

Decision Maker: ENVIRONMENT PORTFOLIO HOLDER

**FOR PRE-DECISION SCRUTINY BY THE ENVIRONMENT
POLICY DEVELOPMENT AND SCRUTINY COMMITTEE ON:**

Date: Wednesday 15th November 2017

Decision Type: Non-Urgent Executive Non-Key

Title: WARREN ROAD/ COURT ROAD (A224) JUNCTION SAFETY
IMPROVEMENTS

Contact Officer: Jenny Carne , Traffic Engineer
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Chief Officer: Nigel Davies, Executive Director of Environment & Community Services

Ward: Chelsfield and Pratts Bottom

1. Reason for report

To seek approval for the construction of a roundabout at the junction of Warren Road and Court Road (A224) to improve road safety. The proposal is in response to the number and pattern of collisions identified in this location and safety concerns raised by Ward Members.

2. **RECOMMENDATION(S)**

2.1 That the Portfolio Holder for Environment to approve the construction of a roundabout at the junction of Warren Road and Court Road (A224) at an estimated cost of £148k.

2.2 That authority is delegated to the Executive Director of Environment and Community Services, in consultation with the Portfolio Holder and Ward Members, to approve the scheme's detailed design.

Impact on Vulnerable Adults and Children

1. Summary of Impact: N/A
-

Corporate Policy

1. Policy Status Existing Policy This project supports Outcome 5 of the 2016/19 Environment Portfolio Plan
 2. BBB Priority: Quality Environment:
-

Financial

1. Cost of proposal: £148k
 2. Ongoing costs: Some resurfacing may be required in around 10 years' time as part of the maintenance of the carriageway/footway to ensure it remains safe and fit for purpose.
 3. Budget head/performance centre: TfL LIP Funding for casualty reduction schemes
 4. Total current budget for this head: £262k of which £148k is allocated to this scheme.
 5. Source of funding: TfL Local Implementation Plan budget for 2017/18
-

Personnel

1. Number of staff (current and additional): 1 member of existing staff
 2. If from existing staff resources, number of staff hours: 70
-

Legal

1. Legal Requirement: N/A
 2. Call-in: Applicable
-

Procurement

1. Summary of Procurement Implications: The works will be completed by LBB's term Contractor for Highways
-

Customer Impact

1. Estimated number of users/beneficiaries (current and projected): Approximately 20,000 vehicles per day use this junction.
-

Ward Councillor Views

1. Have Ward Councillors been asked for comments? Yes
2. Summary of Ward Councillors comments: To be reported at the meeting

3. COMMENTARY

- 3.1 A224 Court Road forms a staggered crossroads with Warren Road. Both Warren Road and the A224 Court Road are single carriageway roads with Court Road having right turn pockets. A 30 mph speed limit is in force on Warren Road and a 40 mph speed limit on Court Road. There is an historical collision issue at this junction with the majority of recorded collisions involving vehicles travelling west to east from Chelsfield Station to Chelsfield Village.
- 3.2 A total of 15 collisions occurred at the junction of Warren Road and the A224 Court Road during the period June 2005 to August 2016, including one fatal collision and three serious collisions.
- 3.3 There have been a total of six collisions in the three years up to September 2016, two of which resulted in serious injury.

The table in Appendix 1 shows the details of the 15 collisions that have occurred during the period June 2005 to September 2016.

- 3.4 One pattern identified from the collision statistics is that at least seven of the collisions are due to vehicles from Warren Road failing to give way or pulling out/crossing into the path of Court Road vehicles.
- 3.5 The collisions involving vehicles traveling West to East could be due to minimal gaps in Court Road traffic, the speed of traffic on Court Road travelling faster than expected, visibility issues due to the layout of the junction or the distance required to cross between both sides of Warren Road.
- 3.6 Four options were assessed to see if safety could be improved at this junction based on the existing collision analysis, existing junction geometry, available highway land and on the guidance contained within the Geometric Design of Major/Minor Priority Junctions (TD 42/95 in Design Manual for Roads and Bridges).

The figure below taken from TD 42/95 recommends that at a junction with similar flows to Warren Road/Court Road, a single lane dualling layout or a roundabout layout would be the best provision at this location.

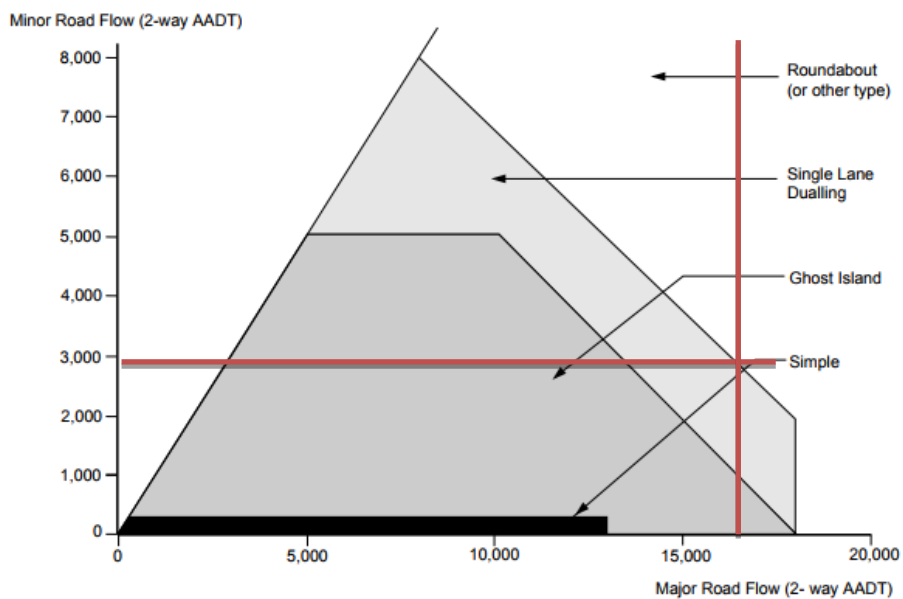


Figure 2/2 : Approximate Level of Provision of T-junctions on New Single Carriageway Roads for Various Major and Minor Road Design Year Traffic Flows (paras 2.2, 2.14)

- 3.7 The four options assessed were a single lane dualling option, a basic realignment of the junction and two roundabout options.
- 3.8 These options are at the feasibility study stage and if implementation of the preferred option recommended in this report is approved, the design will require vehicle tracking assessments (to check if vehicles are able to carry out all movements at the junction) and more investigation into the statutory undertakers' equipment at the junction prior to construction.

The options considered are set out in the table below and the proposed layout drawings are included in Appendix 2

Table 1: Summary of Proposed Options

Option	Overview of proposal	Approximate Cost of Scheme	First Year Rate of Return
A	A single lane dualling arrangement (with traffic islands) aims to safely direct traffic movements at the junction and is believed to be effective in improving safety at staggered crossroad junctions. This form of junction is also designed to prevent overtaking and excessive speeds through a junction. There would not be any delay to vehicles travelling straight along Court Road.	£123,000	106%
B	This proposed option would bring forward the give way lines on both the Warren Road approaches to improve visibility. This option would reduce the stagger arrangement to create a more direct crossroads junction which would reduce the length of the movement for vehicles traveling between both sides of Warren Road.	£84,000	102%
C	Preferred option, described in detail below	£148,500	117%
D	Proposed roundabout with two circulatory lanes. Two circulatory lanes would allow for more than one movement to take place at the junction but may also cause some confusion as two approach lanes would not be provided on all approaches. A larger overall diameter would also result in slightly more land take than a compact roundabout.	£152,000	99%

- 3.9 The preferred option for the junction (Option C) that this report recommends is a compact roundabout layout which would improve movement through the junction for vehicles on Warren Road with only one opposing traffic stream to manage before entering the junction.
- 3.10 A roundabout layout would also reduce vehicle speeds on Court Road as vehicles would need to slow down to negotiate the junction. This design would require some land take on the north eastern (highway verge) and south western sides of the junction (land ownership unclear at present). Changes to the layout of this junction may cause an issue with the existing access road into Rose Cottage (as is the case in the existing layout). The existing access to this property may need to be relocated subject to owner's agreement and an assumption of the cost of this has been included in the scheme cost (£20,000).

- 3.11 Option C is being recommended because it offers the highest First Year Rate Return of the four options considered with a return of 117%. First Year rate of return is a measure of the level of the value of collisions saved compared to the cost of the intervention. It is expected that Option C would reduce the number of collisions occurring at the junction involving vehicles exiting Warren Road.
- 3.12 There are a number of BT and EDF cables and Thames Water pipes running in all directions under the carriageway. Initial assessments of the plans indicate that these cables and pipes should not be an issue. However, more detailed analysis of the information and trial holes would need to be carried out at the detailed design stage to fully understand the impact (if any) of the underground cables.
- 3.13 The main piece of utility equipment at the junction is a BT cabinet which is situated on the north western corner of the junction. The location of this cabinet has been highlighted in each proposed option drawing although this should not be affected as part of any of these initial designs.

4. POLICY IMPLICATIONS

- 4.1 This project supports Outcome 5 of the 2016/19 Environment Portfolio Plan, and is specifically related to the aim 'To reduce road casualties' which states that the Council will:

5.9: Continue implementing the Council's programme of accident reduction measures in key locations

5.10: Identify and prioritise locations for accident reduction measures in 2017/18.

5. FINANCIAL IMPLICATIONS

- 5.1 The proposal is estimated to cost £148k and will be funded from the Casualty Reduction allocation in the 2017/18 Local Implementation Plan budget of £262k. Funding will be reallocated from schemes that have underspent or have been delayed/abandoned.

6. PERSONNEL IMPLICATIONS

- 6.1 The design and project management of the scheme will be undertaken by existing LBB Transport and Highways staff.

7. PROCUREMENT IMPLICATIONS

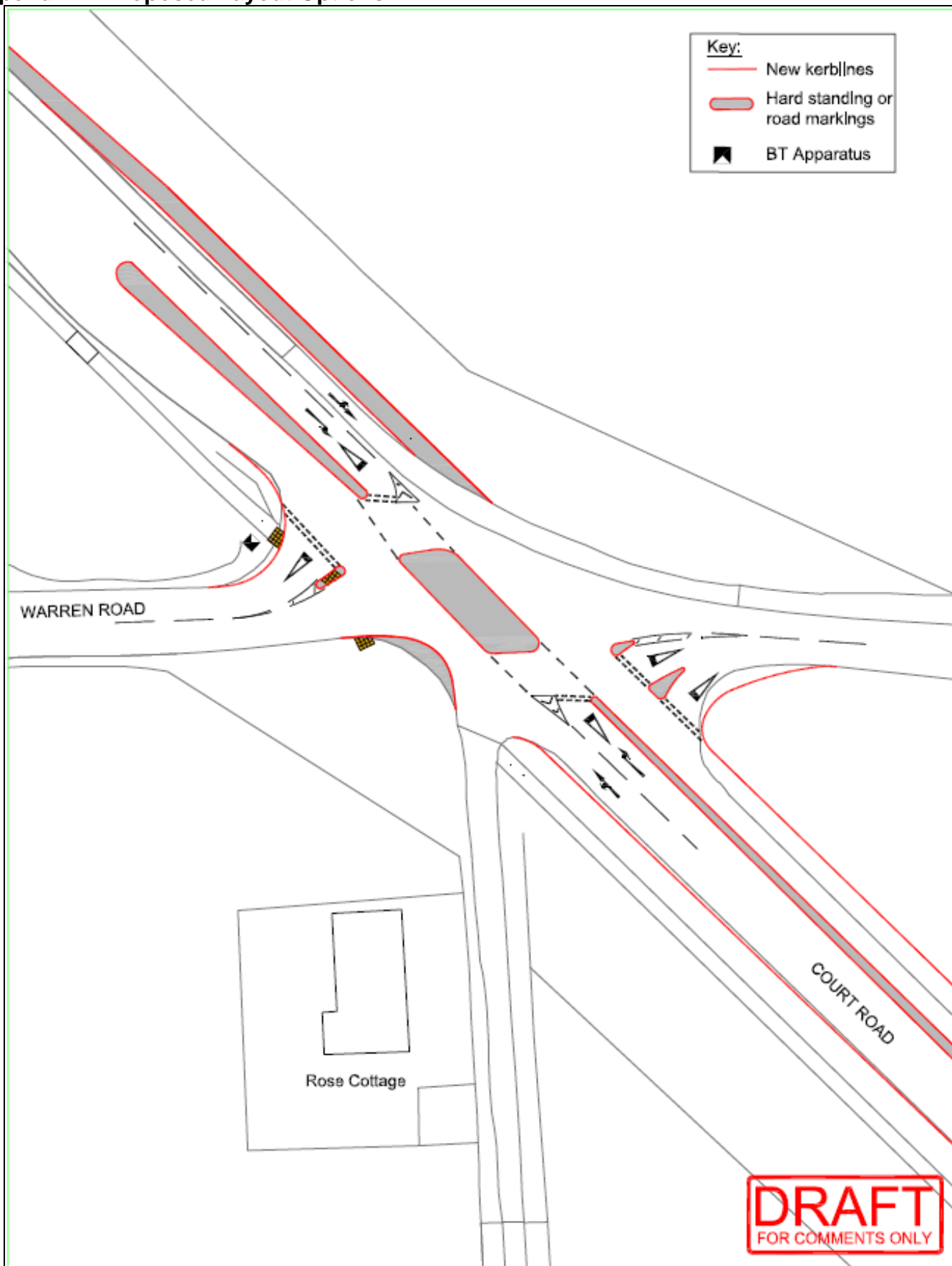
- 7.1 The construction works will be completed by LBB's term Contractor for Highways, therefore there aren't thought to be any Procurement implications of the proposal.

Non-Applicable Sections:	Impact on Vulnerable Adults & Children and Legal Implications.
Background Documents: (Access via Contact Officer)	N/A

Appendix 1: Collision Data between June 2005 and August 2016

Date	Sev.	Location	Description
20-Jun-05	SERIOUS	COURT RD J/W WARREN RD	DRIVER OF V2 (W to E) ENTERED MAIN ROAD WITHOUT LOOKING PROPERLY, V1 (SE to NW) WAS HIT BY V2. V2 FAILED TO JUDGE OTHER PERSONS PATH OR SPEED/CARELESS DRIVING. RIDER OF V1 (MC) RECEIVED SERIOUS INJURIES. CONDITIONS WERE LIGHT AND WET.
28-Mar-06	SLIGHT	COURT RD J/W WARREN RD	V1 (SE to SW) CROSSED INTO PATH OF V1
24-Jul-06	SLIGHT	COURT RD J/W WARREN RD	V2 (E to SE) CROSSED INTO PATH OF V1, V2 (NW to SE) THEN GOES INTO PATH OF V3 (SE to NW)
06-Nov-06	SLIGHT	COURT RD J/W WARREN RD	V3 (W to E) FAILED TO GIVEWAY AND CROSSED THE PATH OF V1 (NW to SE), V3 HIT V1 O/S, V1 THEN SPUN AND HIT THE FRONT OF V2 (SE to E).
15-Jan-06	FATAL	COURT ROAD J/W WARREN ROAD	V1 (SW to NW) TRAVELLING AT SPEED HIT V2 (W to E) EMERGING FROM JUNCTION. DRIVER OF V2 INJURED FATALLY AND V1 RECEIVED SERIOUS INJURIES. CONTRIBUTORY FACTORS INCLUDED V1 TRAVELLING TOO FAST AND AGGRESSIVELY.CONDITIONS WERE DARK AND WET.
13-Apr-10	SLIGHT	WARREN RD J/W COURT RD	V1 (W to SE) TURNED RIGHT ACROSS PATH OF CYCLIST FROM THE NEARSIDE
16-Jun-10	SLIGHT	WARREN RD J/W COURT RD	V2 (W to SE) TURNED RIGHT FROM NEARSIDE OF SOLO AND CAUSED SOLO TO BRAKE AND FALL OFF
30-Jun-11	SLIGHT	COURT RD J/W WARREN RD	V1 (W to SE) FAILED TO GIVEWAY AND CROSSED V2'S PATH (SE to NW)
30-Nov-12	SLIGHT	COURT RD J/W WARREN RD	V2 REVERSED AND HIT V1 (MOBILITY SCOOTER) ON FOOTWAY
24-Jun-14	SLIGHT	COURT RD J/W WARREN RD	V1 CANCELLED ITS TURN AND CHANGED LANE, COLLIDING WITH V2 (W to E)
28-Oct-14	SLIGHT	COURT RD 60 M NW J/W WARREN RD	V1 (SE to NW) SWERVED LOST CONTROL AND FELL FROM BIKE
08-Sep-14	SLIGHT	COURT RD J.W WARREN RD	V1 (SW to SE) PULLED OUT INTO THE PATH OF V2 (SE to NW)
31-Jan-15	SERIOUS	COURT RD J/W WARREN RD	V2 (SW to NE) PULLED OUT INTO THE SIDE OF V1 (SE to NW). CONTRIBUTORY FACTORS WERE V2 LOST CONTROL/TRAVELLING TOO FAST/DISOBYED GIVE WAY/FAILED TO LOOK PROPERLY. PASSENGER OF V2 RECEIVED SERIOUS INJURY. CONDITIONS WERE LIGHT AND WET.
18-Feb-16	SERIOUS	COURT RD J/W WARREN RD	V1 (TRAVELLING NW to W) PULLED OUT INFRONT OF V2 (TRAVELLING W TO E) BY FAILING TO LOOK PROPERLY AND AGGRESSIVE DRIVING. V2 (MOTORCYCLE) HIT V1. CONDITIONS WERE LIGHT AND WET.
23-Aug-16	SLIGHT	COURT RD J/W WARREN RD	V2 OVERSTEERED AND HIT WAITING V1 AND A CENTRAL REFUGE

Appendix 2: Proposed Layout Options



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Job Title:
WARREN ROAD/
COURT ROAD
CHELSFIELD

Drawing Title:
JUNCTION
IMPROVEMENTS
OPTION A
SINGLE LANE DUALLING



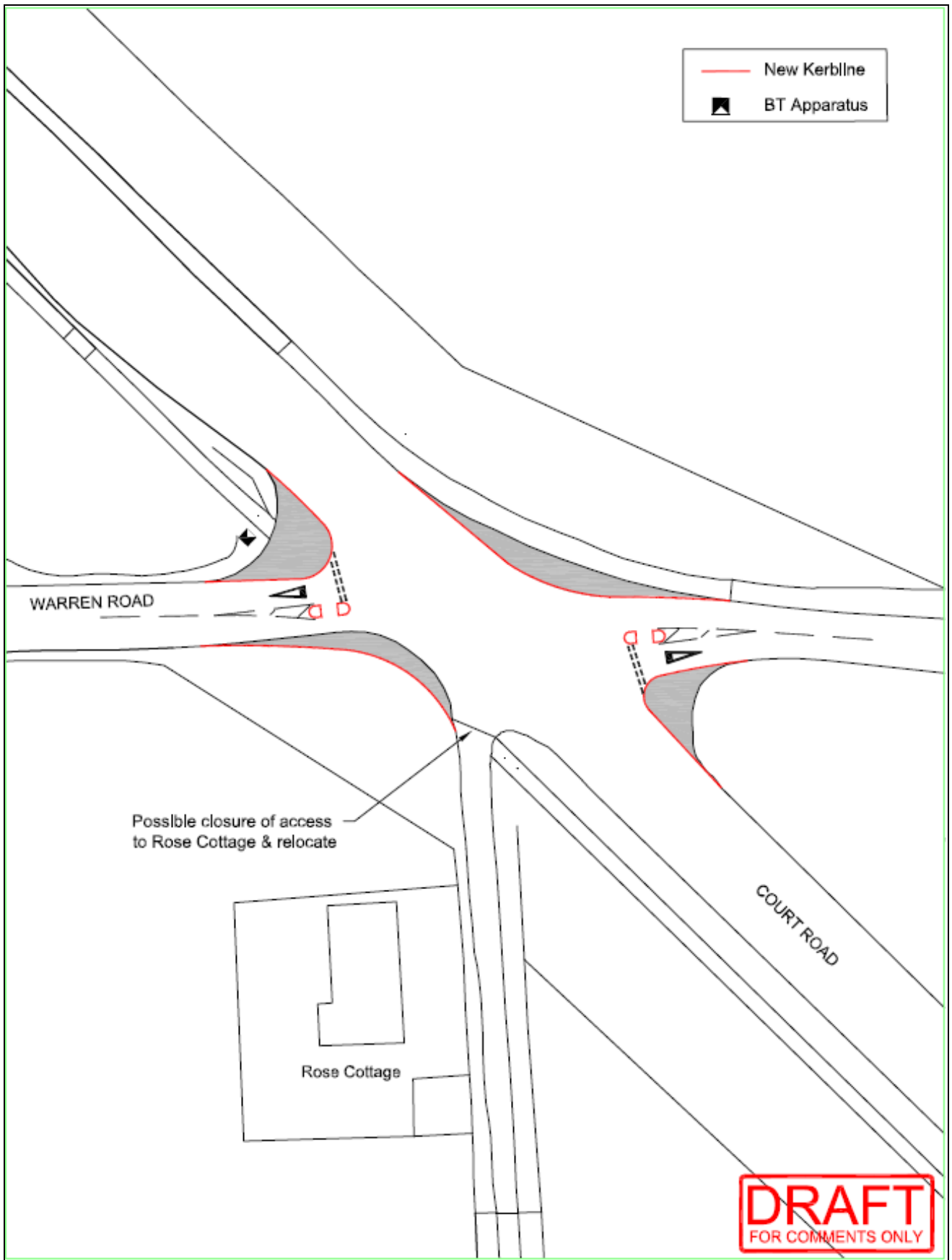
Environmental Services
CME Centre, Stockwell Close,
Bromley, BR1 3UH
Tel: 020 8484 3333
Fax: 020 8313 4555
Email: www.bromley.gov.uk

Nigel Davies
Executive Director of Environment
& Community Services



Scale @ A4
1:500
Date:
18/8/17
Drawn by:
S.T.
Checked by:
J.C.

Rev	Date	Description	By
		Drawing Number 12568-01-A	Rev -



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Job Title:
**WARREN ROAD/
 COURT ROAD
 CHELSFIELD**

Drawing Title:
**JUNCTION
 IMPROVEMENTS
 OPTION B
 REMOVAL OF STAGGER**



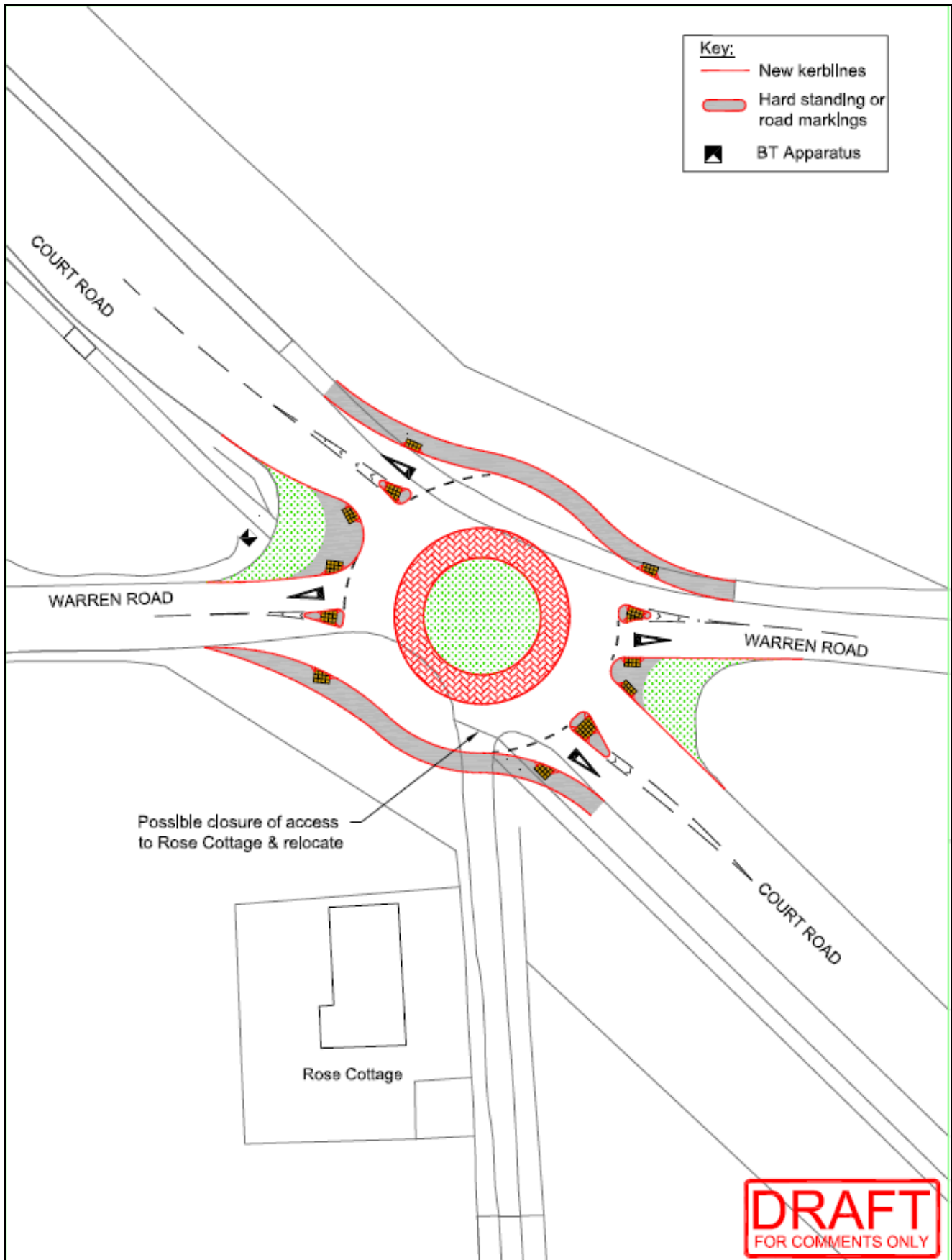
Environmental Services
 Civic Centre, Stockwell Close,
 Bromley, BR1 3UH
 Tel: 020 8464 3333
 Fax: 020 8315 4555
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Nigel Davies
 Executive Director of Environment
 & Community Services

Scale @ A4
 1:500
 Date:
 18/8/17
 Drawn by
 S.T.

Checked by
 J.C.




Rev	Date	Description	By
		Drawing Number	Rev
		12568-01-B	-

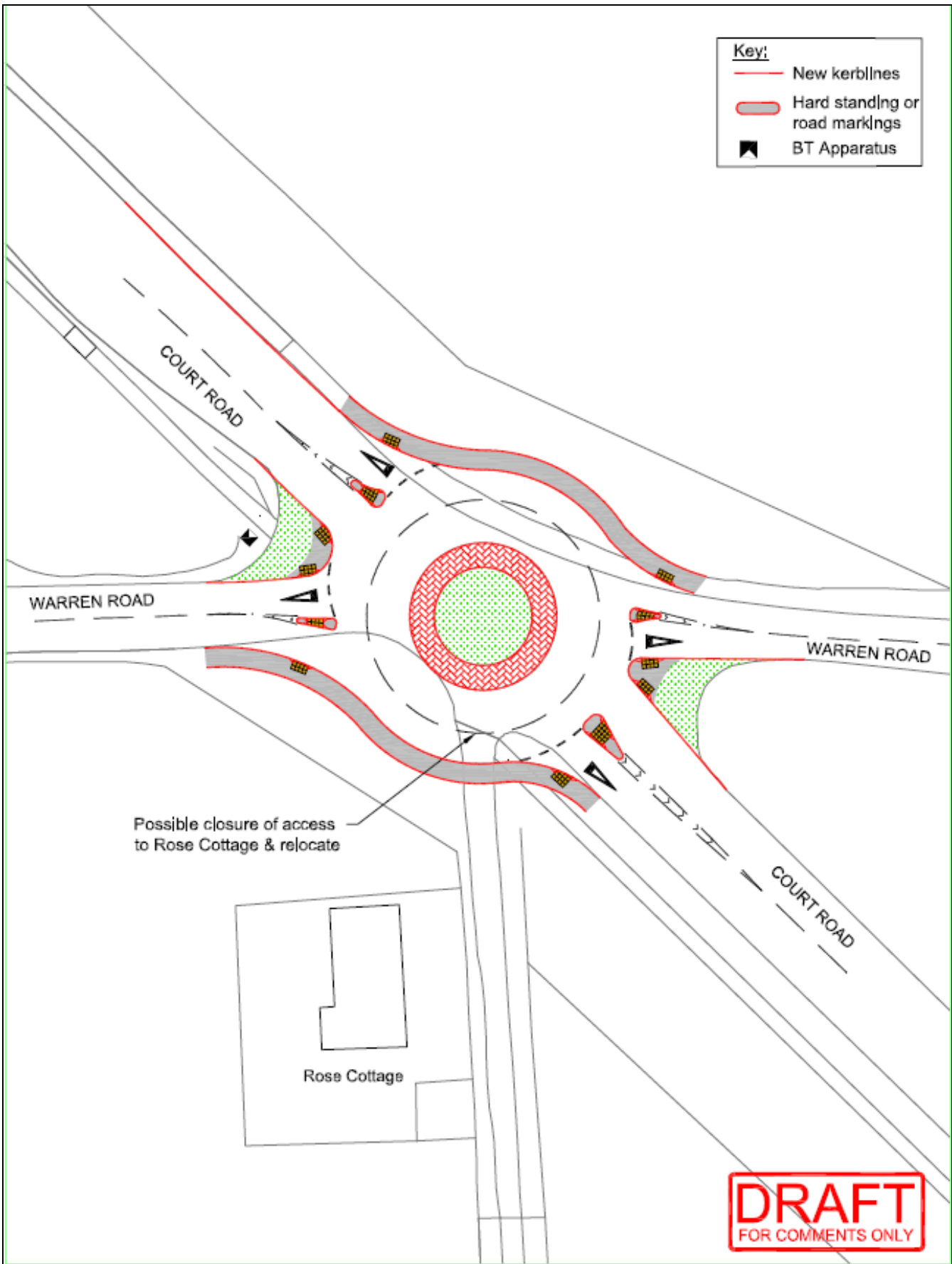


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Job Title: WARREN ROAD/ COURT ROAD CHELSFIELD	Drawing Title: JUNCTION IMPROVEMENTS OPTION C (R/BT WITH ONE CIRCULATORY LANE	 Environmental Services CMC Centre, Stockwell Close, Bromley, SE18 3UH Tel: 020 8464 3333 Fax: 020 8315 4555 Email: www.bromley.gov.uk	Scale @ A4 1:500			
			Date: 18/6/17			
		Nigel Davies Executive Director of Environment & Community Services	Drawn by S.T.	Rev Date Description By		
			Checked by J.C.	Drawing Number 12568-01-C	Rev -	

Key:

-  New kerblines
-  Hard standing or road markings
-  BT Apparatus



DRAFT
FOR COMMENTS ONLY

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Job Title
**WARREN ROAD/
COURT ROAD
CHELSFIELD**

Drawing Title
**JUNCTION IMPROVEMENTS
OPTION D (R/BT WITH TWO
CIRCULATORY LANES)**

 Environmental Services
CME Centre, Stockwell Close,
Bronley, BR1 3UH
Tel: 020 8484 3333
Fax: 020 8313 4555
Email: www.bronley.gov.uk

 Nigel Davies
Executive Director of Environment
& Community Services

Scale @ A4
1:500
Date: 18/8/17
Drawn by: S.T.
Checked by: J.C.

Rev	Date	Description	By
		Drawing Number	
		12568-01-D	