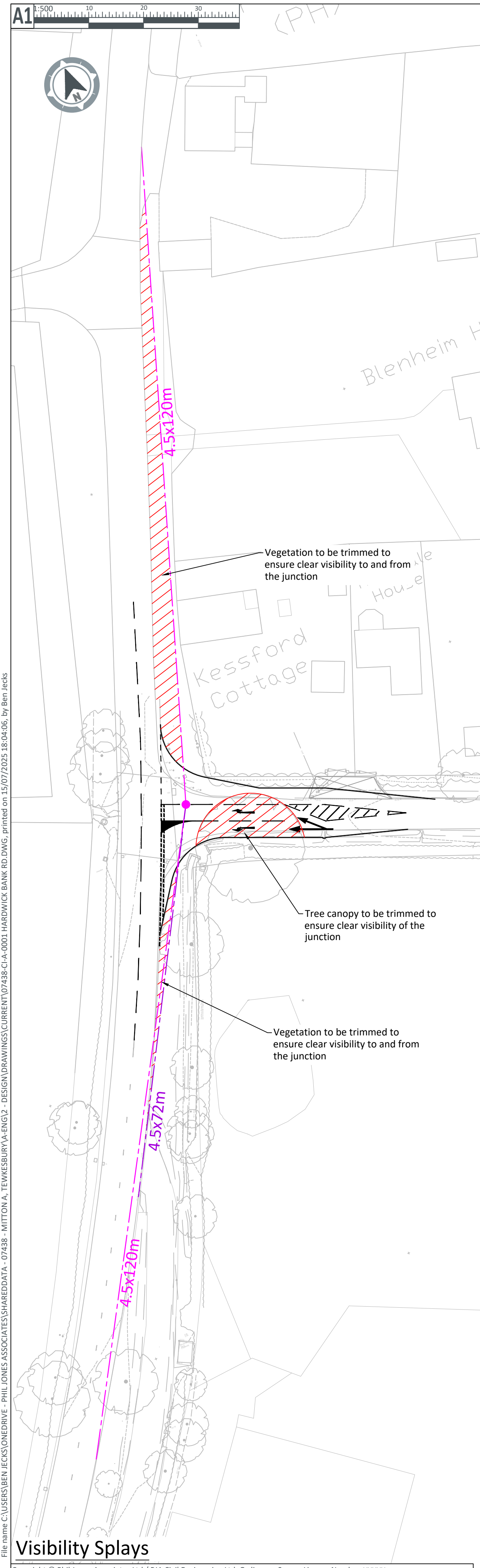
12. Stopping Sight Distance (SSD) and Junction Visibility is based on CD109 for a design speed of 70kph.

13. Visibility splay 'X' distance shown 4.5m as 1 step below (9.0).

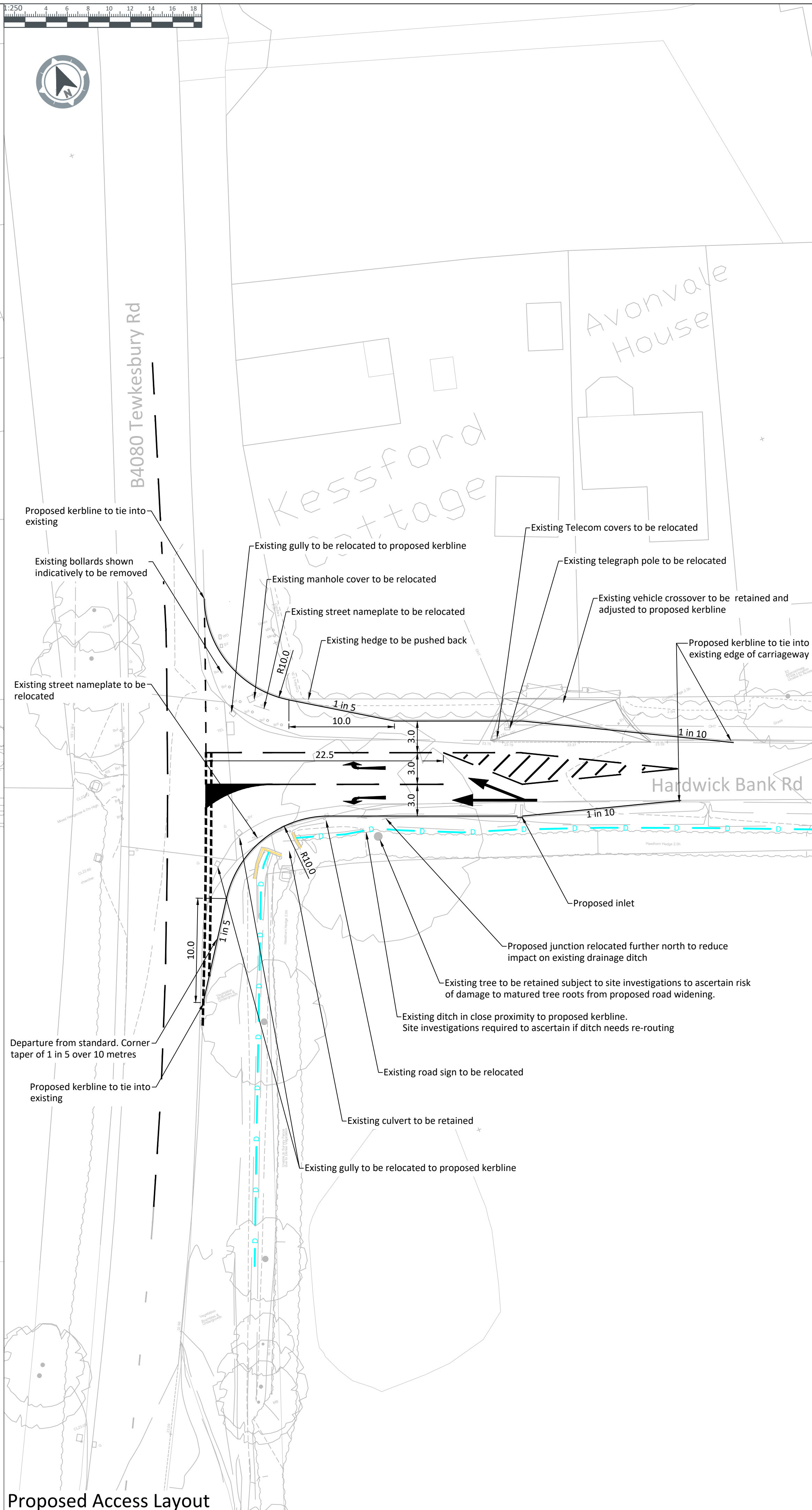
14. Hatched island taper of 1 in 10.

15. Storage length of the right turn lane to be confirmed.

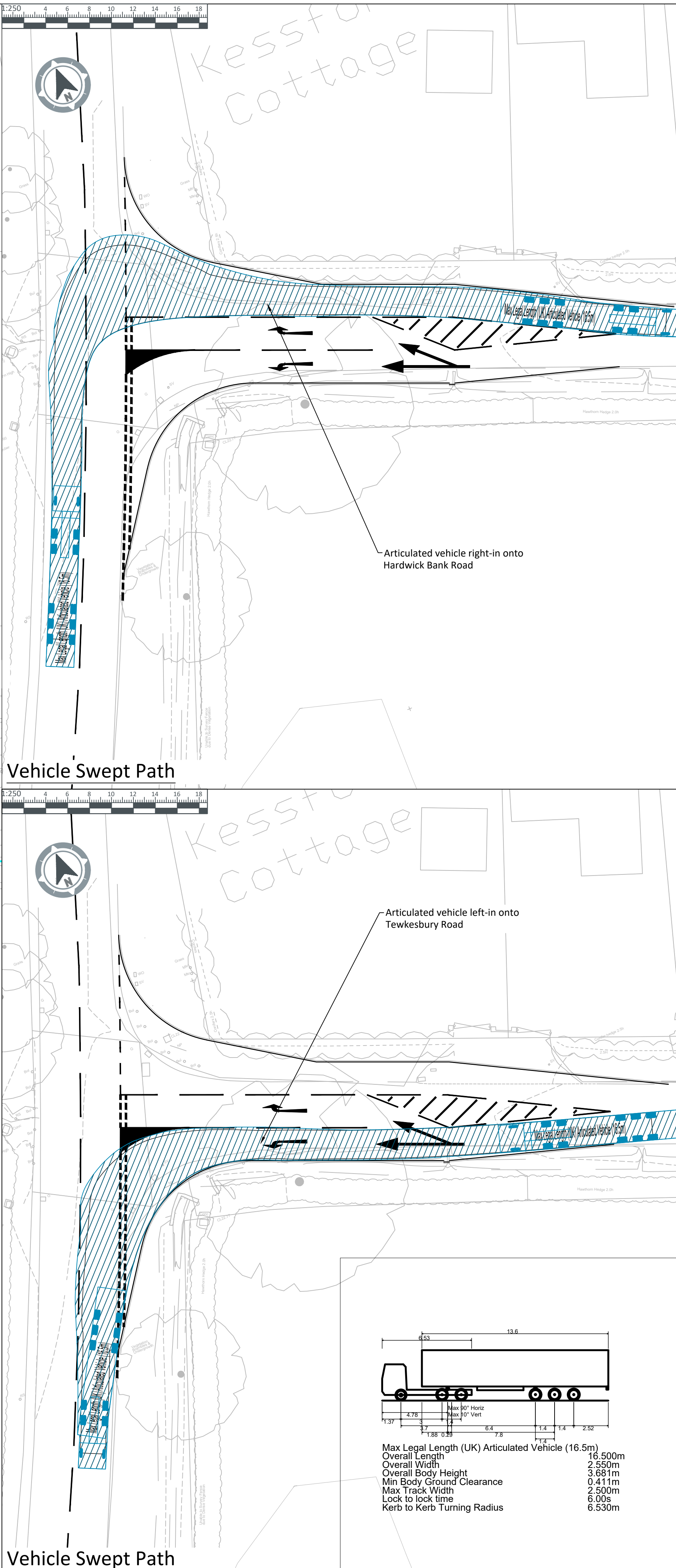
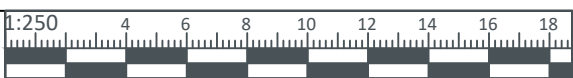




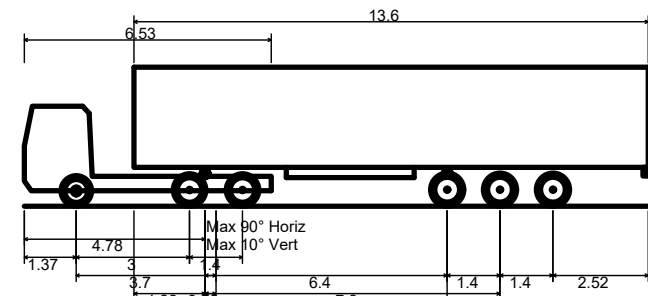
Visibility Splays



Proposed Access Layout



Vehicle Swept Path









| | |
|---|---------|
| Max Legal Length (UK) Articulated Vehicle (16.5m) | |
| Overall Length | 16.500m |
| Overall Width | 2.550m |
| Overall Body Height | 3.681m |
| Min Body Ground Clearance | 0.411m |
| Max Track Width | 2.500m |
| Lock to lock time | 6.00s |
| Kerb to Kerb Turning Radius | 6.530m |

CDM Note

These drawings have been produced with reference to the CDM Regulations 2015.
Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9.

Key

- Highway Boundary
-  Channel/Kerbline
-  Existing Crossover
-  Existing Ditch
-  Vegetation to be Trimmed
-  Junction Visibility
-  Tangential Visibility
- Brick Retaining Wall

Notes

1. Do not scale from this drawing.
2. All dimensions in metres unless stated otherwise.
3. All works are proposed to be within the Highway Boundary.
4. This drawing is based on the Topographical survey (ref. UAJ255, A) received Jan 2024 and a junction drawing prepared by Icent Projects (ref. 16-T071)
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7. The drawing details have been composed for accessibility purposes only. The drawings should not be used for tendering or construction purposes. The information is subject to change during the detailed design.
8. Site specific detailed surveys need to be carried out to confirm design information, which may impact the outline design proposals. These include, but are not limited to, ground conditions, groundwater levels, utilities, ecology, tree protection etc. Impacts related to other civil features have not been detailed and are subject to detailed design.
9. Any existing details which are shown on this drawing are for guidance only and are to be checked on site.
10. The existing road widths are based upon OS mapping.
11. The purpose of this drawing is to show a re-designed junction as part of the mitigation for a development.
12. The design is Preliminary and subject to discussions with the local planning and highway authorities. The design should not be used for tendering or construction purposes and requires further development as part of the pre-planning application and understanding of highway authority preferences, which vary between authority.
13. The junction has been designed in accordance with CD123 Geometric Design of A-grade Priority and Signal-controlled Junctions.
14. Road markings have been designed in accordance with the Traffic Management and Traffic Signs Regulations and General Directions 2016.
15. Stopping Sight Distance (SSD) and Junction Visibility is based on CD109 for a design speed of 70kph.
16. Visibility splay 'X' distance shown 4.5m as 1 step below (9.0).
17. Area within the footprint of the Junction Visibility splay to be trimmed of vegetation above 600mm.
18. The splay and distance of 1 in 10.
19. Storage length of the right turn lane to be confirmed.
20. Existing overhead BT cables may require diverting/relocating due to the relocation of the telegraph pole



RISK: Existing underground services and service covers within the works extents which may need re-routing/relocating. These have not been shown on this drawing.

| | | | | | | |
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| | | | | | | |
| P01 | 10.06.2025 | FIRST ISSUE | | BJ | KA | JO |
| Rev | Date | Revision Note | | Drw | Chk | App |



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Client
BDW South West and
Mactaggart and Mickel Homes Ltd

Project
Mitton A
Tewkesbury

Title

Hardwick Bank Road
Proposed Junction Arrangement

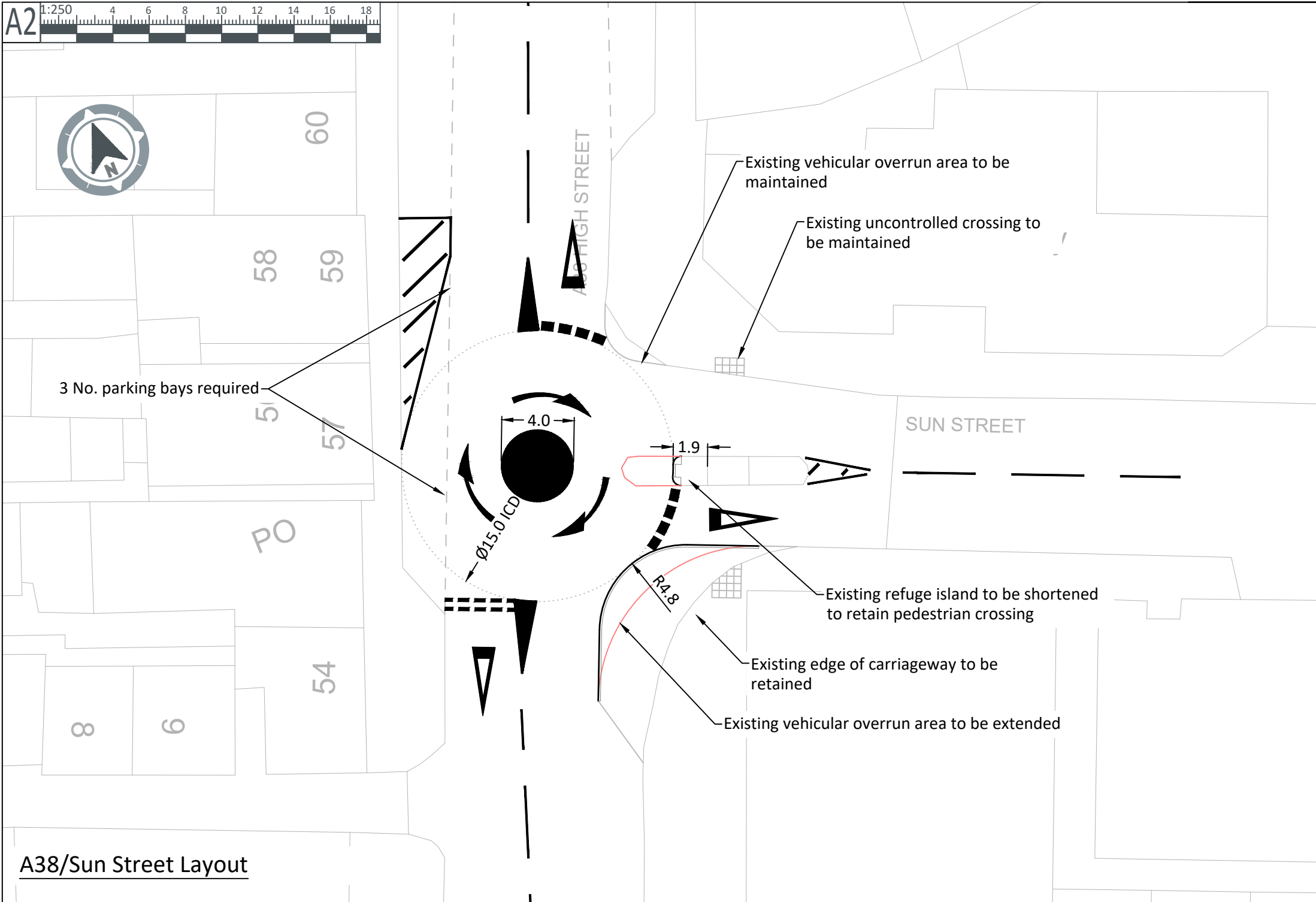
Drawing Issue Status

| | | |
|---------|------------|------------|
| PJA Ref | Scale @ A1 | Date |
| 07438 | As Shown | 10.06.2025 |

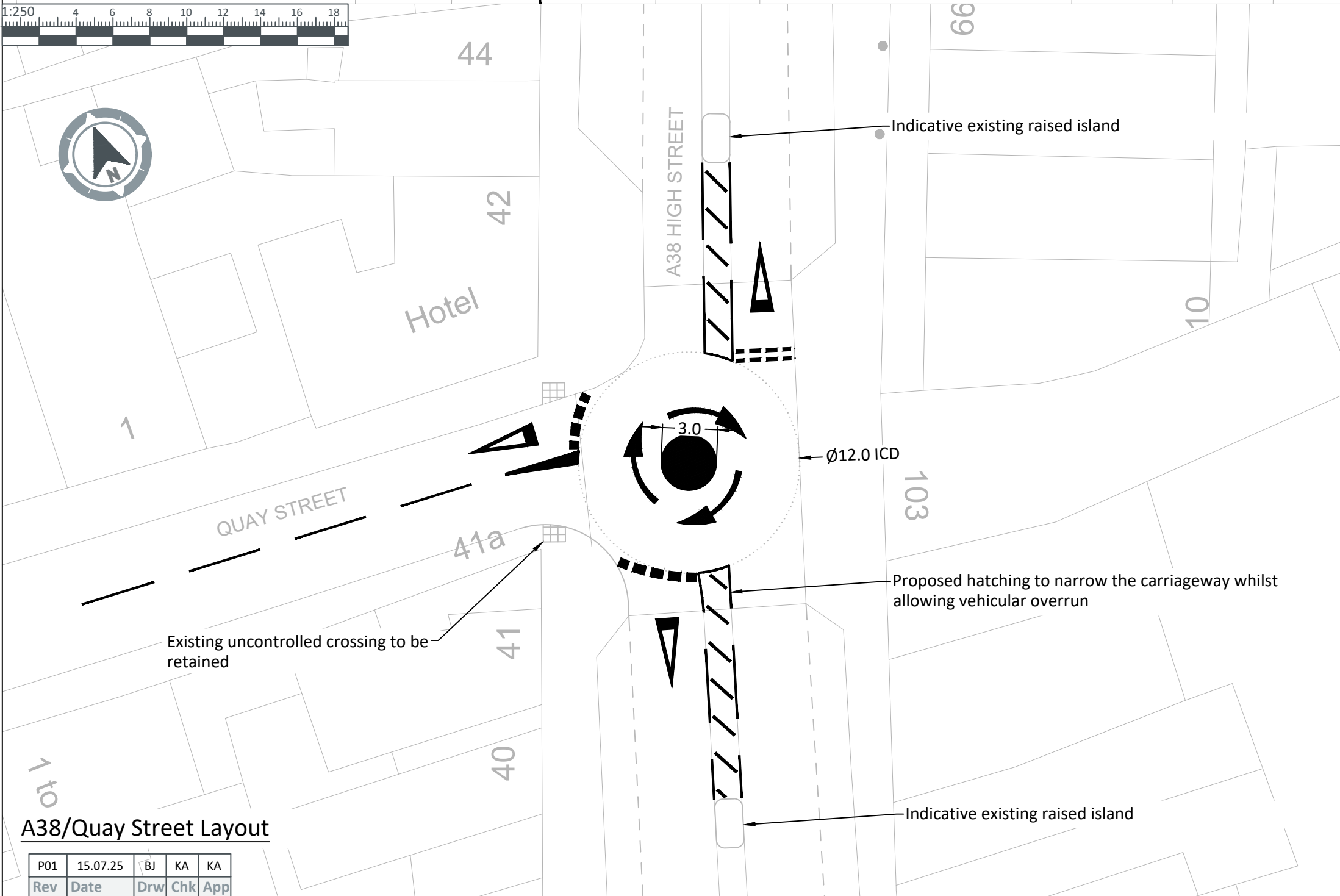
| | |
|-----------------|----------|
| Drawing No. | Revision |
| 07438-CI-SK02.1 | P01 |

Primary Contact
primarycontact@pja.co.uk

File name C:\USERS\BEN JECKS\ONEDRIVE - PHIL JONES ASSOCIATES\SHARED\DATA - 07438 - MITTON A, TEWKESBURY\A-ENG\2 - DESIGN\DRAWINGS\CURRENT\07438-CI-A-SK01 - MINI ROUNDABOUTS.DWG, printed on 15/07/2025 17:59:47, by Ben Jecks

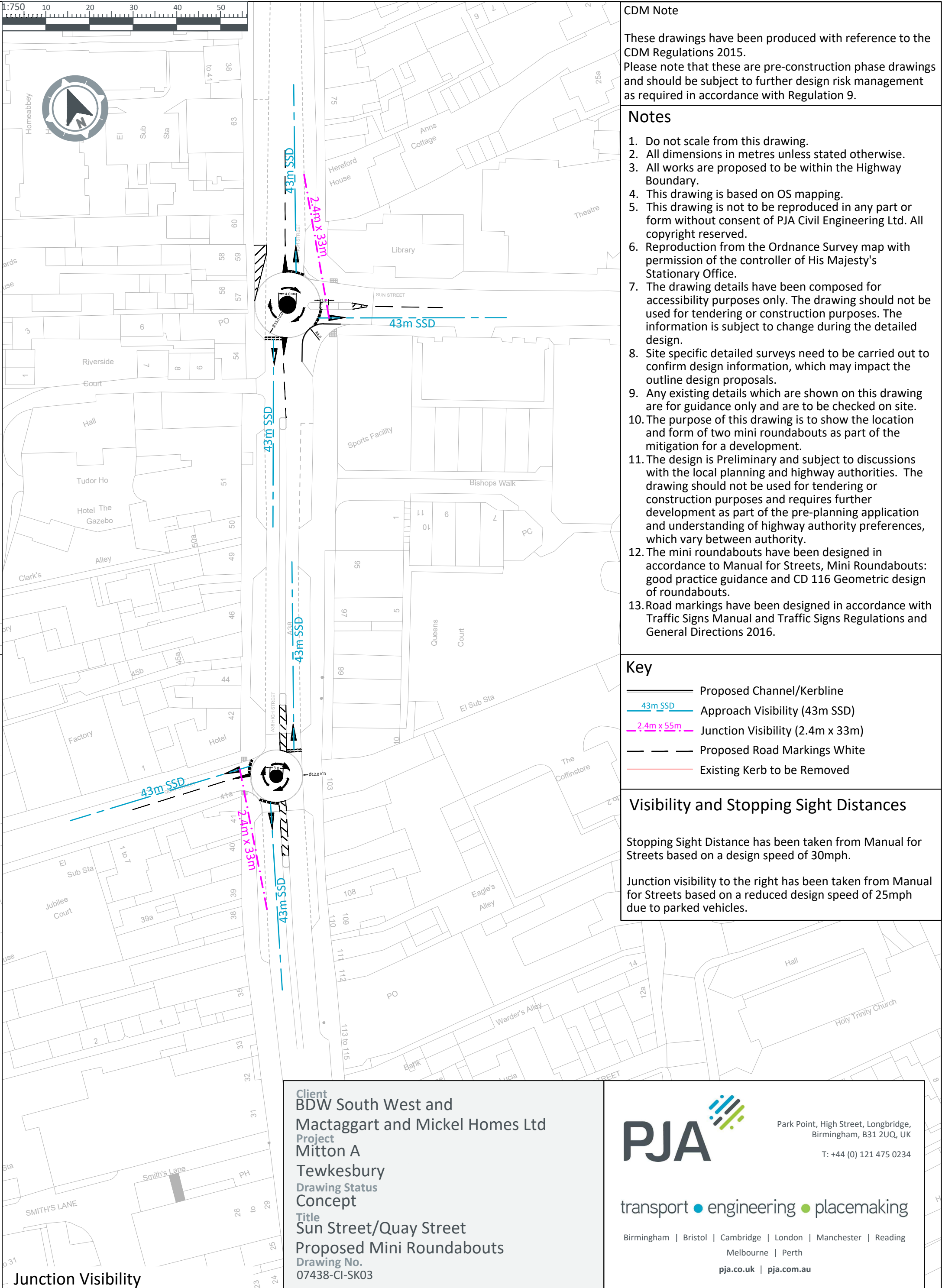


A38/Sun Street Layout



A38/Quay Street Layout

| | | | | |
|-----|----------|-----|-----|-----|
| P01 | 15.07.25 | BJ | KA | KA |
| Rev | Date | Drw | Chk | App |



Junction Visibility

- CDM Note
- These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9.
- Notes
- Do not scale from this drawing.
 - All dimensions in metres unless stated otherwise.
 - All works are proposed to be within the Highway Boundary.
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 - Site specific detailed surveys need to be carried out to confirm design information, which may impact the outline design proposals.
 - Any existing details which are shown on this drawing are for guidance only and are to be checked on site.
 - The purpose of this drawing is to show the location and form of two mini roundabouts as part of the mitigation for a development.
 - The design is Preliminary and subject to discussions with the local planning and highway authorities. The drawing should not be used for tendering or construction purposes and requires further development as part of the pre-planning application and understanding of highway authority preferences, which vary between authority.
 - The mini roundabouts have been designed in accordance to Manual for Streets, Mini Roundabouts: good practice guidance and CD 116 Geometric design of roundabouts.
 - Road markings have been designed in accordance with Traffic Signs Manual and Traffic Signs Regulations and General Directions 2016.

- Key
- Proposed Channel/Kerbline
 - 43m SSD Approach Visibility (43m SSD)
 - 2.4m x 33m Junction Visibility (2.4m x 33m)
 - Proposed Road Markings White
 - Existing Kerb to be Removed

Visibility and Stopping Sight Distances

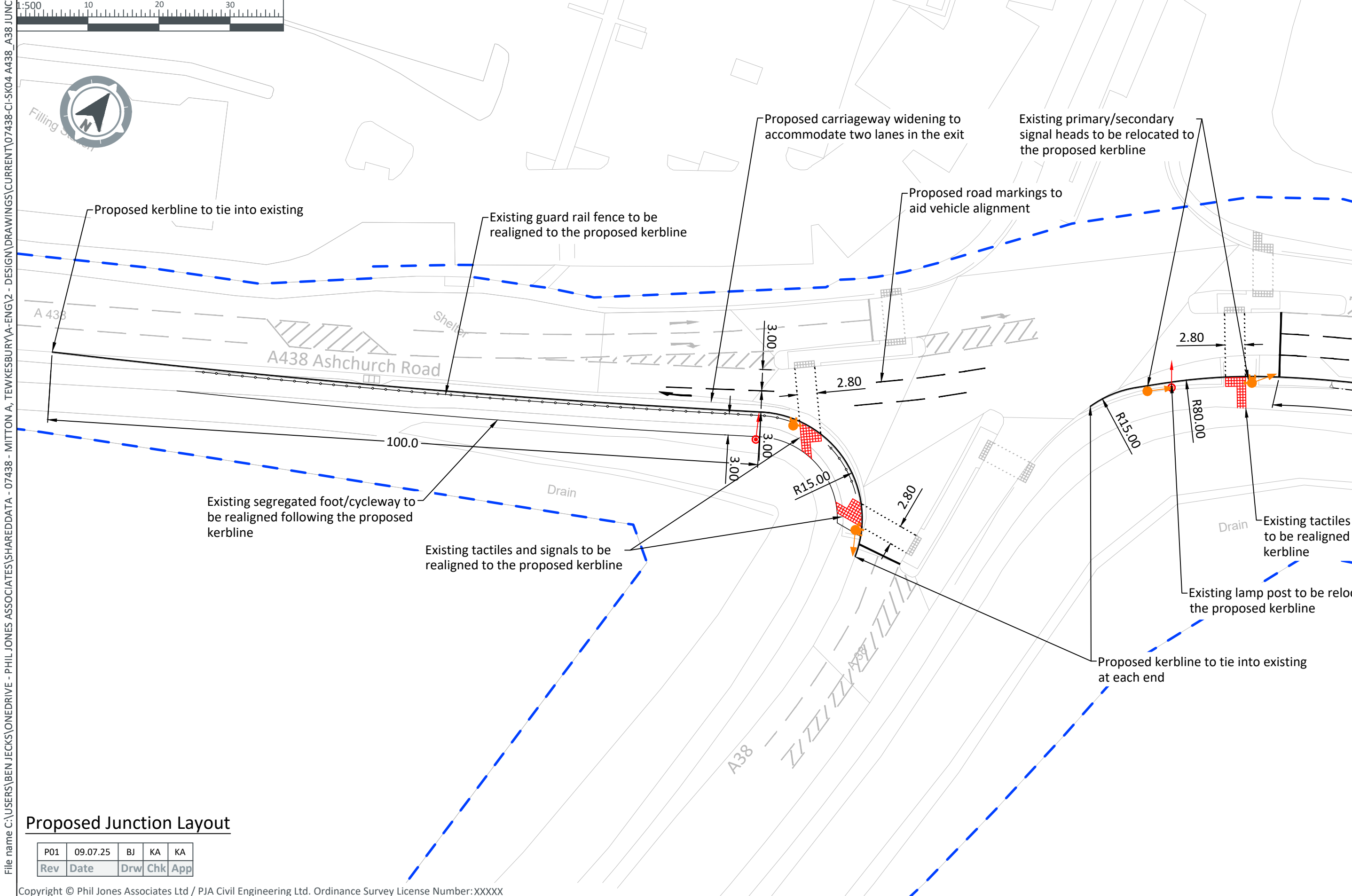
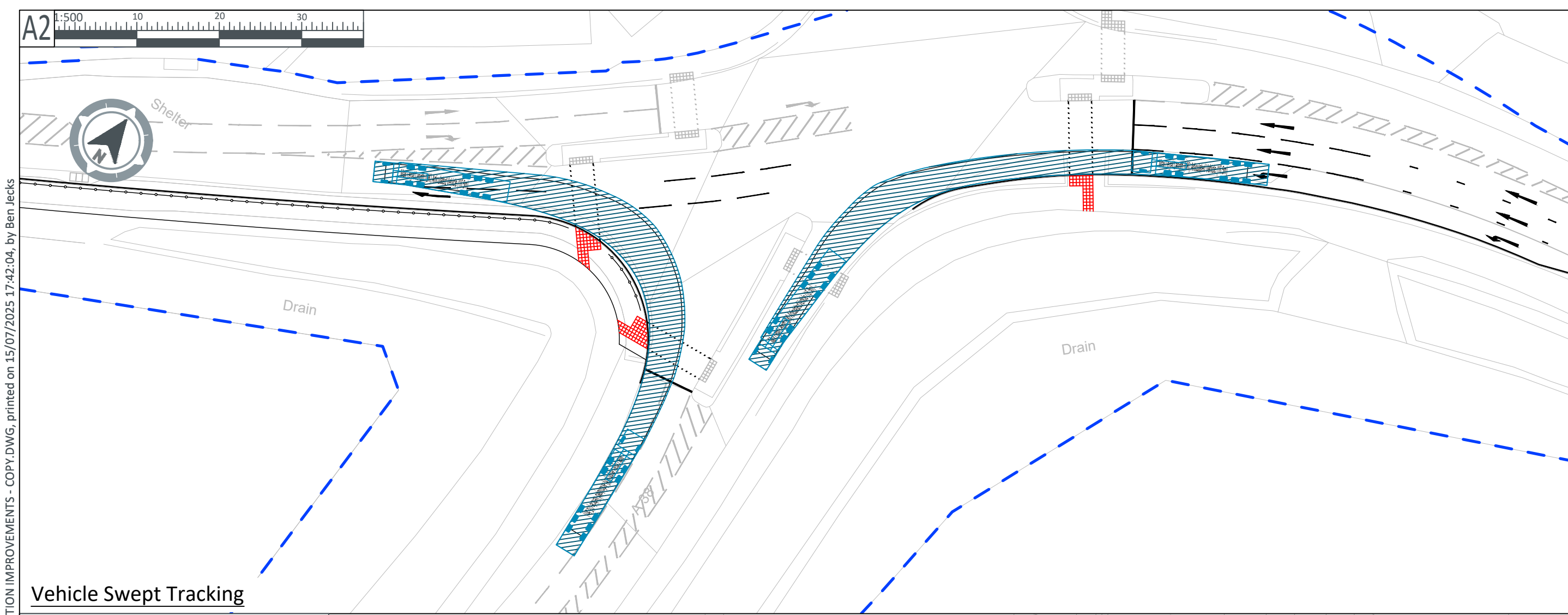
Stopping Sight Distance has been taken from Manual for Streets based on a design speed of 30mph.

Junction visibility to the right has been taken from Manual for Streets based on a reduced design speed of 25mph due to parked vehicles.

Client
BDW South West and
Mactaggart and Mickel Homes Ltd
Project
Milton A
Tewkesbury
Drawing Status
Concept
Title
Sun Street/Quay Street
Proposed Mini Roundabouts
Drawing No.
07438-CI-SK03

PJA
Park Point, High Street, Longbridge,
Birmingham, B31 2UQ, UK
T: +44 (0) 121 475 0234

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Key

- Highway Boundary
- Proposed Channel/Kerbline
- Proposed White Road Marking
- Proposed Embankment Extent
- Proposed Edging
- Proposed Guard Rail Fence
- Proposed Tactile Paving (Red, Controlled)
- Indicative Relocated Lamp Column
- Indicative Relocated Traffic Signal
- Push Button
- Pedestrian Signal

Max Legal Length (UK) Articulated Vehicle (16.5m)

| | |
|-----------------------------|---------|
| Overall Length | 16.500m |
| Overall Width | 2.550m |
| Overall Body Height | 3.681m |
| Min Body Ground Clearance | 0.411m |
| Max Track Width | 2.500m |
| Lock to lock time | 6.00s |
| Kerb to Kerb Turning Radius | 6.530m |

| |
|---|
| <p>CDM Note</p> <p>These drawings have been produced with reference to the CDM Regulations 2015.</p> <p>Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9.</p> |
| <p>Notes</p> <ol style="list-style-type: none">1. Do not scale from this drawing.2. All dimensions in metres unless stated otherwise.3. All works are proposed to be within the Highway Boundary.4. This drawing is based on OS mapping.5. This drawing is not to be reproduced in any part of form without consent of PJA Civil Engineering Ltd. All copyright reserved.6. Reproduction from the Ordinance Survey map with permission of the controller of His Majesty's Stationary Office.7. The drawing details have been composed for accessibility purposes only. The drawings should not be used for tendering or construction purposes. The information is subject to change during the detailed design.8. Site specific detailed surveys need to be carried out to confirm design information, which may impact the outline design proposals.9. Any existing details which are shown on this drawing are for guidance only and are to be checked on site.10. The purpose of this drawing is to show a re-designed signalized junction layout which accommodates an additional ahead lane.11. The design is preliminary and subject to discussions with the local planning and highway authorities. The drawing should not be used for tendering or construction purposes and requires further development as part of the pre-planning application and understanding of highway authority preferences, which vary between authority.12. The junction has been designed in accordance with CD123 Geometric Design of At-grade Priority and Signal-controlled Junctions.13. Road markings have been designed in accordance with Traffic Signs Manual and Traffic Signs Regulations and General Directions 2016.14. Hatched island taper of 1 in 10.15. Storage length of the left turn lane to be confirmed.16. Relocated signal heads/lighting shown indicatively. Exact location to be confirmed by signal/lighting designer. |

Client
BDW South West and
Mactaggart and Mickel Homes Ltd
Project
Mitton A Tewkesbury
Drawing Status
Concept
Title
A438 Ashchurch Road jw A38
Proposed Junction Improvements
Drawing No.
07438-CI-SK04

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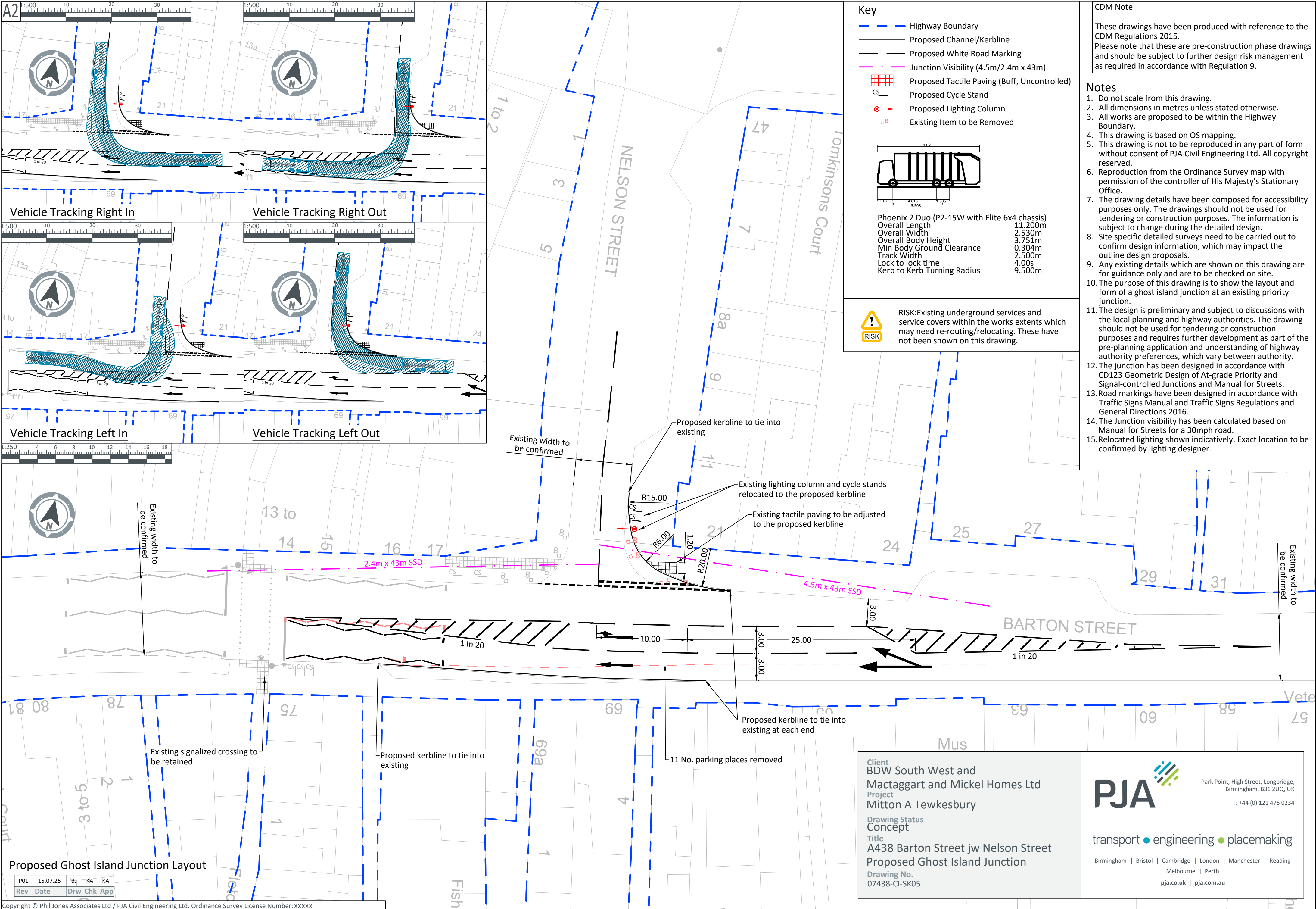
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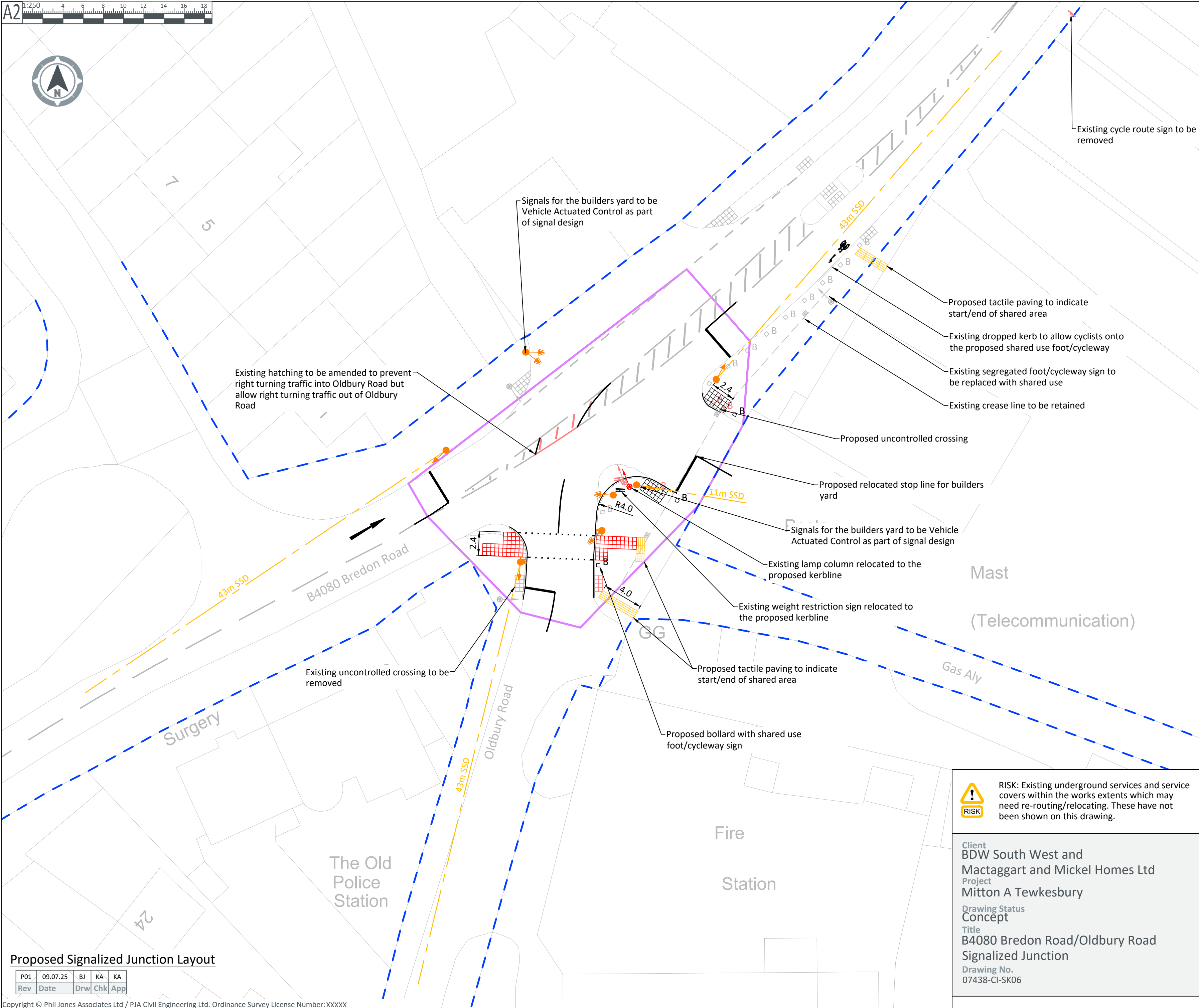
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Proposed Signalized Junction Layout

| | | | | |
|-----|----------|-----|-----|-----|
| P01 | 09.07.25 | BJ | KA | KA |
| Rev | Date | Drw | Chk | App |

CDM Note

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Notes

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- Site specific detailed surveys need to be carried out to confirm design information, which may impact the outline design proposals.
- Any existing details which are shown on this drawing are for guidance only and are to be checked on site.
- The purpose of this drawing is to show the layout and form of a new signalized junction at an existing priority junction, and improvements to the adjacent foot/cycleway.
- The design is preliminary and subject to discussions with the local planning and highway authorities. The drawing should not be used for tendering or construction purposes and requires further development as part of the pre-planning application and understanding of highway authority preferences, which vary between authority.
- The junction has been designed in accordance with CD123 Geometric Design of At-grade Priority and Signal-controlled Junctions, Traffic Signs Manual Chapter 6.
- Road markings have been designed in accordance with Traffic Signs Manual and Traffic Signs Regulations and General Directions 2016.
- The signal head visibility has been measured as the SSD from Manual For Streets for a 30mph road and the SSD for a 10mph for the builders yard access.
- Relocated signal heads/lighting shown indicatively. Exact location to be confirmed by signal/lighting designer.

Key

- Highway Boundary
- Proposed Channel/Kerblines
- Indicative Existing Crease Line
- Indicative Existing Footway Gully
- Proposed White Road Marking
- Signal Head Visibility (43m/11m SSD)
- Junction Intervisibility Zone
- Proposed Tactile Paving (Red, Controlled)
- Proposed Tactile Paving (Buff, Uncontrolled)
- Proposed Corduroy Paving (Buff)
- Proposed Sign
- Proposed Bollard
- Relocated Lamp Column
- Proposed Primary Traffic Signal
- Proposed Secondary Traffic Signal
- Proposed Push Button
- Proposed Pedestrian Signal
- Existing Item to be Removed



RISK: Existing underground services and service covers within the works extents which may need re-routing/relocating. These have not been shown on this drawing.

Client
BDW South West and
Mactaggart and Mickel Homes Ltd
Project
Mitton A Tewkesbury
Drawing Status
Concept
Title
B4080 Bredon Road/Oldbury Road
Signalized Junction
Drawing No.
07438-CI-SK06

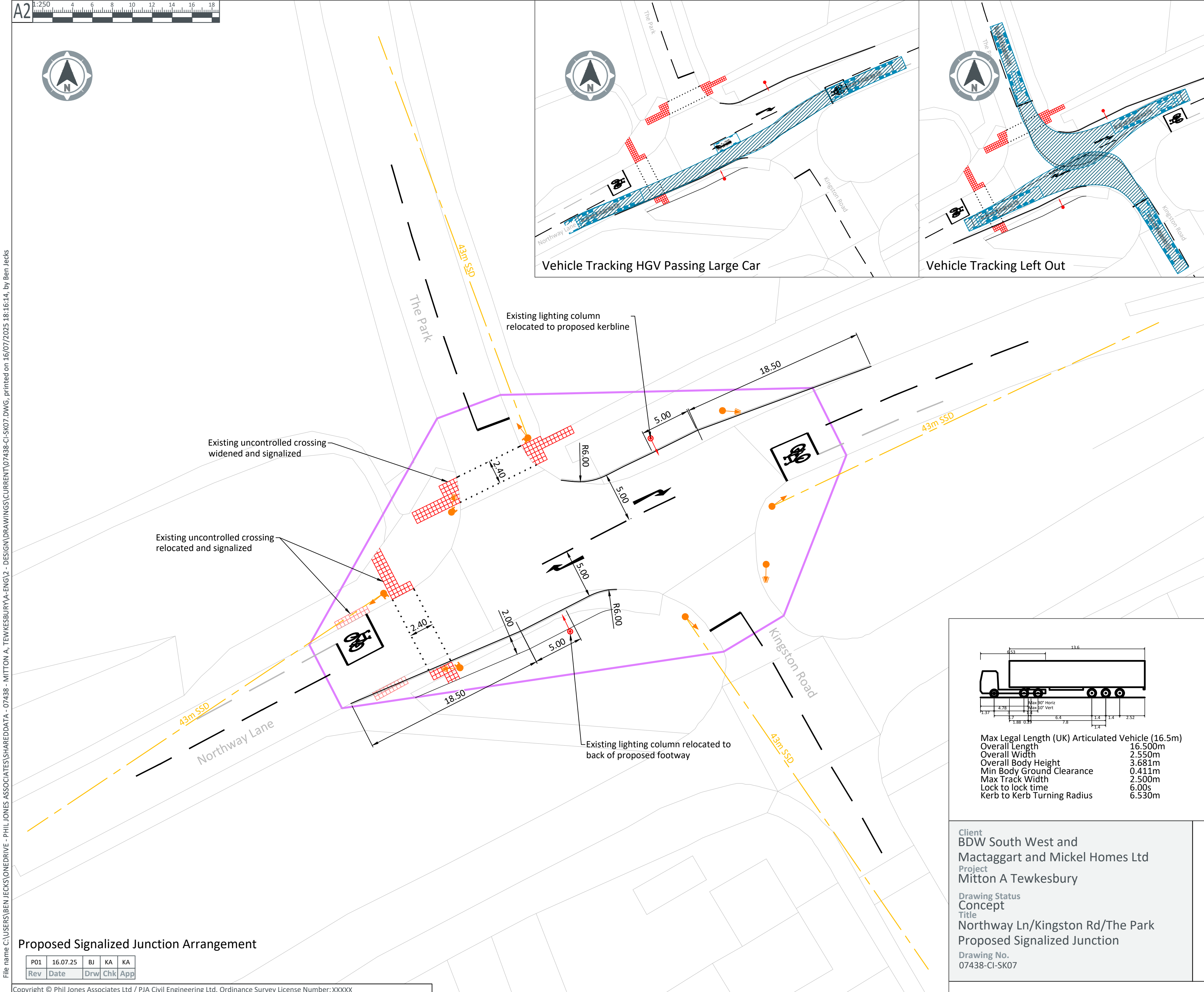
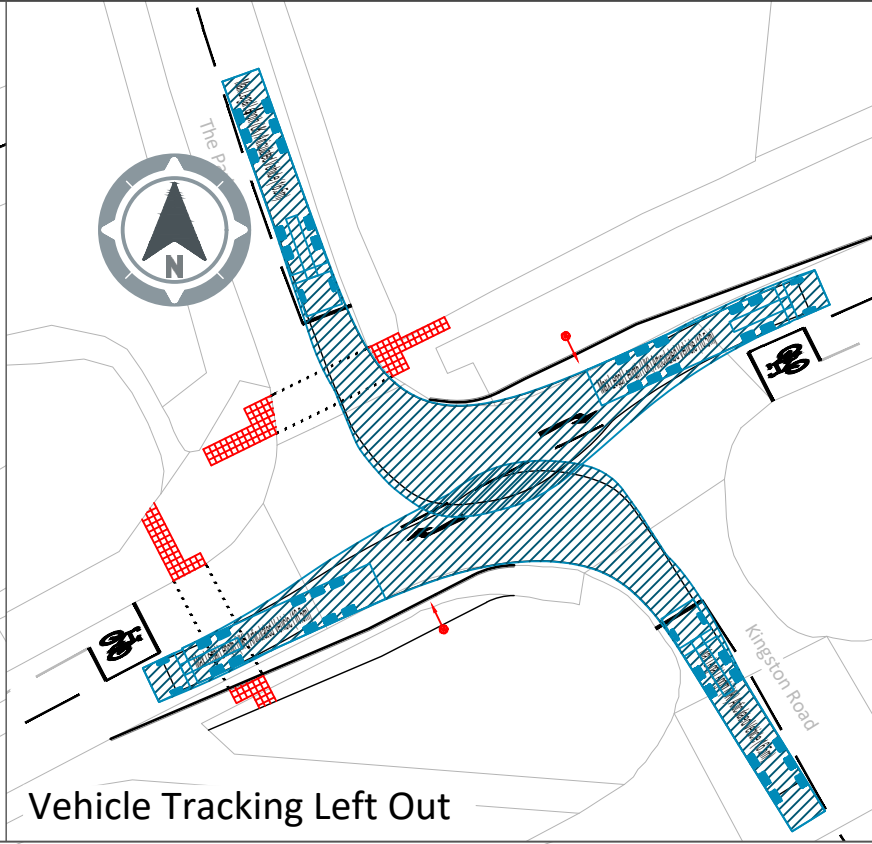
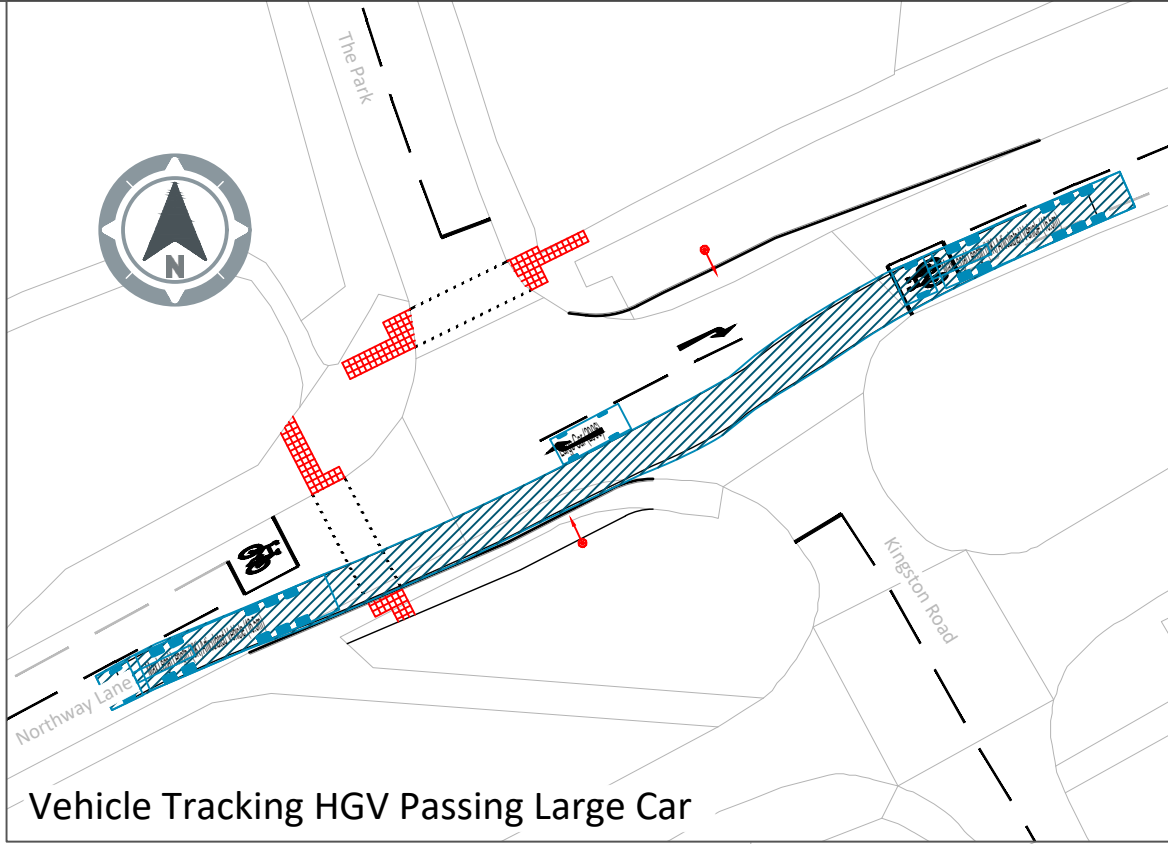


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CDM Note

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- The drawing details have been composed for accessibility purposes only. The drawing should not be used for tendering or construction purposes. The information is subject to change during the detailed design.
- Site specific detailed surveys need to be carried out to confirm design information, which may impact the outline design proposals.
- The purpose of this drawing is to show the location and form of a staggered signaled junction arrangement with improvements to the adjacent crossings.
- The design is Preliminary and subject to discussions with the local planning and highway authorities.
- The drawing should not be used for tendering or construction purposes and requires further development as part of the pre-planning application and understanding of highway authority preferences, which vary between authority.
- The drawing has been designed in accordance with Design Manual for Roads and Bridges, Manual for Streets 1 & 2 and Government Guidance. Key documents listed below:
 - CD 109 Highway Link Design
 - CD123 Geometric design of at-grade priority and signal-controlled junctions
 - Traffic Signs Manual Chapter 6 Traffic Control
 - LTN 1/20 Cycle Infrastructure Design.
- Road markings have been designed in accordance with Traffic Signs Manual and Traffic Signs Regulations and General Directions 2016.
- The signal head visibility has been calculated from Manual for Streets based on a 30mph road.
- Carriageway widening has been designed to accommodate a car and HGV to pass one another as per Table 6.25 of CD123.
- Relocated signal heads/lighting shown indicatively. Exact location to be confirmed by signal/lighting designer.

Key

- Proposed Channel/Kerbline
- Proposed White Road Marking
- Proposed Edging
- Proposed Tactile Paving (Red, Controlled)
- Proposed Relocated Lighting Column
- Signal Head Visibility (43m SSD MfS)
- Indicative Relocated Traffic Signal
- Push Button
- Pedestrian Signal

RISK: Existing underground services and service covers within the works extents which may need re-routing/relocating. These have not been shown on this drawing.

Client
BDW South West and
Mactaggart and Mickel Homes Ltd
Project
Mitton A Tewkesbury

Drawing Status
Concept
Title
Northway Ln/Kingston Rd/The Park
Proposed Signaled Junction

Drawing No.
07438-CI-SK07

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Proposed Signaled Junction Arrangement

| | | | | |
|-----|----------|-----|-----|-----|
| P01 | 16.07.25 | BJ | KA | KA |
| Rev | Date | Drw | Chk | App |