

AQUIND Limited

AQUIND INTERCONNECTOR

Temporary Highway Alterations to Facilitate Abnormal Load Deliveries

The Planning Act 2008

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

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DOCUMENT

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PROJECT: AQUIND Interconnector AUTHOR: Geoff Williams

CHECKED: Simon Brownlie APPROVED: Chris Williams

INTRODUCTION

This Technical Note has been prepared in response to Hampshire County Council's (HCC's) Local Impact Report (REP1-167) paragraphs A7.40 to A7.46 which related to the delivery of Abnormal Indivisible Loads (AlLs) to the Converter Station in Lovedean:

A7.40 The FCTMP states that Abnormal Invisible Loads will comply with the statutory regulations, including agreement of routing and communication with affected residents and other road users. This should be secured within the DCO Requirements

A7.41 There is only one signal junction on the route of the abnormal load (transformer) which is Portsmouth Road/ Catherington Lane/ Dell Piece. There are 6 signal poles that will be affected by the abnormal load. None of the poles are in the sockets which makes the task of removing them more challenging, and therefore their removal will need to be arranged significantly in advance of the load passing through. The advance work will need to be programmed approximately 3 months before the abnormal load is taken through. Existing road space bookings may restrict these movements.

A7.42 If it is required that the existing poles are removed, then new sockets and poles will be required to be installed. The street furniture could be re-used, and the signal cables disconnected and rewired. This may require temporary lights to be installed to allow necessary work to be undertaken

A7.43 On the day that the abnormal load is taken through, the Applicant will need to arrange for Hampshire County Council's contractor to be on site to remove these 6 signal poles. Further details of the Traffic Management will decide how the traffic is managed directly in advance of the load going through as certain movements will no longer be available or be under signal controlled. It would also be necessary to know the ground clearance of the abnormal load/vehicle.

A7.44 All costs associated with the works to the signals, in advance, and on the day, will be required to be recharged to the Applicant. A thorough precondition survey will be required prior to the first abnormal load delivery, and any repairs or works to bring the highway back up to standard to be implemented after the final abnormal load delivery.

A7.45 There is also widening works required at the junctions of Lovedean Lane/ London Road and Lovedean Lane/ Day Lane to facilitate the abnormal load delivery. However no information has been submitted detailing what these are proposed to be, nor the timescales for implementation. This information is required. Any widening required at the junctions of Lovedean Lane/ London Road and Lovedean Lane/ Day Lane should be temporary and once all abnormal load movements have been completed, the carriageway/ verge restored back to its original width and standard. A S278 will be required for these works and secured appropriately within the DCO.



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A7.46 Details are required for an indicative timescale for the abnormal load arrival (i.e. all 6 in one day/ week/ month) as well as tracking drawings showing how the trailer can return to the strategic road network after delivery.

Given that Abnormal Indivisible Loads will also be required on Portsmouth City Council (PCC) highway network through the delivery of Cable Drums to Joint Bays, this Technical Note covers both HCC and PCC sites. The Technical Note provides a proposed strategy for discussion and approval by the Local Highway Authorities (LHA), for the highway assets affected by the logistical manoeuvres of the two types of abnormal loads required as part of the AQUIND Interconnector scheme.

This Technical Note(TN) is focussed on the **traffic signal and associated assets** that will be directly affected by the two types of abnormal loads being proposed. However, where identified, other highway assets such as verge strengthening, bollards, kerbing and pedestrian guard rail have been included to further inform the authorities and aid future discussions.

Impacted Locations

The following junctions have been identified as requiring modification to highway assets to accommodate delivery of AILs in relation to the Proposed Development:

- 1 A3 Portsmouth Road / Dell Piece West / Catherington Lane traffic signal junction (HCC);
- 2 A3 Portsmouth Road / Lovedean Lane priority junction (HCC);
- 3 Lovedean Lane / Day Lane priority junction (HCC);
- 4 A2030 Eastern Road / Fitzherbert Road traffic signal junction (PCC); and
- 5 Fitzherbert Road / Sainsbury Entrance Exit traffic signal junction (PCC).

The locations identified within the HCC network will be impacted by the delivery of transformers to the Converter Station as identified in the Collett Route Access Strategy included in Appendix A of the Supplementary Transport Assessment (REP1-142). A total of seven transformers will be delivered to the Converter Station and while the exact schedule of such deliveries cannot currently be confirmed this may occur over a period of several weeks.

The locations identified in the PCC network will be impacted by the delivery of Cable Drums to a Joint Bay located in the Sainsbury's car park. This is identified in Drawing 0616-ATR-080 in Appendix D of the Supplementary Transport Assessment (REP1-142). Based on the preliminary assessment of Joint Bay locations it is estimated that 16 cable drums will be delivered to a Joint Bay located in Sainsbury's car park.

GENERAL PROCEDURE FOR ABNORMAL LOAD DELIVERIES

As noted in Section 2.7 of the Framework CTMP (REP1-070) it will be the responsibility of the appointed haulier to gain approval from the relevant LHA prior to commencement of the work. As required by The



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Road Vehicles (Authorisation of Special Types) Order 2003 the following notice of the following minimum notice periods will be provided:

- Transformer deliveries: at least 10 weeks' notice will be required to Highways England (via a Special Order application) while the Highway and Bridge Authorities and Police will require five workings days' notice; and
- Cable drum deliveries: Two workings days' notice to the highway authority and Police.

Further to this, the draft Development Consent Order under Paragraph 10 'Power to alter layout etc. of streets' states that the LHA will have a period of twenty working days to notify the undertaker of its decision on an application to temporary alter the layout of any street.

For all construction traffic routes the Applicant will complete a pre-condition survey for submission to each LHA. Any remedial measures required will be identified through further highway condition surveys completed once all abnormal load movements area complete. Any remedial measures will be rectified by the Applicant and agreed with the LHA. This is secured by Section 7.4 of the Framework Construction Traffic Management Plan (CTMP).

PROPOSED METHODOLOGY FOR TEMPORARY ALTERATIONS TO HIGHWAY ASSETS

To obtain technical approval in principal by the relevant LHA for the installation, removal, relocation of the affected traffic signal poles, associated equipment, kerbing, guard railing and other street furniture, the following process is proposed by the Applicant. Where identified, verge strengthening will furthermore be required. This is considered necessary given the multiple abnormal load vehicles that will travel through the various junctions. In all cases the methodology will aim to agree a strategy for the following work packages:

- Installation of new traffic signal poles in pole retention sockets (where required) ahead the first abnormal load delivery. This will allow for faster removal and reinstatement of traffic signal poles for all abnormal load deliveries:
- Removal of kerbing and guard rail where identified to be replaced with temporary plastic red-white traffic management barriers;
- Protection of service chambers due to the heavy loads that may traverse over it;
- The safe disconnection of the affected traffic signal poles on the day where required (for the transformer deliveries only);
- Safe disconnection of lit signs, removal of signs, posts and bollards;
- To temporary relocate a traffic signal pole outside of the swept path of abnormal loads for the duration abnormal load deliveries, where required (Sainsbury Joint Bay 12/13 only);



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Use of temporary traffic signals during the works.

Traffic Signal Junctions

For traffic signal junctions the following steps would be completed in order to prepare sketches and work packages, early liaison with the specialist traffic signal contractor and obtain site specific methods statements, risk assessments and pricing:

- Engage with LHA traffic signal teams to advise of proposals and obtain any available traffic signal as-built drawings;
- Obtain C2 utility data for the affected areas;
- Undertake a joint site survey with the specialist traffic signal contractor to agree temporary removal / relocation of traffic signals and / or installation of pole retention sockets.
- Undertake temporary works including removal of traffic signal poles as approved by the LHA;
- Rewire all cabling, test and reinstate signal heads, push button and on-crossing detectors;
- Reinstate all other street furniture;
- Make good all surfacing to match existing surfacing materials; and
- Undertake a joint inspection with the specialist traffic signal contractor for acceptance of the assets back into maintenance.

Priority Junctions

For priority junctions the following steps would be completed in order to prepare sketches and work packages, site specific methods statements, risk assessments and pricing:

- Obtain available as-built highway drawings;
- Obtain C2 utility data for affected areas;
- Undertake a joint site survey with the relevant LHA Highways Engineer to agree temporary / permanent works.
- Undertake temporary / permanent works as agreed with the LHA;
- Reinstate all street furniture;
- Make good all surfacing to match existing surfacing materials; and
- Undertake a joint inspection by the relevant LHA Highways Engineer for acceptance of the assets back into maintenance.



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A3 PORTSMOUTH ROAD / DELL PIECE WEST / CATHERINGTON LANE TRAFFIC SIGNAL JUNCTION

Further to the general methodology outlined above, this section provides site specific proposals for the A3 Portsmouth Road / Dell Piece West / Catherington Lane traffic signal junction, which will be impacted by transformer deliveries to the Converter Station. Figures 1 to 4 below provide details of the vehicle movement requirements and impacted street furniture.



Figure 1: A3/Portsmouth Road / B2149 Location of the junction and directional of travel where traffic signal assets have been found to be affected by the abnormal load manoeuvre.



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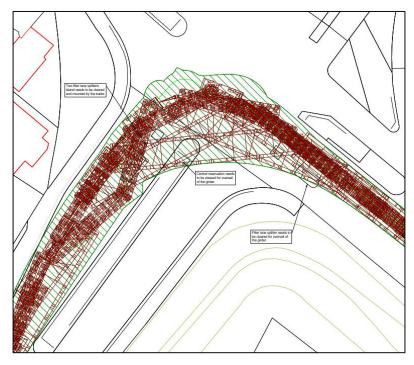
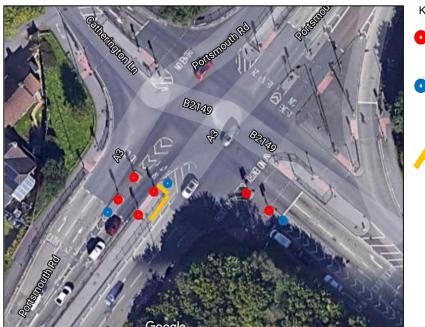


Figure 2: Swept Path Analysis - A3/Portsmouth Road / B2149



Key:

- Traffic Signal Pole to be removedset aside and reinstated
- Collapsible Bollard to be removedset aside and reinstated
 - Pedestrian Guard Rail to be removed set aside and reinstated

Figure 3: Traffic Signal poles, collapsible bollards and pedestrian guard rail to be removed.



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Figure 4: Existing pedestrian guard rail to be removed, set aside and reinstated.

Proposed Strategy

Upon approval to proceed, AQUIND will prepare sketches and work packages, liaise with the specialist traffic signal contractor and civils contractor to obtain site specific methods statements, risk assessments and pricing.

- Obtain available as-built traffic signal drawings;
- Obtain C2 utility statistic details for the affected areas;
- Undertake a joint site survey with the specialist traffic signal contractor to agree temporary removal / relocation of traffic signals and / or installation of role retention sockets;
- Liaise with the approved relevant civils contractor to obtain the best method for removing the pedestrian guard rail and setting aside for reinstatement;
- Liaise with Street Lighting contractor or approved civils contractor for the removal of the bollards affected to then be set aside and reinstated after the move; and
- Install Pole and barrier Retention Sockets including slot-less poles with cable termination units, reinstate prior to abnormal load movement.
- Undertake temporary works and including the installation of temporary traffic signals and removal of traffic signal poles as approved by the LHA;



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Upon final completion of all works:

- Rewire all cabling, test and reinstate signal heads, push button and on-crossing detectors;
- Reinstate all other street furniture;
- Make good all surfacing to match existing surfacing materials; and
- Undertake a joint inspection with the specialist traffic signal contractor for acceptance of the assets back into maintenance.
- On the evening before the abnormal load manoeuvre, install temporary traffic signals ready for the safe isolation of the main traffic signals. Bag over signal heads, if deemed appropriate. Safely isolate, disconnect traffic signal cabling and remove poles using a NAL pole remover or similar. Set aside for reinstatement afterwards. Ensure the specialist traffic signal contractor has sufficient resources to remove and reinstate in a single shift after abnormal load has passed through.



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A3 PORTSMOUTH ROAD / LOVEDEAN LANE PRIORITY JUNCTION

From a review of the Collett Route Access Survey report, the swept path analysis shown on drawing COL-D-333200-10-4 (1 of 1), indicates that the trailer will mount the nearside footway outside house no. 221 on Portsmouth Road (as shown in Figure 5 below). Figure 6 provides further details of the extents.

Furthermore, due to the oversail on the diagonally opposite corner outside house no. 231, 3no street signs have been identified as being in the path of the trailer (see Figure 7) and would require removal prior to the abnormal load manoeuvre.



Figure 5: Direction of travel at the A3 Portsmouth Road / Lovedean Lane junction



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Figure 6: Swept Path Analysis - A3 Portsmouth Road / Lovedean Lane junction



Figure 7: Signs on the N-W verge to be cleared ahead of the AIL manoeuvre Key:



Sign Posts to be removed, set aside and reinstated after each AIL manoeuvre



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Proposed Strategy

For the A3 Portsmouth Rd / Lovedean Ln priority junction, the following strategy is suggested for consideration:

- Obtain available as-built highway drawings;
- Obtain C2 utility statistic details for the affected;
- Undertake a joint site survey with the relevant LHA Highways Engineer to agree temporary / permanent works.
- Undertake temporary / permanent works as agreed with the LHA;
- Liaise with the LHA Sign / Streetlighting Engineer for the electrical isolation of the lit sign
- Install Pole Retention Sockets for all signs so they can be easily removed/reinstated during the works;
- Make good all surfacing to match existing surfacing materials; and
- Undertake a joint inspection by the relevant LHA Highways Engineer for acceptance of the assets back into maintenance.



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LOVEDEAN LANE / DAY LANE PRIORITY JUNCTION

From a review of the Collett Route Access Survey report, the swept path analysis shown on drawing COL-D-333100-10-6 (1 of 1), indicates that the trailer will mount the offside verge outside in Day Lane. This area appears to be used informally as a lay-by so ground conditions are likely to be well-compacted. An illustration of the swept path is shown in Figure 8 below.

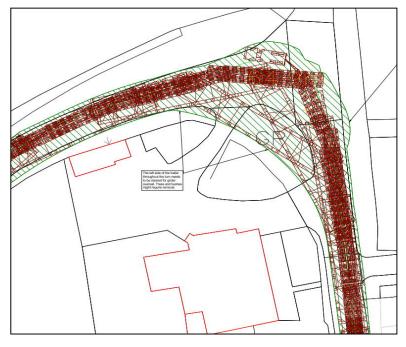


Figure 8: Swept Path Analysis - Lovedean Ln / Day Lane Priority Junction

Proposed Strategy

For the Lovedean Ln / Day Ln priority junction, the following strategy is suggested for consideration:

- Obtain available as-built highway drawings;
- Obtain C2 utility statistic details for the affected;
- Undertake a joint site survey with the relevant LHA Highways Engineer to agree any temporary / permanent works.
- Undertake temporary / permanent works (if required) as agreed with the LHA;
- Make good all surfacing to match existing surfacing materials; and



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 Undertake a joint inspection by the relevant LHA Highways Engineer for acceptance of the assets back into maintenance.

A2030 EASTERN ROAD / FITZHERBERT ROAD TRAFFIC SIGNAL JUNCTION

Further to the general methodology outlined above, this section provides site specific proposals for the A2030 Eastern Road / Fitzherbert Road traffic signal junction, which will be impacted by cable drum deliveries should a Joint Bay be constructed within Sainsbury's car park. Figure 9 provides detail of the proposed abnormal load vehicle being utilised for these deliveries. Figures 10 and 11 provide details of the required movements and the associated swept path.

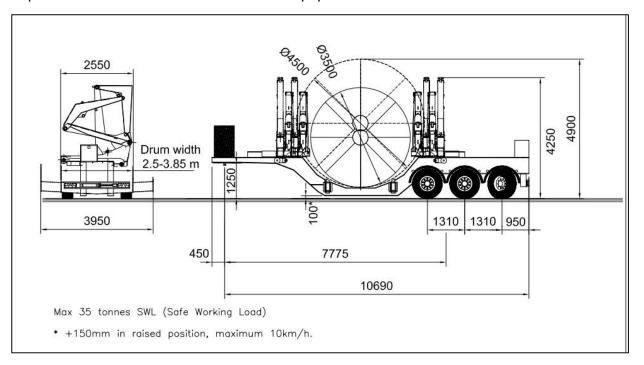


Figure 9: Proposed Abnormal Load Vehicle dimensions - "Hammar 155" - for the delivery of the cable drums.



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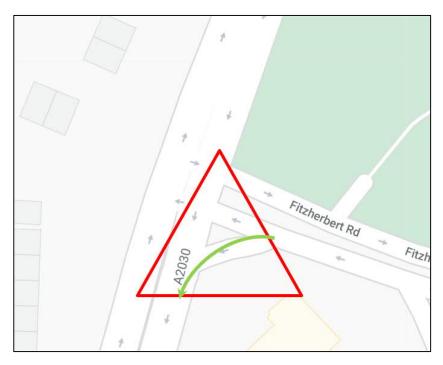


Figure 10: Affected area – Jct. A2030 / Fitzherbert Rd – Portsmouth (on exit from Sainsbury Car Park / Direction of travel of the abnormal load.

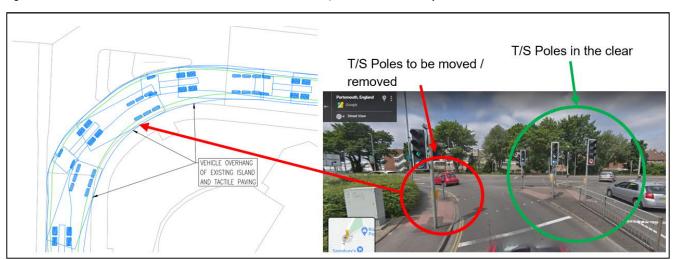


Figure 11: Extract from Drawing No. 0616-ATR-080 Rev A - Swept Path Analysis - Sainsbury Car Park Exit



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Proposed Strategy

Upon approval to proceed, prepare sketches and work packages, liaise with the specialist traffic signal contractor and obtain site specific methods statements, risk assessments and pricing.

- Obtain available as-built traffic signal drawings from PCC;
- Obtain C2 utility statistic details for the affected areas from PCC;
- Undertake a joint site survey with PCC's Traffic Signal Engineer;
- Propose to relocate the un-numbered nearside primary / TOUCAN pole in the affected area closer
 to the back edge of the footway in the direction of the controller. Extend the cable temporarily if
 needed as it can be replaced for the final reinstatement;
- To install a new Pole Retention Socket where it currently is for the final reinstatement. A new 4m grey slot-less pole will be required. Rewire all cabling to this pole from the controller, terminate, test and reinstate signal heads, push button and on-crossing detector;
- Remove the 2m pedestrian demand unit stub pole for the duration of the proposed manoeuvres and pull the cable back into the nearest chamber. Ensure the cable is isolated from its feeder pole / controller. Send the pole to scrap;
- Install a pole retention socket where is currently is for the reinstatement. A new grey 2m slot-less
 pole will be required. Rewire the cable from source, assumed the primary pole, test and reinstate to
 pedestrian demand unit;
- Make good all surfacing to match existing surfacing materials;
- Undertake a joint inspection by the LHA for acceptance of the assets back into maintenance.



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FITZHERBERT ROAD / SAINSBURY'S ENTRANCE EXIT TRAFFIC SIGNAL JUNCTION

Further to the general methodology outlined above, this section provides site specific proposals for the Fitzherbert Road / Sainsbury's traffic signal junction, which will be impacted by cable drum deliveries to the proposed Joint Bay 12/13. Figures 12, 13 and 14 provide further details.

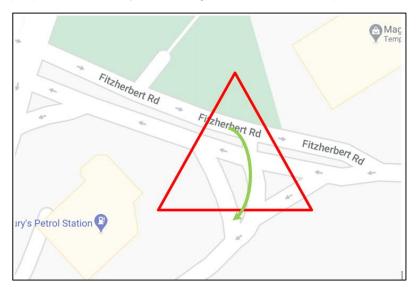


Figure 12: Affected area – Fitzherbert Rd – Sainsbury Entrance / Exit Portsmouth / Direction of travel of the abnormal load

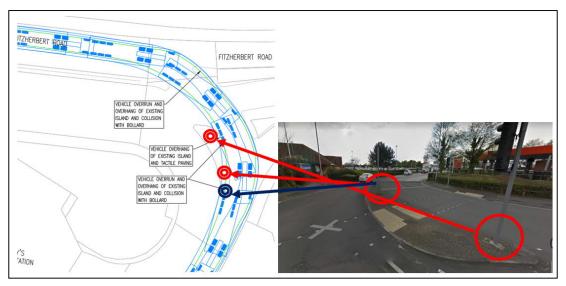


Figure 13: Extract from Drawing No. 0616-ATR-080 Rev A – Swept Path Analysis – Sainsbury Car Park Entrance / Exit / Affected traffic signal poles and bollard. Entrance to the Sainsbury Car Park Joint Bay 12/13.

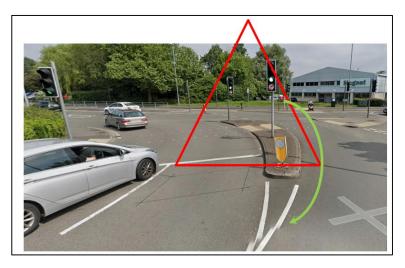


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The T/S Poles and collapsible bollard as identified by the Collets survey are proposed to be removed. Kerbs may have to be removed due to the trailer wheels directly traversing over the island. The current trailer clearance stated is 100mm +150mm raised which suggests the trailer should clear the island. Strengthening of chambers could be required via steel plating.

Figure 14: Front view of the affected traffic signal poles and bollard - Sainsbury Car Park Entrance / Exit / direction of travel of the abnormal load.

Proposed Strategy

Upon approval to proceed, AQUIND will prepare sketches and work packages, liaise with the specialist traffic signal contractor and civils contractor in order to obtain site specific methods statements, risk assessments and pricing.

- Obtain available as-built traffic signal and highways drawings from PCC;
- Obtain C2 utility data details of the affected areas;
- Undertake a joint site survey with PCC's Traffic Signal Engineer;
- Install 2x new Pole Retention Sockets including matching 2 new slot-less grey 4m poles. Rewire all cabling for these poles, terminate, test and reinstate signal heads. Ensure there is enough slack on the cabling for future disconnects and reconnects as each load comes through.
- Remove collapsible bollard and set aside for the duration of the works.
- Make good all street furniture and road infrastructure;
- Undertake a joint inspection by the LHA for acceptance of the assets back into maintenance.
- Make good all surfacing to match existing surfacing materials;
- Undertake a joint inspection by the LHA for acceptance of the assets back into maintenance.



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NEXT STEPS

- Arrange for this TN and supporting documentation to be sent to the relevant officers in HCC and PCC for consideration and approval.
- modify, minute and make changes to this TN if required.
- Upon final approval, prepare a Pre-Construction Information Works Package for the impacted junctions.

