



**Land East of Manor Trading Estate,
Benfleet, Masterplan Development**

**Proof of Evidence of Justin Bass
in Relation to Highways Matters**

Appendices

**Appeal Reference:
APP/M1520/W/22/3310794**

LPA Reference: 21/0532/OUT

on behalf of

The Smith Family

January 2023

INTERMODAL TRANSPORTATION

Hunters Court, Debdon Road, Saffron Walden, Essex CB11 4AA Tel: 01799 529529 Fax: 01799 529530 e-mail: enquiries@inter-modal.co.uk

11932



APPENDICES

APPENDIX JB1: LOCAL AND WIDER CONTEXT PLAN

APPENDIX JB2: ESSEX HIGHWAYS CONSULTATION RESPONSE

APPENDIX JB3: FEBRUARY 2020 PLANNING APPLICATION

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APPENDIX JB7: COMPOSITE OVERLAY PLANS

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DIMENSIONS



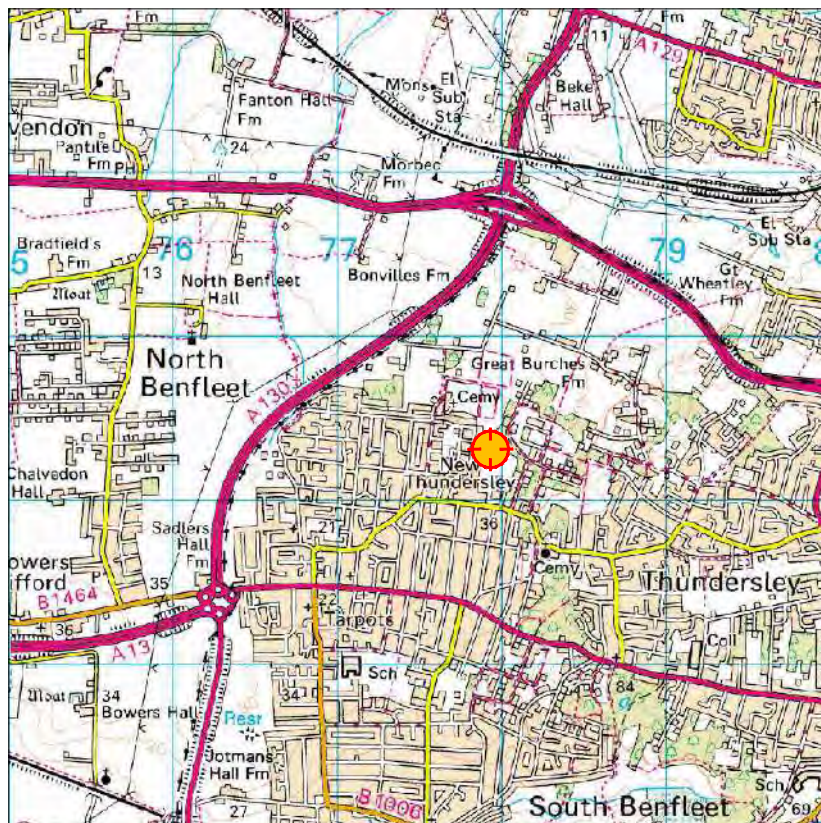
APPENDIX JB1



Local Context



Wider Context



**SITE
LOCATION**

IT Project:
**LAND EAST OF MANOR
TRADING ESTATE,
BENFLEET, MASTERPLAN
DEVELOPMENT**

Drawing Title:
**SITE LOCATION,
IN THE LOCAL AND
WIDER CONTEXT**

Sheet 1 of 1

Rev	Description	Date
Client:	SMART PLANNING	
A4	Notes: Dimensions should not be scaled from this drawing. The contents of this drawing are confidential. should you receive this drawing in error please return it to Intermodal Transportation at the address printed.	

Drawn By:
SG

Approved By:
JB

Drawing No:
IT1932/JB/1

CAD File:
IT600_TA_01.dwg

Date:
JULY 2018

Scale:
NTS



**Intermodal
TRANSPORTATION**

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APPENDIX JB2

Your Ref: 21/0532/OUT
Our Ref: CO/EGD /SD/CPT/ 21/0532/OUT
Date:- 4th Nov 2021



CC: (by email) Adjeley Dsane (SMO3)

Andrew Cook
Director for Operations
Environment and Economy

To:

Regeneration and Homes
Castle Point Borough Council
Council Offices
Kiln Road
Thundersley
Benfleet
Essex SS7 1TF

County Hall
Chelmsford
Essex CM1 1QH

Recommendation

Application No. 21/0532/OUT

Applicant Smart Planning Ltd

Site Location Land East Of Manor Trading Estate Benfleet Essex SS7 4PS

Proposal Outline Planning Application Comprising of 68 Residential Units, Three Class E (Commercial, Business and Service) Units, One B2 (General Industrial) Unit and Two B8 (Storage and Distribution) Units with Associated Access, Parking, Amenity Space, Strategic Landscaping and Noise Attenuation. Restoration and Improvement of Existing Estate Roads and Infrastructure.

From a highway and transportation perspective the proposal is acceptable to the Highway Authority subject to following conditions being applied.

1. No development shall take place, including any ground works or demolition, until a Construction Management Plan has been submitted to, and approved in writing by, the local planning authority. The approved plan shall be adhered to throughout the construction period. The Plan shall provide for;
 - I. vehicle routing,
 - II. the parking of vehicles of site operatives and visitors,
 - III. loading and unloading of plant and materials,
 - IV. storage of plant and materials used in constructing the development,
 - V. wheel and underbody washing facilities.
 - VI. Before and after condition survey to identify defects to highway in the vicinity of the access to the site and where necessary ensure repairs are undertaken at the developer expense where caused by developer.

Reason: To ensure that on-street parking of these vehicles in the adjoining streets does not occur and to ensure that loose materials and spoil are not brought out onto the highway in the

interests of highway safety and Policy DM 1 of the Highway Authority's Development Management Policies February 2011.

2. Prior to occupation of the development, the access point at Church Road shall provide a site access road at a minimum of 5.5m in width with 2m wide footways on either side. As shown in principle on Drawing IT1932/TA/02. The vehicular access shall be constructed at right angles to the highway boundary and to the existing carriageway with an appropriate dropped kerb vehicular crossing of the footway with clear to ground visibility splay. Such vehicular visibility splays of 2.4m x 43m in both directions, shall be provided before the road junction is first used by vehicular traffic and retained free of any obstruction at all times thereafter. The existing layby facility on Church Road shall be suitably reinstated with full upstand kerb and footway provision.

Reason: To provide adequate inter-visibility between vehicles using the access and those in the existing public highway in the interest of highway safety in accordance with policy DM1 of the Development Management Policies as adopted as County Council Supplementary Guidance in February 2011.

3. Prior to commencement of the development, the areas within the curtilage of the site for the purpose of loading / unloading / reception and storage of building materials and manoeuvring of all vehicles, including construction traffic shall be provided clear of the highway.

Reason: To ensure that appropriate loading / unloading facilities are available to ensure that the highway is not obstructed during the construction period in the interest of highway safety in accordance with policy DM1 of the Development Management Policies as adopted as County Council Supplementary Guidance in February 2011.

4. Prior to commencement of the development details showing the means to prevent the discharge of surface water from the development onto the highway shall be submitted to and approved in writing by the Local Planning Authority. The approved scheme shall be carried out in its entirety prior to the access becoming operational and shall be retained at all times.

Reason: To prevent hazards caused by water flowing onto the highway and to avoid the formation of ice on the highway in the interest of highway safety to ensure accordance with policy DM1 of the Development Management Policies as adopted as County Council Supplementary Guidance in February 2011.

5. No unbound material shall be used in the surface treatment of the vehicular access within 6 metres of the highway boundary.

Reason: To avoid displacement of loose material onto the highway in the interests of highway safety in accordance with policy DM1 of the Development Management Policies as adopted as County Council Supplementary Guidance in February 2011.

6. The proposed development shall not be occupied until such time as the vehicle parking area indicated on the approved plans, including any parking spaces for the mobility impaired, has been hard surfaced, sealed and marked out in parking bays. The vehicle parking area and associated turning area shall be retained in this form at all times. The vehicle parking shall not be used for any purpose other than the parking of vehicles that are related to the use of the development unless otherwise agreed with the Local Planning Authority.

Reason: To ensure that on street parking of vehicles in the adjoining streets does not occur in the interests of highway safety and that appropriate parking is provided in accordance with Policy DM8 of the Development Management Policies as adopted as County Council Supplementary Guidance in February 2011.

7. The Developer shall be responsible for the provision and implementation of a Residential Travel Information Pack for every household for sustainable transport, to include six one day travel vouchers for bus travel approved by Essex County Council. The developer shall also implement a car club for residents.

Reason: In the interests of reducing the need to travel by car and promoting sustainable development and transport in accordance with policies DM9 and DM10 of the Highway Authority's Development Management Policies, adopted as County Council Supplementary Guidance in February 2011.

8. The developer to pay for the necessary Traffic Regulation Orders together with provision of the associated signing and extension of existing yellow lining along the northern side of Church road to prevent parking in the vicinity of the site.

Reason: To prevent parking in the visibility splay at the junction of the site with Church Road in the interests of highway safety and Policy DM 1 of the Highway Authority's Development Management Policies February 2011.

9. Prior to occupation of the proposed development the existing bus stops on both sides of Church Road to the west of the residential site access shall be upgraded to provide shelter / timetable / flagpole and real time passenger information as deemed necessary and approved by Essex County Council.

Reason: In the interests of reducing the need to travel by car and promoting sustainable development and transport in accordance with policies DM9 and DM10 of the Highway Authority's Development Management Policies, adopted as County Council Supplementary Guidance in February 2011.

Informatives:


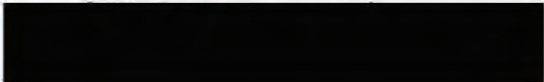
1. All work within or affecting the highway is to be laid out and constructed by prior arrangement with, and to the requirements and satisfaction of, the Highway Authority, details to be agreed before the commencement of works.

The applicants should be advised to contact the Development Management Team by email at development.management@essexhighways.org or by post to:

SMO3 - Essex Highways, Childerditch Highways Depot, Unit 36, Childerditch Industrial Park, Childerditch Hall Drive, Brentwood, Essex, CM13 3HD

2. The Highway Authority cannot accept any liability for costs associated with a developer's improvement. This includes technical check, safety audits, site inspection, commuted sums for maintenance and any potential claims under the Part 1 and Part 2 of the Land Compensation Act 1973. To protect the Highway Authority against such compensation claims a cash deposit or bond may be required as security in case of default.

3. Prior to any works taking place in the public highway the developer shall enter into the appropriate legal agreement with the Highway authority under the Highways Act 1980 to regulate the construction of the highway works.
4. Under Section 148 of the Highways Act 1980 it is an offence to deposit mud, detritus etc. on the highway. In addition, under Section 161 any person, depositing anything on a highway which results in a user of the highway being injured or endangered is guilty of an offence. Therefore, the applicant must ensure that no mud or detritus is taken onto the highway, such measures include provision of wheel cleaning facilities and sweeping/cleaning of the highway.


.....
pp. . Director for Highways and Transportation
Enquiries to




APPENDIX JB3

Our Ref: JRF/TS/JW16.3839.DP

Your Ref: CPBC



28 February 2020

Planning Services

Castle Point Borough Council
Kiln Road
Thundersley
Benfleet
Essex
SS7 1TF

 **Head Office**
Old School House, Rettendon Turnpike,
Battlesbridge, Essex, SS11 7QL

 **Phone**
0330 053 6811

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contact@smartplanning.co.uk

 **Website**
www.smartplanning.co.uk

By post and email: planning@castlepoint.gov.uk

Dear Sir/Madam

Repair, Renovation and Improvement of Private Road Infrastructure Including Carriageway, Footways, Kerbs, Gullies, Surface Water and Foul Drainage (Except Where Statutory Responsibilities Exist), Lighting, Routing of Utility Infrastructure, Guarding of Pedestrian Footways, Reinstatement of Correct Property Boundaries
Manor Trading Estate, Benfleet, Essex, SS7 4PS

I enclose an application for planning permission as described above. We will pay the application fee of £234.00 online. The documents are set out in the attached 'Schedule of Application Documents'.

The Manor Trading Estate (MTE) is the only Industrial area in Benfleet of any significance. All others are either on Canvey Island, or else their primary activity has changed to retail warehousing such as has occurred at Stadium Way, Rayleigh Weir. A peculiarity of MTE is that the estate roads are privately owned. There are approximately 97 businesses on the estate at present, all of which rely on the private roads to gain access to their businesses, whether that be by staff, clients, service and delivery vehicles.

The significance of this should not be underestimated. The whole road infrastructure includes the carriageways, footpaths, kerbs, drainage infrastructure (foul and surface water), utilities (gas, water, electric), street lighting. Investment in the maintenance, repair, management and upkeep of the roads has been neglected by the former owners in the long term. The physical and operational deterioration of the road infrastructure is readily apparent. Their condition is desperately poor as demonstrated by the submitted photographs and as experienced when walking and driving around the estate.

The roads are almost impassable in places because of the extensive damage. This poses a danger to all road users including pedestrians and cyclists. Vehicles which use the roads are also exposed to the possibility of damage. In respect of drainage, many of the drains are blocked, broken and/or inefficient. Some businesses have taken matters into their own hands privately connecting into the drains, with instances of foul waste being connected into surface water drains. There are no public records of the drainage runs throughout the Estate. However, the submitted Road Improvement Plan (P201) identifies the extent of infrastructure surveyed by the Applicant.

...continued

Furthermore, it is important to note that there are no wayleaves for utility companies to use the estate roads for the routing of their infrastructure. There are no maps or plans available of where any of the utility infrastructure currently runs within the MTE. Part of the renovation process is to find the utility routes through the road system, assess their suitability/legality, to make robust provision in perpetuity and to plot the network for future maintenance and accountability.

The physical and visual deterioration of the roads has encouraged some business owners, in places, to encroach upon the footways with their yard areas and forecourt parking. The poor quality of the environment has created a vicious circle of degradation and carelessness. Consequently, the estate now tends towards the lowest common denominator of environmental quality which promotes increasing and ongoing instances of environmental lawlessness. This includes extensions and yards created without the relevant permissions, the siting of containers and skips in ad hoc places around the estate, fly-tipping, littering, parking on the footpaths and unauthorised signage. Please refer to the submitted Aerial Plan (M003) which provides evidence of the aforementioned issues.

The majority of the roads are unlit leaving the estate in darkness at night and many of the buildings are devoid of basic maintenance and repair. That is not to say that all industrialists are of the same mind, but in the face of an apparent losing battle, environmental standards are as low as can be with little incentive to change. The net effect of this is only to attract low value tenants and the promotion of vacancies. These add to the cycle of deterioration.

However, the Council formally recognises the MTE as a site of significance in its Economic Strategy and has long cited 'environmental improvements' as being of primary importance in the future of the estate. This application is crucial for the future prosperity of the estate, bringing significant and much needed investment which, until now, has never proceeded beyond aspiration. Furthermore, this application corresponds positively to the objectives of adopted Policy ED7 of the current Castle Point Local Plan (1998) which states:

"The council will seek to encourage environmental improvements within employment areas."

In respect of the Pre-submission Local Plan (2019), Section 11 *Building a Strong, Competitive Economy*, Paragraph 11.10 lends further support to the proposed improvement works. It states:

"...there is a need to improve the quality of employment areas and provide greater flexibility in the supply of premises to attract investment and encourage indigenous companies to stay in the borough as they grow."

Given the foregoing, the proposal aligns with the current and future aspirations of the Local Planning Authority (LPA) for the estate.

The Applicant has put a substantial amount of resources into this project, assembling an action plan which can practically deliver the qualitative improvements for the estate roads. This planning application specifies those works necessary to bring the private roads up to a suitable operational and environmental standard. The cost of these upgrade and improvement works will require a considerable financial input from the road owners.

This application proposes to bring the road up to a satisfactory and usable condition. It shall be executed in sections to minimise disruption to existing businesses and users attending the estate.

...continued

The existing street lighting on the estate will be renewed or upgraded where required. The renewed and refurbished lighting will improve the ambience and safety of the MTE, acting as a deterrent for acts of vandalism or theft.

New Armco road edge barriers will be installed in locations throughout the estate where no footways exist at present, facilitating and protecting pedestrian movements. Existing pathways will be improved realigned and raised where necessary. The current roads have relegated the safety of pedestrians to unacceptable levels. Reinstatement and guarding of key footpaths will elevate pedestrians to a position of better safety.

New road marking and street signage will be introduced across all roads, where there are little to none currently in existence. This will greatly assist visiting customers and delivery vehicles to navigate accurately around the estate. This will be further supported by the implementation of parking restrictions to prevent parking on footways and the blocking of roads through indiscriminate parking/loading.

Taking all the submitted details into consideration, it has been demonstrated that the proposal is policy compliant, based on a substantive and deliverable plan and would make a significant improvement to the overall working environment of the MTE. I therefore respectfully request that planning permission is granted for the application without delay.

Please would you register the application, notify me of the application reference and timetable and supply a receipt for payment of the application fee. Should you have any queries relating to this proposal, please do not hesitate to contact me. I will otherwise make contact with the case officer in due course.

Yours sincerely



Russell Forde BEng (Hons) DipTP (Dist) MRTPI
Principal Director

Enc. Schedule of Planning Application Documents

c.c. ACT Roadways Ltd
SPL

Manor Trading Estate – Schedule of Works by Section

(Assessed November 2019)

Document to be read in conjunction with Drawing 16.3839/P201A Estate Roads Improvement Plan

Section 1:

1. Allow pothole repair - <40m²
2. Re-align kerb line raising as required 40mm-120m
3. Re-set gullies and clear drainage - 2 no (G2 & G3)
4. Refurbish lighting columns -1 no
5. install new lighting columns -1 no
6. Install road signage as required
7. Overlay existing road surface SMA - 600m²
8. Install road marking as required

Section 2:

1. Allow pothole repair - <5m²
2. Re-align kerb line raising as required 40mm -30m
3. Re-set gullies and clear drainage - 1no (G1)
4. Refurbish lighting columns - 1 no
5. Install new lighting columns - 0 no
6. Install road signage as required
7. Overlay existing road surface SMA -200m²
8. Install road marking as required

Section 3:

1. Allow pothole repair - <40m²
2. Re-align kerb line raising as required 40mm - 120m
3. Re-set gullies and clear drainage - 2 no (G14 & G15)
4. Refurbish lighting columns- 1 no
5. Install new lighting columns – 0 no
6. Install road signage as required
7. Overlay existing road surface SMA - 420m²
8. Install road marking as required

Section 4:

1. Allow pothole repair -<5m²
2. Re-align kerb line raising as required 40mm - 30m
3. Re-set gullies and clear drainage - 1 no (G16)
4. Refurbish lighting columns -0 no
5. install new lighting columns - 2 no
6. Install road signage as required
7. Overlay existing road surface SMA - 200m²
8. Install road marking as required

Section 5:

1. Allow pothole repair - <20m²
2. Re-align kerb line raising as required 40mm -92m
3. Re-set gullies and clear drainage - 2 no (G23 & G24)
4. Refurbish lighting columns – 0 no
5. install new lighting columns - 1 no
6. Install road signage as required
7. Overlay existing road surface SMA - 345m²
8. Install road marking as required

Section 6:

1. Allow pothole repair - <10 m²
2. Re-align kerb line raising as required 40mm - 30m
3. Re-set gullies and clear drainage 1 no (G22)
4. Refurbish lighting columns - 1 no
5. install new lighting columns – 0 no
6. Install road signage as required
7. Overlay existing road surface SMA -200m²
8. Install road marking as required

Section 7:

1. Allow pothole repair - 35m²
2. Re-align kerb line raising as required 40mm -92m
3. Re-set gullies and clear drainage- 2 no (G25 & G26)
4. Refurbish lighting columns - 1 no
5. Install new lighting columns – 0 no
6. Install road signage as required
7. Overlay existing road surface SMA - 345m²
8. Install road marking as required

Section 8:

1. Allow pothole repair - <5m²
2. Re-align kerb line raising as required 40mm -30m
3. Re-set gullies and clear drainage - 2 no (G27 & G28)
4. Refurbish lighting columns - 1 no
5. Install new lighting columns – 0 no
6. Install road signage as required
7. Overlay existing road surface SMA -231m²
8. Install road marking as required

Section 9:

1. Allow pothole repair - <40m²
2. Re-align kerb line raising as required 40mm -114m
3. Re-set gullies and clear drainage - 1 no (G43)
4. Refurbish lighting columns – 0 no
5. Install new lighting columns -1 no
6. Install road signage as required
7. Overlay existing road surface SMA -399m²
8. Install road marking as required

Section 10:

1. Allow pothole repair- <100m²
2. Re-align kerb line raising as required 40mm -44m
3. Re-set gullies and clear drainage - 1 no(G44)
4. Refurbish lighting columns – 0 no
5. Install new lighting columns - 1 no
6. Install road signage as required
7. Overlay existing road surface SMA -220m²
8. Install road marking as required

Section 11:

1. Allow pothole repair -<50m²
2. Re-align kerb line raising as required 40mm -192m
3. Re-set gullies and clear drainage - 3 no (G45, G46 & G47)
4. Refurbish lighting columns - 2 no
5. Install new lighting columns - 2 no
6. Install road signage as required
7. Overlay existing road surface SMA -672m²
8. Install road marking as required

Section 12:

1. Allow pothole repair - <20m²
2. Re-align kerb line raising as required 40mm -110m
3. Re-set gullies and clear drainage - 4 no (G54,55,58 & 59)
4. Refurbish lighting columns - 2 no
5. Install new lighting columns – 0 no
6. Install road signage as required
7. Overlay existing road surface SMA -385m²
8. Install road marking as required

Section 13:

1. Allow pothole repair-<70 m2
2. Re-align kerb line raising as required 40mm - 96m
3. Re-set gullies and clear drainage - 3 no (G48,49 & 50)
4. Refurbish lighting columns - 1 no
5. Install new lighting columns - 1 no
6. Install road signage as required
7. Overlay existing road surface SMA – 329m2
8. Install road markings required

Section 14:

1. Allow pothole repair -<15m2
2. Re-align kerb line raising as required 40mm 120m
3. Re-set gullies and clear drainage - 4 no (G51 ,52,53 & 36)
4. Refurbish lighting columns – 0 no
5. Install new lighting columns - 1 no
6. Install road signage as required
7. Overlay existing road surface SMA - 420m2
8. Install road marking as required

Section 15:

1. Allow pothole repair -<10m2
2. Re-align kerb line raising as required 40mm - 30m
3. Re-set gullies and clear drainage - 4 no (G31 ,32 35 & 39)
4. Refurbish lighting columns -1 no
5. Install new lighting columns - 0 no
6. Install road signage as required
7. Overlay existing road surface SMA - 140m2
8. Install road marking as required

Section 16:

1. Allow pothole repair -<20m2
2. Re-align kerb line raising as required 40mm -90m
3. Re-set gullies and clear drainage - 1 no (G37)
4. Refurbish lighting columns - 1 no
5. Install new lighting columns – 0 no
6. Install road signage as required
7. Overlay existing road surface SMA - 315m2
8. Install road marking as required

Section 17:

1. Allow pothole repair -<20m²
2. Creation new footpath - 55m
3. Re-align kerb line raising as required 40mm - 110m
4. Re-set gullies and clear drainage - 3 no (G19 41 & 42)
5. Refurbish lighting columns - 1 no
6. Install new lighting columns - 1 no
7. Install road signage as Required
8. Overlay existing road surface SMA - 385m²
9. Install road marking as Required

Section 18:

1. Allow pothole repair -<10m²
2. Creation new footpath - 47m
3. Re-align kerb line raising as required 40mm -96m
4. Re-set gullies and clear drainage- 2 No (G17 & 18)
5. Refurbish lighting columns - 1 no
6. Install new lighting columns - 1 no
7. Install road signage as required
8. Overlay existing road surface SMA - 336m²
9. Install road marking as required

Section 19:

1. Allow pothole repair -<5m²
2. Creation new footpath - 25m
3. Re-align kerb line raising as required 40mm- 50m
4. Re-set gullies and clear drainage -1 no (G9)
5. Refurbish lighting columns -0 no
6. Install new lighting columns - 1 no
7. Install road signage as required
8. Overlay existing road surface SMA -210m²
9. Install road marking as required

Section 20:

1. Allow pothole repair -<20m²
2. Re-align kerb line raising as required 40mm -110m
3. Re-set gullies and clear drainage - 4 no. (G5,6,7 &8)
4. Refurbish lighting columns -0 no
5. Install new lighting columns - 2 no
6. Install road signage as required
7. Overlay existing road surface SMA - 385m²
8. Install road marking as required

Section 21:

1. Allow pothole repair -<5m2
2. Re-align kerb line raising as required 40mm -30m
3. Re-set gullies and clear drainage - 1 no (G4)
4. Refurbish lighting columns - 1 no
5. Install new lighting columns – 0 no
6. Install road signage as required
7. Overlay existing road surface SMA - 113m2
8. Install road marking as required

Section 22:

1. Allow pothole repair- < 5m2
2. Re-align kerb line raising as required 40mm -130m
3. Re-set gullies and clear drainage - 4 no (G10,11,12 &13)
4. Refurbish lighting columns – 0 no
5. Install new lighting columns - 2 no
6. Install road signage as required
7. Overlay existing road surface SMA - 455m2
8. Install road marking as required

Section 23:

1. Allow pothole repair -<10m2
2. Re-align kerb line raising as required 40 mm - 132m
3. Re-set gullies and clear drainage - 2 no (G20&G21)
4. Refurbish lighting columns -1 no
5. Install new lighting columns - 1 no
6. Install road signage as required
7. Overlay existing road surface SMA - 462m2
8. Install road marking as Required

Section 24:

1. Allow pothole repair -<40m2
2. Re-align kerb line raising as required 40mm -204m
3. Re-set gullies and clear drainage - 1 no (G29) & 1 no Aco 7m long
4. Refurbish lighting columns - 1 no
5. Install new lighting columns - 3 no
6. Install road signage as required
7. Overlay existing road surface SMA- 714m2

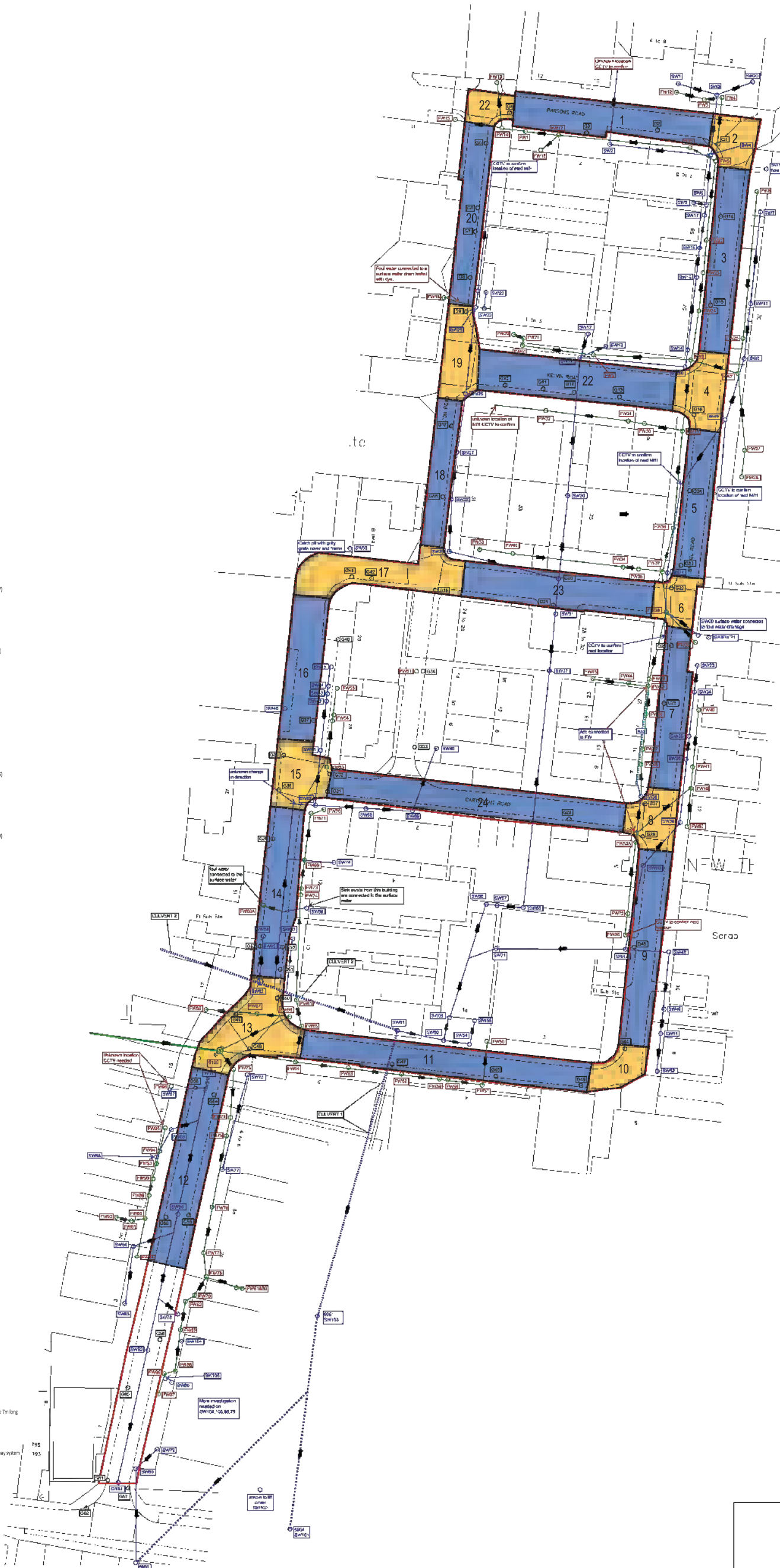
Sections 1-24:

1. Extra road signage & markings
2. New one-way system
3. Parking restrictions



Works Schedule Section Assessed November 2019 1:24

- Section 1
Allow pothole repair - <40m²
Re-align kerb line raising as required 40mm-120m
Re-set gullies and clear drainage - 2 no (G2 & G3)
Refurbish lighting columns - 1 no
Install new lighting columns - 1 no
Install road signage as required
Overlay existing road surface SMA - 600m²
Install road marking as required
- Section 2
Allow pothole repair - <5m²
Re-align kerb line raising as required 40mm-30m
Re-set gullies and clear drainage - 1 no (G1)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 200m²
Install road marking as required
- Section 3
Allow pothole repair - <40m²
Re-align kerb line raising as required 40mm-120m
Re-set gullies and clear drainage - 2 no (G24 & G25)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 420m²
Install road marking as required
- Section 4
Allow pothole repair - <5m²
Re-align kerb line raising as required 40mm-30m
Re-set gullies and clear drainage - 1 no (G16)
Refurbish lighting columns - 0 no
Install new lighting columns - 2 no
Install road signage as required
Overlay existing road surface SMA - 200m²
Install road marking as required
- Section 5
Allow pothole repair - <20m²
Re-align kerb line raising as required 40mm-92m
Re-set gullies and clear drainage - 2 no (G23 & G24)
Refurbish lighting columns - 0 no
Install new lighting columns - 1 no
Install road signage as required
Overlay existing road surface SMA - 345m²
Install road marking as required
- Section 6
Allow pothole repair - <10 m²
Re-align kerb line raising as required 40mm-30m
Re-set gullies and clear drainage - 1 no (G22)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 200m²
Install road marking as required
- Section 7
Allow pothole repair - 35m²
Re-align kerb line raising as required 40mm-30m
Re-set gullies and clear drainage - 2 no (G25 & G26)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 345m²
Install road marking as required
- Section 8
Allow pothole repair - <5m²
Re-align kerb line raising as required 40mm-30m
Re-set gullies and clear drainage - 2 no (G27 & G28)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 231m²
Install road marking as required
- Section 9
Allow pothole repair - <40m²
Re-align kerb line raising as required 40mm-114m
Re-set gullies and clear drainage - 1 no (G43)
Refurbish lighting columns - 0 no
Install new lighting columns - 1 no
Install road signage as required
Overlay existing road surface SMA - 399m²
Install road marking as required
- Section 10
Allow pothole repair - <100m²
Re-align kerb line raising as required 40mm-44m
Re-set gullies and clear drainage - 1 no (G44)
Refurbish lighting columns - 0 no
Install new lighting columns - 1 no
Install road signage as required
Overlay existing road surface SMA - 220m²
Install road marking as required
- Section 11
Allow pothole repair - <50m²
Re-align kerb line raising as required 40mm-102m
Re-set gullies and clear drainage - 2 no (G45, G46 & G47)
Refurbish lighting columns - 2 no
Install new lighting columns - 2 no
Install road signage as required
Overlay existing road surface SMA - 472m²
Install road marking as required
- Section 12
Allow pothole repair - <20m²
Re-align kerb line raising as required 40mm-110m
Re-set gullies and clear drainage - 4 no (G48, G49 & G50)
Refurbish lighting columns - 2 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 385m²
Install road marking as required
- Section 13
Allow pothole repair - <70 m²
Re-align kerb line raising as required 40mm-96m
Re-set gullies and clear drainage - 3 no (G49, G50 & G51)
Refurbish lighting columns - 1 no
Install new lighting columns - 1 no
Install road signage as required
Overlay existing road surface SMA - 329m²
Install road marking as required
- Section 14
Allow pothole repair - <15m²
Re-align kerb line raising as required 40mm-120m
Re-set gullies and clear drainage - 4 no (G51, G52, G53 & G54)
Refurbish lighting columns - 0 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 420m²
Install road marking as required
- Section 15
Allow pothole repair - <10m²
Re-align kerb line raising as required 40mm-30m
Re-set gullies and clear drainage - 4 no (G53, G54 & G55)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 140m²
Install road marking as required
- Section 16
Allow pothole repair - <20m²
Re-align kerb line raising as required 40mm-90m
Re-set gullies and clear drainage - 1 no (G37)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 315m²
Install road marking as required
- Section 17
Allow pothole repair - <20m²
Re-align kerb line raising as required 40mm-110m
Re-set gullies and clear drainage - 2 no (G17 & G18)
Refurbish lighting columns - 1 no
Install new lighting columns - 1 no
Install road signage as required
Overlay existing road surface SMA - 336m²
Install road marking as required
- Section 18
Allow pothole repair - <5m²
Re-align kerb line raising as required 40mm-50m
Re-set gullies and clear drainage - 1 no (G9)
Refurbish lighting columns - 0 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 210m²
Install road marking as required
- Section 19
Allow pothole repair - <20m²
Re-align kerb line raising as required 40mm-110m
Re-set gullies and clear drainage - 4 no (G20, G21, G22 & G23)
Refurbish lighting columns - 0 no
Install new lighting columns - 2 no
Install road signage as required
Overlay existing road surface SMA - 385m²
Install road marking as required
- Section 20
Allow pothole repair - <20m²
Re-align kerb line raising as required 40mm-110m
Re-set gullies and clear drainage - 4 no (G20, G21, G22 & G23)
Refurbish lighting columns - 0 no
Install new lighting columns - 2 no
Install road signage as required
Overlay existing road surface SMA - 385m²
Install road marking as required
- Section 21
Allow pothole repair - <5m²
Re-align kerb line raising as required 40mm-30m
Re-set gullies and clear drainage - 1 no (G4)
Refurbish lighting columns - 1 no
Install new lighting columns - 0 no
Install road signage as required
Overlay existing road surface SMA - 113m²
Install road marking as required
- Section 22
Allow pothole repair - <5m²
Re-align kerb line raising as required 40mm-130m
Re-set gullies and clear drainage - 4 no (G20, G21, G22 & G23)
Refurbish lighting columns - 0 no
Install new lighting columns - 2 no
Install road signage as required
Overlay existing road surface SMA - 455m²
Install road marking as required
- Section 23
Allow pothole repair - <10m²
Re-align kerb line raising as required 40 mm - 132m
Re-set gullies and clear drainage - 2 no (G26 & G27)
Refurbish lighting columns - 1 no
Install new lighting columns - 1 no
Install road signage as required
Overlay existing road surface SMA - 462m²
Install road marking as required
- Section 24
Allow pothole repair - <40m²
Re-align kerb line raising as required 40mm-204m
Re-set gullies and clear drainage - 1 no (G29) & 1 no Aco 7m long
Refurbish lighting columns - 1 no
Install new lighting columns - 3 no
Install road signage as required
Overlay existing road surface SMA - 714m²
Install road marking as required
- Section 25
Extra road signage & markings allowing for a new one way system & parking restrictions



Note:
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No.	Date	Amendment	Initials	No.	Date	Amendment	Initials
A	27.02.20	Minor amendments to the description	ZAH				

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Client Name : ACT Roadways Ltd

Project Title : Manor Trading Estate, Benfleet, SS7 4PS

Drawing Name : Estate Roads Improvement Plan

Scale : 1:500 @ A4 Drawn/Checked: ZAH/TWS Status : Application

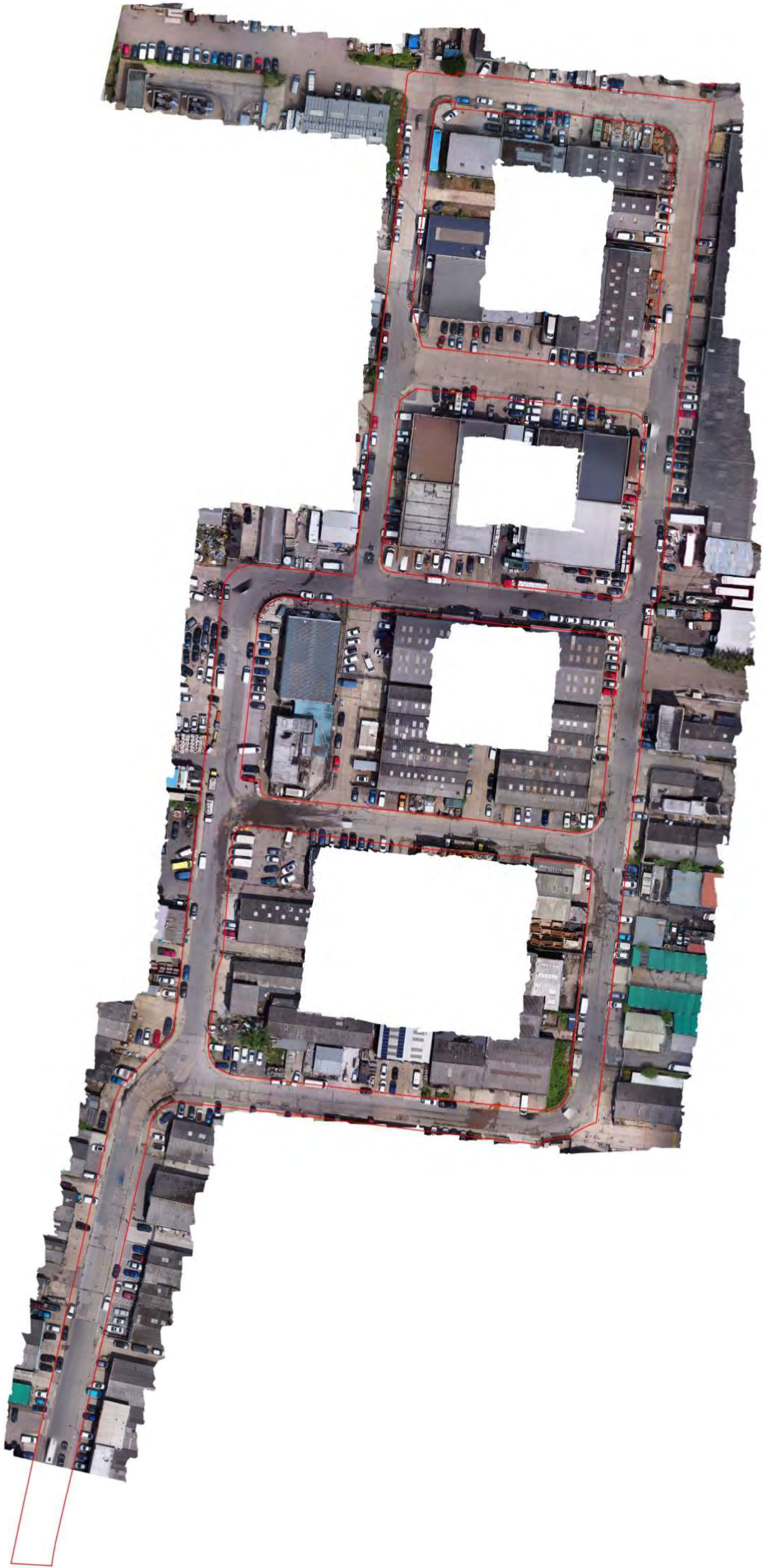
Date : 19 Oct 2019 Plot Date : 27/02/2020 Draw No : 16.3838P201

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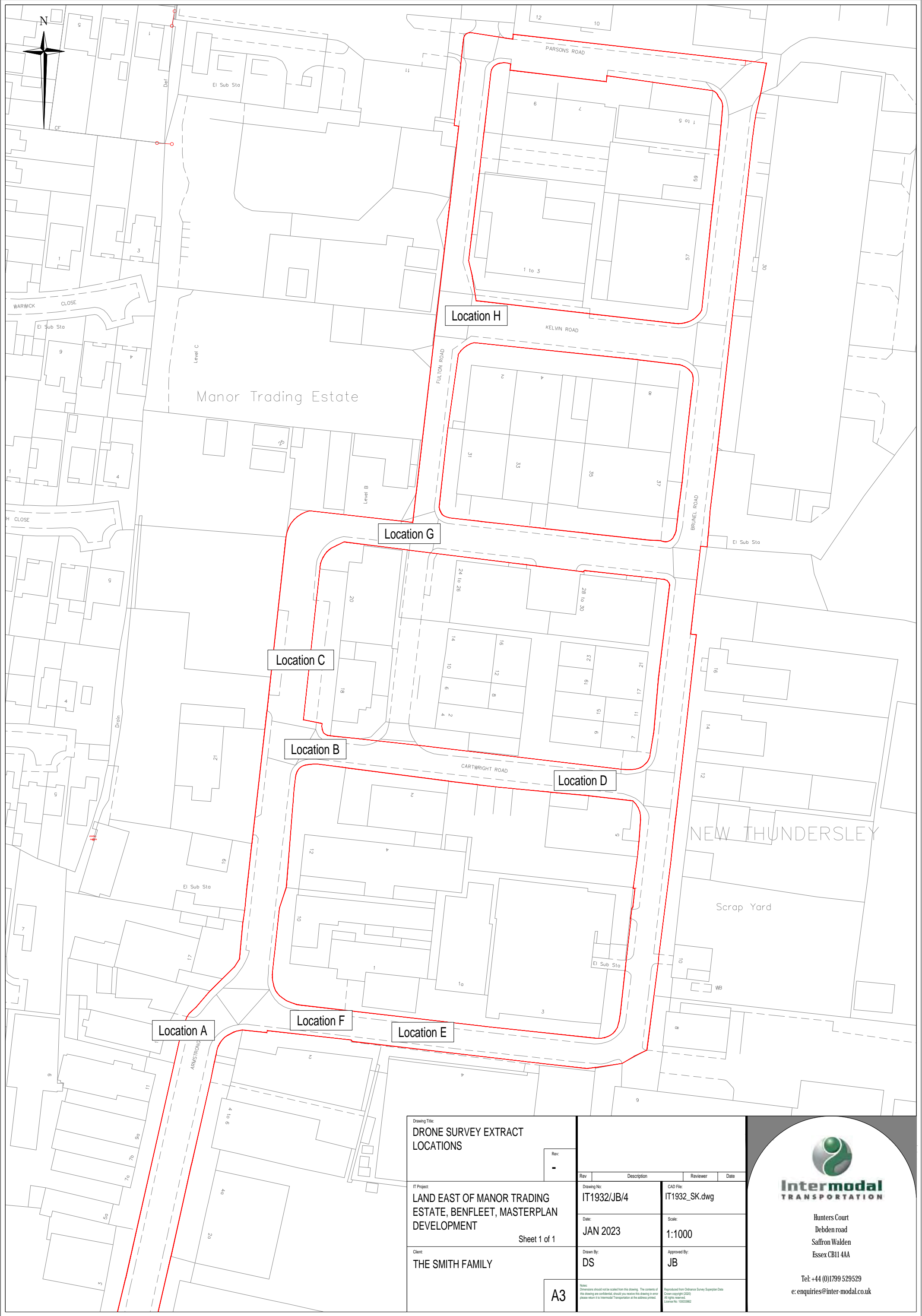


APPENDIX JB4

Drone Survey 2019







Drawing Title: DRONE SURVEY EXTRACT LOCATIONS		Rev: -	
IT Project: LAND EAST OF MANOR TRADING ESTATE, BENFLEET, MASTERPLAN DEVELOPMENT Sheet 1 of 1	Rev		Description
	Drawing No:		IT1932/JB/4
	Date:		JAN 2023
	Drawn By:		DS
Client: THE SMITH FAMILY		Approved By: JB	
A3		Notes: Dimensions should not be scaled from this drawing. The contents of this drawing are confidential, should you receive this drawing in error please return it to Intermodal Transportation at the address printed.	
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Location A

2019



2023

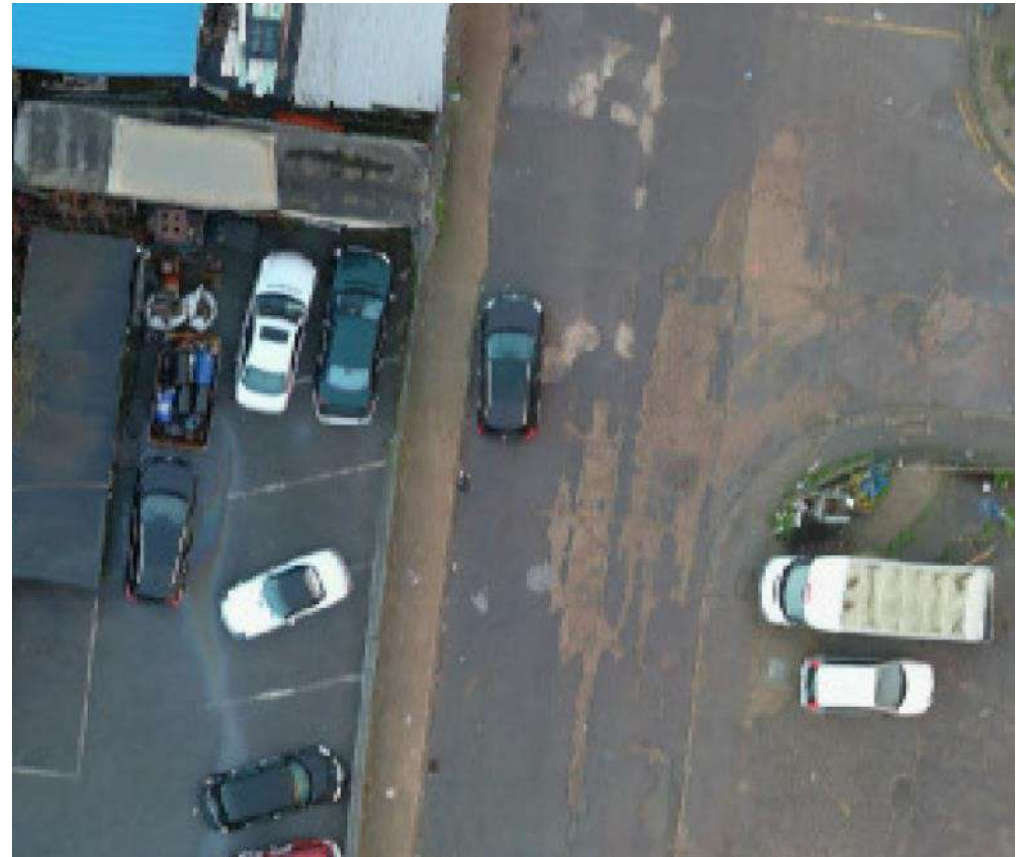


Location B

2019

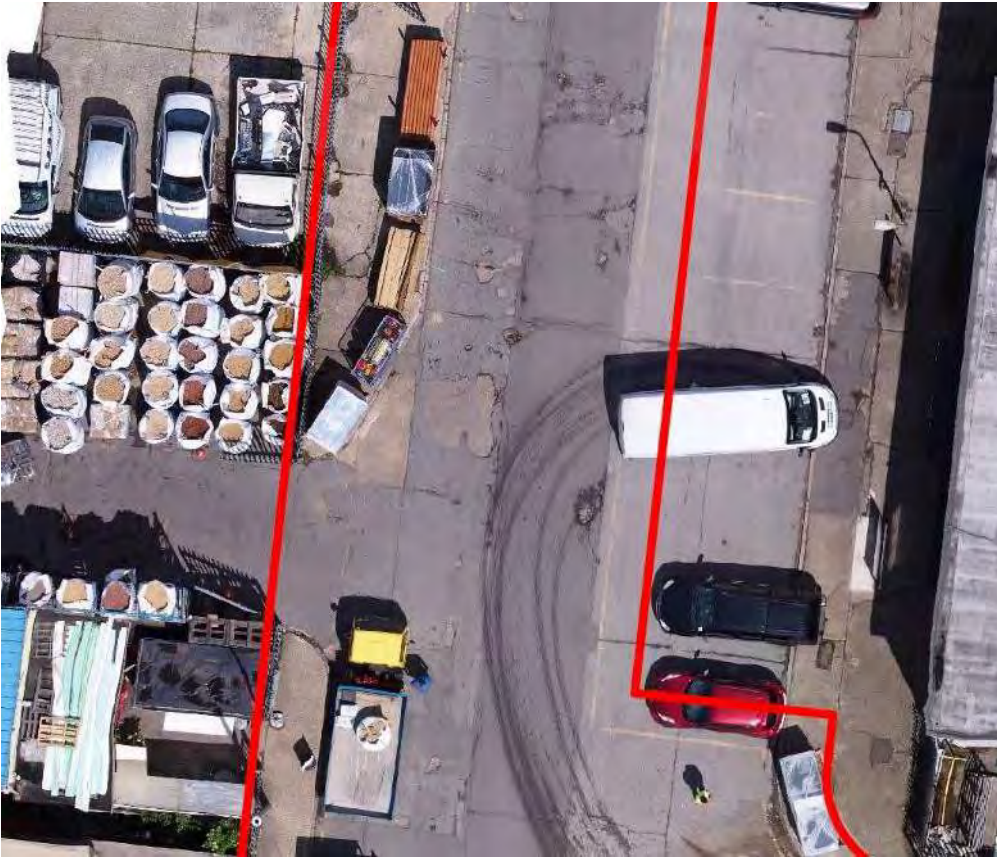


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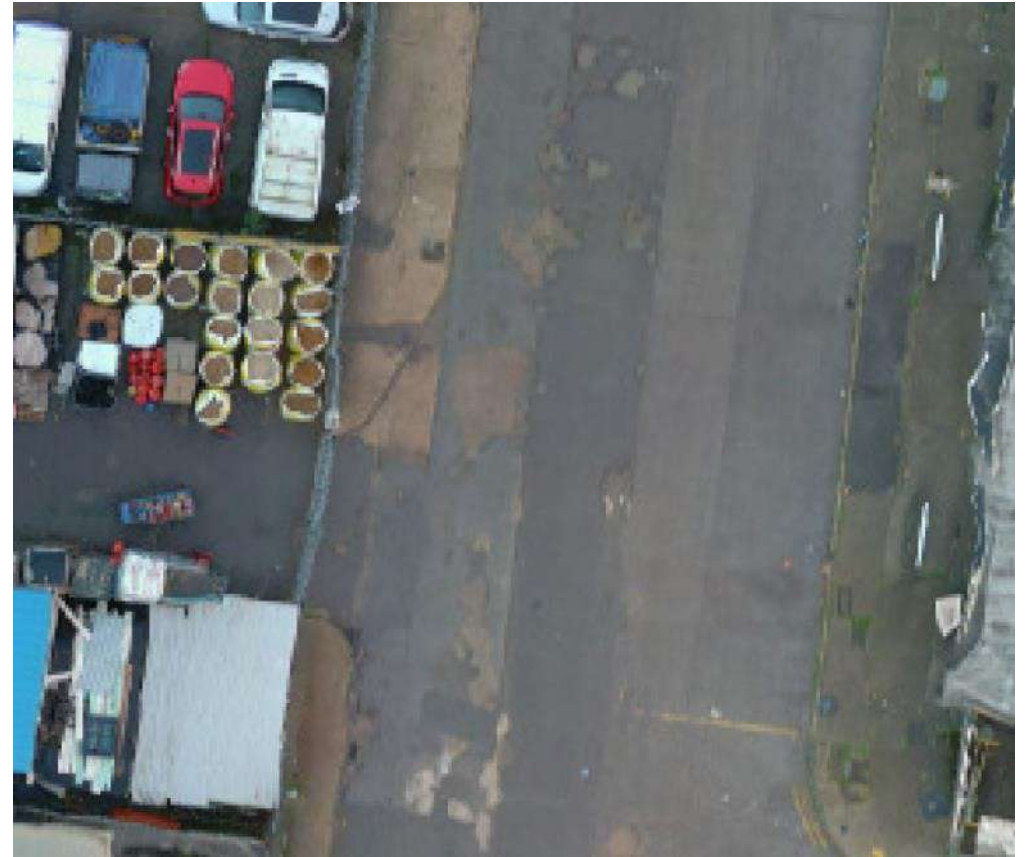


Location C

2019



2023

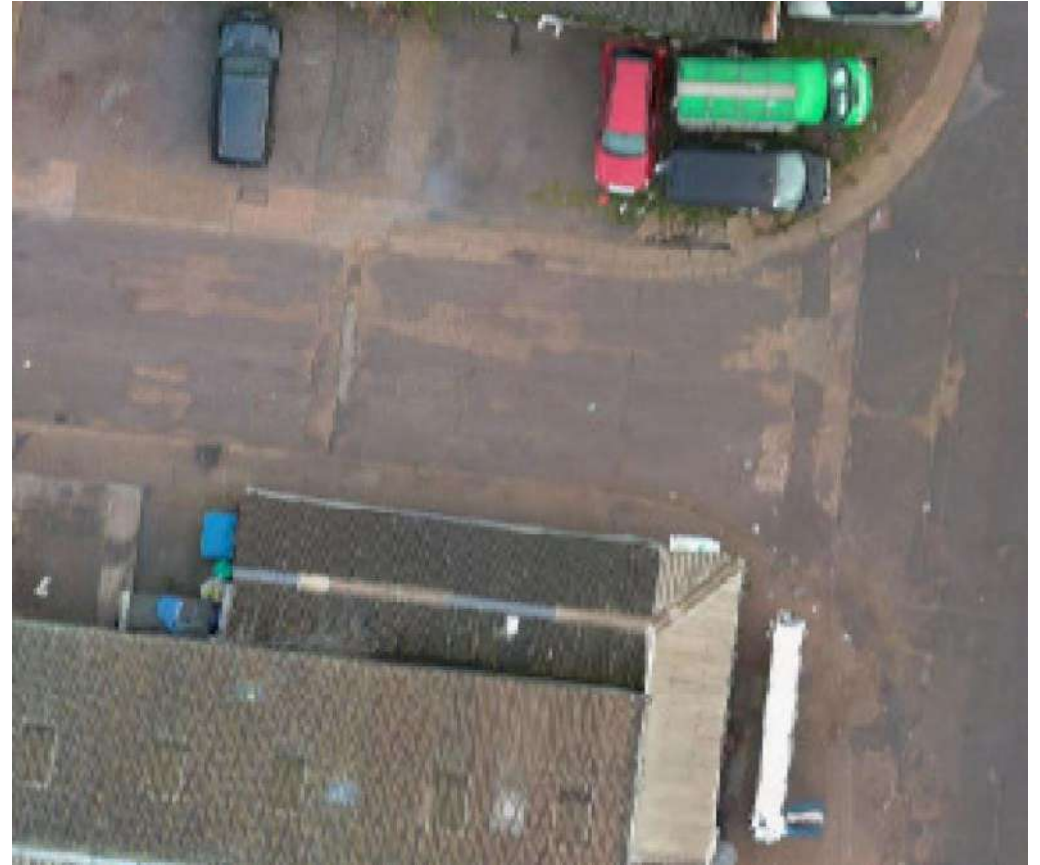


Location D

2019



2023



Location E

2019



2023



Location F

2019



2023

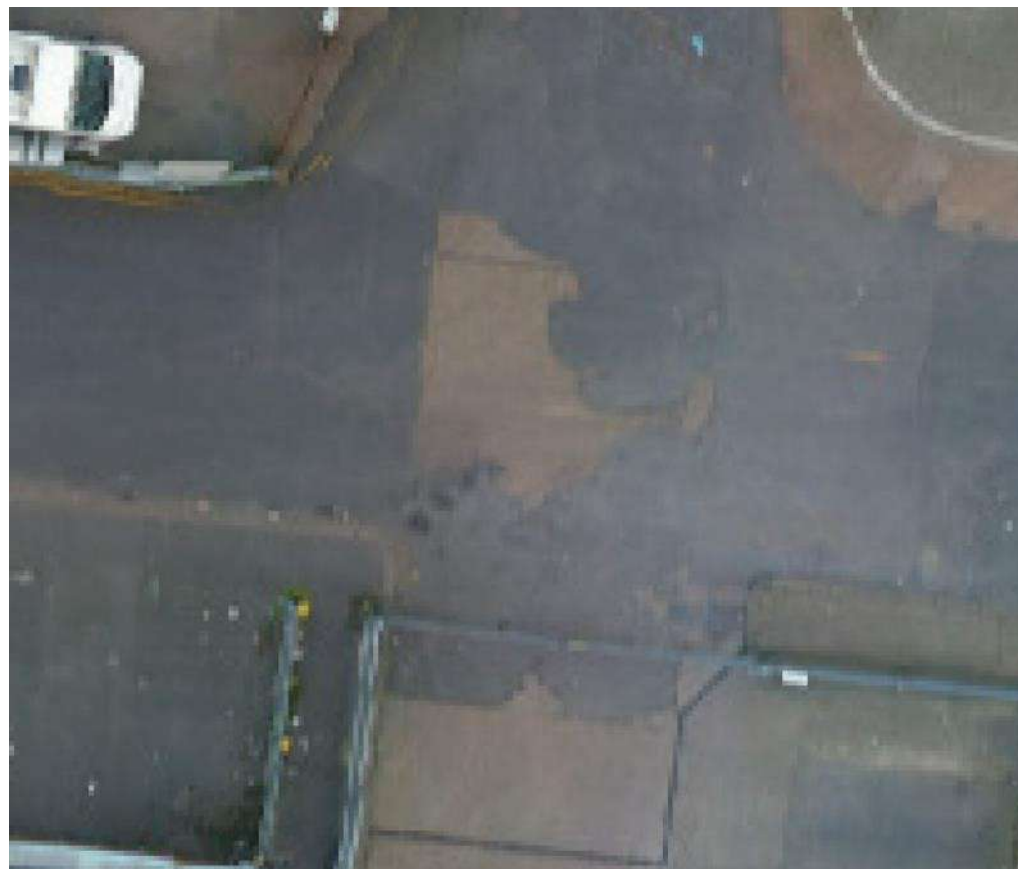


Location G

2019



2023

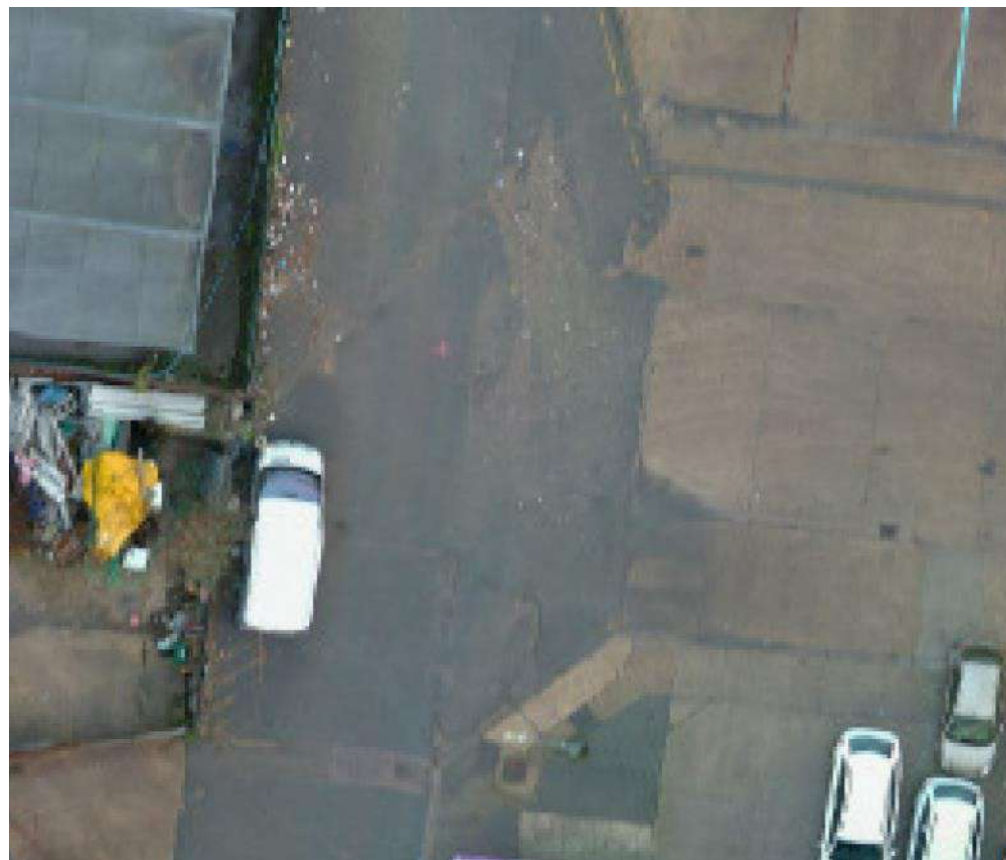


Location H

2019



2023





APPENDIX JB5



Summary of Visual Inspection of Estate Roads

Section	Main Defects Observed	Notes on Carriageway Condition
1	<ul style="list-style-type: none"> • Elongated pothole of approximately 1sqm, which is up to 50mm deep (Plate 1) • Damaged footway and kerbs (Plate 2) • Gulleys blocked (Plate 3) 	The southern half of this section of road appears to have been reconstructed with a flexible tarmacadam surface relatively recently and is in good condition. The northern half of the carriageway is of concrete construction and is cracked in places with defects / pot holes present particularly around the poorly re-instated service trench (Plate 4).
2	<ul style="list-style-type: none"> • A number of potholes varying between 0.5sqm and 2sqm in area and up to 40mm in depth (Plate 5) • Lamp column notably leaning over 	Carriageway surface generally cracked with corners of concrete slabs broken and potholes present.
3	<ul style="list-style-type: none"> • Surface deterioration (Plate 6) • Joint deterioration, which has led to a pothole forming up to 50mm deep (Plate 7) 	The existing concrete surface is deteriorating in a number of locations, possibly due to water ingress and may evolve into more pot holes if left un-remediated.
4	<ul style="list-style-type: none"> • Reflective cracking with the flexible overlay breaking from the concrete surface (Plate 8) 	This section has a flexible tarmacadam overlay which is showing signs of deterioration.
5	<ul style="list-style-type: none"> • Reflective cracking with flexible overlay cracking at joints (Plate 9) • Concrete section of footway deteriorated and kerbs cracked / broken 	This section has a flexible tarmacadam overlay which is showing signs of deterioration.



6	<ul style="list-style-type: none"> • A number of potholes present and filling with water (Plate 10). Potholes vary in depth from 30mm to 90mm in depth and from 0.3sqm to 2sqm in area. • Reflective cracking (Plate 11) • Water pooling at mouth of junction (Plate 12), unable to see whether there was a blocked gulley in that location. • Concrete footway cracked and un-even with standing water present. 	Water running off from the adjacent site and pooling on the road and footway filling potholes and defects (Plate 13)
7	<ul style="list-style-type: none"> • Service trench is failing / has not been well re-instated leading to adjacent defects of up to 50mm in depth (Plate 14). • Reflective cracking of surface with defects of up to 50mm in depth. • Potholes / sinking of road surface up to 80mm in depth up to approximately 2.3sqm in area (Plate 15). • Kerbs broken • Lamp column on the western side leaning over. 	This section has a flexible tarmacadam overlay which is showing signs of deterioration.
8	<ul style="list-style-type: none"> • Gulley blocked, water pooling on carriageway (Plate 16) • Surface deterioration and numerous defects typically 40mm in depth (Plate 17) 	Standing water on carriageway appears to be leading to deterioration / erosion of flexible overlay.
9	<ul style="list-style-type: none"> • Numerous potholes and defects (Plate 18). • Road surface deteriorating (Plate 19). • Kerbs notably damaged. 	This section has a flexible tarmacadam overlay, which particularly at the northern end is showing notable deterioration. Towards the southern end of the section some potholes appear to have been previously repaired.



	<ul style="list-style-type: none"> • Reflective cracking of joints in concrete slabs below. • Corners of concrete slabs below exposed and may be rotating / lifting with up to 50mm upstand measured. 	
10	<ul style="list-style-type: none"> • Potholes (Plate 20). • Shadow cracking and exposed slab at corners / edges (Plate 21). • Lamp column snapped off. 	
11	<ul style="list-style-type: none"> • Potholes / defects up to 50mm deep (Plate 22). • Water collecting at the edge of the road due to blocked gulley (Plate 23). • Flexible overlay eroded (Plate 24). • Large hole with safety barriers (Plate 25). 	Flexible overlay eroded with potholes. In places large sections of the overlay have eroded away over time.
12	<ul style="list-style-type: none"> • Carriageway edge deteriorating with upto 80mm step down from adjacent plot (Plate 26). • Uneven surface with overlay lifted / lost (Plate 27). • Uneven footway due to service cover and water ponding on footway further north. 	Typically more of flexible overlay retained on western side of carriageway but still patchy.
13	<ul style="list-style-type: none"> • Exposed metal joint / bar with defect forming to east up to 30mm in depth (Plate 28). • Former roundabout central island remains at height of 130mm (Plate 29). • Corner of concrete slab broken and defect / pothole forming 	Overall uneven surfacing with potholes and defects.



	<p>(Plate 30).</p> <ul style="list-style-type: none"> • Pothole forming in concrete base slab filled with water up to 60mm in depth (Plate 31). • Gulley grate missing and covered with unsecured metal plate. 	
14	<ul style="list-style-type: none"> • Flexible overlay lifting from concrete surface (Plate 32). • Maximum 70mm deep pothole at northern end of section. • Reflective cracking at joints (Plate 33). • Gulley blocked. • Lamp column leaning over. 	Notwithstanding the defects noted, this section is one of the better sections within the estate.
15	<ul style="list-style-type: none"> • Flexible overlay eroded and cracking at joints and concrete slab below deteriorating. Depth of defects 50mm – 60mm (Plate 34). • Road surface eroded around manhole cover with pothole depth up to 100mm (Plate 35). • 2 blocked gullies. 	Surface notably deteriorated.
16	<ul style="list-style-type: none"> • Pothole with reinforced steel bars exposed (Plate 36). • Flexible overlay lifting from concrete surface below (Plate 37). 	Surface notably deteriorated with reinforcement within concrete slab below exposed in some potholes. Potholes up to 100mm deep recorded on this section, which is one of the worst on the estate.
17	<ul style="list-style-type: none"> • Overlay lifting at junction (Plate 38). • 1 pothole approximately 30mm in depth. 	Overall this section generally in a good state of repair (Plate 39).



18	<ul style="list-style-type: none"> • Surface deterioration around gully, defect up to 60mm deep (Plate 40). • Lamp column broken. 	Notwithstanding the defects noted and presence of reflective cracking, this section is one of the better sections within the estate. (Plate 41)
19	<ul style="list-style-type: none"> • Pothole 30mm deep (Plate 42). • Service trench deteriorating (Plate 43). • Reflective cracking. 	Carriageway surface deteriorating.
20	<ul style="list-style-type: none"> • 4 blocked gullies. • Pothole 110mm deep and severely rutted overlay (Plate 44). 	This section is concrete construction without an overlay (Plate 45).
21	<ul style="list-style-type: none"> • Concrete surface cracking, particularly at joints (Plate 46) • Lamp column leaning over 	This section is concrete construction without an overlay.
22	<ul style="list-style-type: none"> • 1 isolated pothole at western end, 60mm deep. • Slabs cracking / breaking at corners / joints (Plate 47) 	This section is concrete construction without an overlay (Plate 48).
23	<ul style="list-style-type: none"> • Pothole 30mm deep (Plate 49). • Flexible overlay cracking from concrete surface at joints in slab below defects 30mm – 60mm in depth (Plate 50). 	Flexible overlay with reflective cracking and potholes at some locations.
24	<ul style="list-style-type: none"> • Concrete around lateral drain broken, defect 50mm – 80mm in depth (Plate 51). • Service trench deteriorated and filling with water (Plate 52). • 2 gullies blocked. • Reflective cracking in overlay from concrete joints. 	Flexible overlay surface deteriorating.

*The defects recorded represent the main defects observed for each section of the estate roads but should not be viewed as an extensive list of all the defects on the road.

Site Photographs

Section 1: Parsons Road

Plate 1: Elongated pot hole up to 50mm deep



Plate 2: Damaged footway & broken Kerbs



Plate 3: Blocked gulley



Plate 4: Carriageway condition



Section 2: Parsons Road / Brunel Road

Plate 5: Potholes and cracked surface



Section 3: Brunel Road

Plate 6: Cracked concrete and surface deterioration



Plate 7: Pot hole up to 50mm deep



Section 4: Brunel Road / Kelvin Road

Plate 8: Flexible overlay lifting from concrete surface below



Section 5: Brunel Road

Plate 9: Flexible overlay cracking at joints



Section 6: Brunel Road / Armstrong Road

Plate 10: Pot holes filling With water



Plate 11: Surface cracking



Plate 12: Water pooling at junction



Plate 13: Run off from adjacent site



Section 7: Brunel Road

Plate 14: Service trench cracking



Plate 15: Potholes up to 80mm deep



Section 8: Brunel Road / Cartwright Road

Plate 16: Water pooling at blocked gulley



Plate 17: Potholes up to 80mm deep



Section 9: Brunel Road

Plate 18: Potholes and surface cracking



Plate 19: Road surface deteriorating



Section 10: Brunel Road

Plate 20: Potholes on carriageway edge



Plate 21: Exposed joints



Section 11: Brunel Road

Plate 22: Pot holes filling with water



Plate 23: Water pooling at blocked gulley



Plate 24: Eroded tarmac



Plate 25: Barrier around hole



Section 12: Armstrong Road

Plate 26: Carriageway edge deteriorating



Plate 27: Uneven surfacing



Section 13: Brunel Road / Armstrong Road

Plate 28: Exposed metal joint / bar



Plate 29: Former roundabout central marking partially remains



Plate 30: Corner of slab broken



Plate 31: Pothole filled with water



Section 14: Armstrong Road

Plate 32: Flexible overlay deteriorating



Plate 33: Reflective cracking of surface



Section 15: Armstrong Road / Cartwright Road

Plate 34: Surface deterioration



Plate 35: Erosion around manhole cover



Section 16: Armstrong Road

Plate 36: Steel bars exposed in pothole



Plate 37: Flexible overlay deteriorating



Section 17: Armstrong Road / Fulton Road

Plate 38: Overlay lifting at junction



Plate 39: Carriageway surface in good condition



Section 18: Fulton Road

Plate 40: Surface deterioration around gulley



Plate 41: Carriageway Condition



Section 19: Fulton Road / Kelvin Road

Plate 42: Pothole



Plate 43: Service trench deteriorating



Section 20: Fulton Road

Plate 44: Potholes and cracks



Plate 45: Concrete surface



Section 21: Fulton Road / Parsons Road

Plate 46: Concrete surface



Section 22: Kelvin Road

Plate 47: Cracks on carriageway edge



Plate 48: Carriageway condition



Section 23: Armstrong Road

Plate 49: Potholes in carriageway



Plate 50: Tarmac cracking at joints



Section 24: Cartwright Road

Plate 51: Concrete around drain cracking



Plate 52: Service trench deteriorated





APPENDIX JB6



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0m 50m 100m

B	25.11.22	Parking information updated	ZAH
A	12.07.22	Layout amended	ZAH
No.	Date	Amendment	Initials

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APPENDIX JB7





Drawing Title: COMPOSITE OVERLAY PLAN					
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IT Project: LAND EAST OF MANOR TRADING ESTATE, BENFLEET Sheet 1 of 1	Rev		Description	Reviewer	Date
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	Date:		JAN 2023	Scale: 1:1000	
	Client: THE SMITH FAMILY		Drawn By: LS		Approved By: JB
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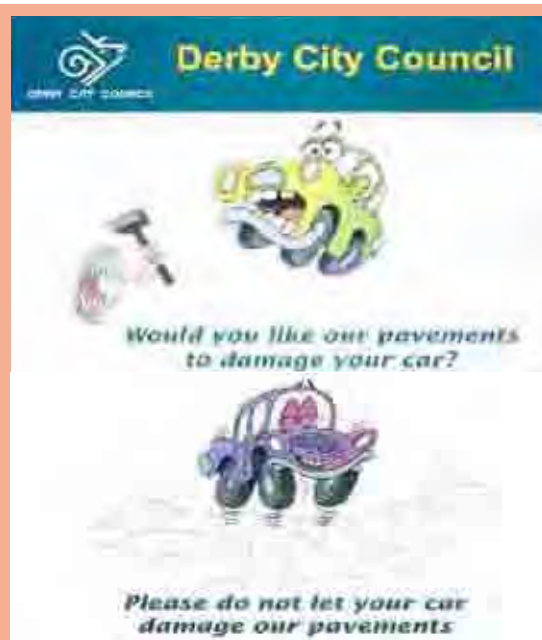
APPENDIX JB8

Case study

Derby City Council – tackling pavement parking

In a number of pavement parking hot-spots in Derby, the Council placed Parking on Pavements leaflets on vehicles parked on the pavement (Fig. 8.15). These leaflets give a clear message as to the negative effects of pavement parking, along with an indication of the penalties that pavement parkers could incur. Since 2002, over 300 Parking on Pavements leaflets have been placed on vehicles in hot spots, and the effect on pavement parking has been positive.

Figure 8.15 DCC's Parking on Pavements leaflets.



Derby City Council

8.3.46 Further guidance on deterring footway parking is contained in Traffic Advisory Leaflet 04/93.²² The Department for Transport has also drawn together examples of authorities that have tackled footway parking (also see 'Derby City Council case study box').

8.3.47 Where there is a shared surface (Fig. 8.16), conventional footways are dispensed with, so, technically, footway parking does not arise. However, inconsiderate parking can still be a problem (Fig. 8.17). Parking spaces within shared surface areas which are clearly indicated – for example by a change in materials – will let people know where they should park. Street furniture and planting, including trees, can also be used to constrain or direct parking.



Phil Jones, Phil Jones Associates

Figure 8.16 Clearly indicated parking spaces on a shared surface in Morice Town Home Zone, Plymouth.

Dimensions for car-parking spaces and manoeuvring areas

8.3.48 For parking parallel to the street, each vehicle will typically need an area of about 2 m wide and 6 m long.

8.3.49 For echelon or perpendicular parking, individual bays will need to be indicated or marked. Bays will need to enclose a rectangular area about 2.4 m wide and a minimum of 4.2 m long. Echelon bays should be arranged so that drivers are encouraged to reverse into them. This is safer than reversing out, when visibility might be restricted by adjacent parked vehicles.



Una McCaugh in, Llewelyn Davies Yeang

Figure 8.17 Untidy and inconsiderate parking.

²² Department for Transport (1993) *Traffic Advisory Leaflet 04/93 – Pavement Parking*. London: Department for Transport.

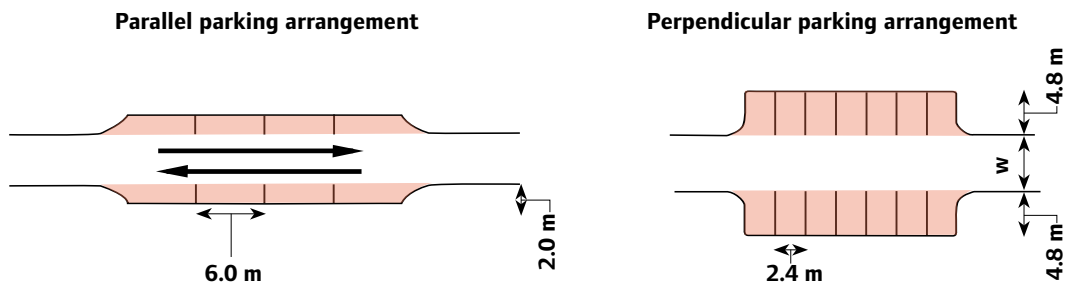


Figure 8.18 Suggested parallel and perpendicular parking arrangements.

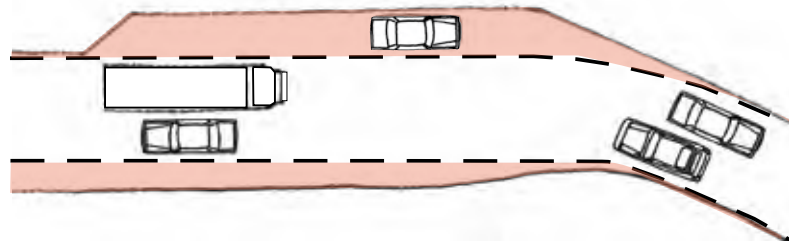


Figure 8.19 Gradual widening of the carriageway to create on-street spaces, with running carriageway checked using vehicle tracking.

8.3.50 Figures 8.18 and 8.19 show some suggested arrangements.

8.3.51 The width (W in Fig. 8.18) needed to access echelon or perpendicular spaces conveniently, depends on the width of the bay and the angle of approach. For a 2.4 m wide bay, these values are typically:

- at 90 degrees, $W = 6.0$ m;
- at 60 degrees, $W = 4.2$ m; and
- at 45 degrees, $W = 3.6$ m.

8.3.52 These width requirements can be reduced if the spaces are made wider. Swept-path analysis can be used to assess the effect of oversized spaces on reducing the need for manoeuvring space (Fig 8.20).

8.3.53 Where space is limited it may not be possible to provide for vehicles to get into the spaces in one movement. Some back and fore manoeuvring may be required. This is likely to be acceptable where traffic volumes and speeds are low.

8.3.54 The dimensions given above for parking spaces and manoeuvring areas can also be applied to the design of underground and multi-storey car parks. For detailed guidance on the design of these types of parking, reference can be made to guidelines prepared by the Institution of Structural Engineers (IStructE).²³

Tracking assessment

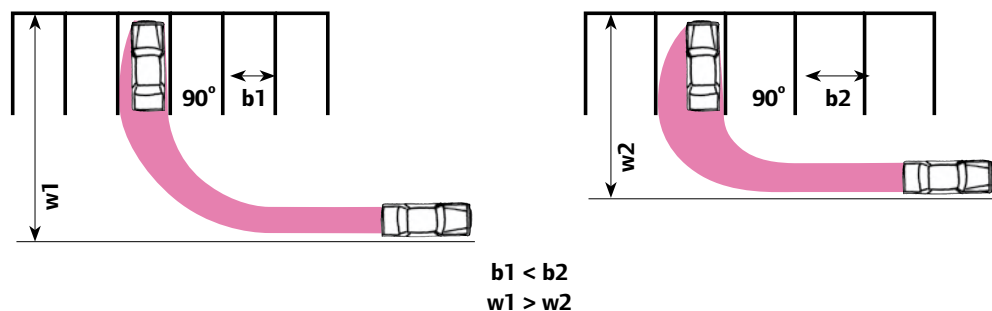


Figure 8.20 The effect on overall street width requirements when wider car parking spaces are provided.

²³ IStructE (2002) *Design Recommendations for Multi-storey and Underground Car Parks*. London: IStructE.

Parking spaces for disabled people

8.3.55 Detailed design specifications for parking spaces for disabled people are set out in *Traffic Advisory Leaflet 05/95*²⁴ and in *Inclusive Mobility*.²⁵ Further advice is available in BS 8300: 2001.²⁶ However, it is important to note that the diagrams on page 58 of *Inclusive Mobility* do not show the correct way to mark nor do they show the full range of dimensions for on-street bays for disabled people. The diagrams also show some of the kerb-mounted sign posts poorly positioned for people wishing to access their cars. Traffic signs and road markings for on-street bays reserved for disabled badge holders should comply with TSRGD and further guidance is provided in *Traffic Signs Manual Chapter 3*²⁷ and *Traffic Signs Manual Chapter 5*.²⁸

8.3.56 It is recommended that parking bays for disabled people are designed so that drivers and passengers, either of whom may be disabled, can get in and out of the car easily. They should allow wheelchair users to gain access from the side and the rear. The bays should be large enough to protect people from moving traffic when they cannot get in or out of their car on the footway side.

8.3.57 *Inclusive Mobility* recommends that dropped kerbs with tactile paving are provided adjacent to car-parking spaces to ensure that wheelchair users can access footways from the carriageway. (*Wales*: Further guidance on car parking standards and design for inclusive mobility will be produced in association with Welsh guidance on Design and Access Statements during 2007.)

8.3.58 The recommended dimensions of off-street parking bays are that they are laid out as a rectangle at least 4.8 m long by 2.4 m wide for the vehicle, along with additional space as set out in *Inclusive Mobility*.

8.4 Motorcycle parking

8.4.1 In 2003 there were 1.52 million motorcycles in use – representing around 5% of all motor vehicles. The need for parking provision for motorcycles is recognised in PPG13, which advises that, in developing and implementing policies on parking, local authorities should consider appropriate provision for motorcycle parking.

8.4.2 Guidance on motorcycle parking is contained in Traffic Advisory Leaflet 02/02.²⁹ General advice on designing highways to meet the need of motorcycles is given in the Institute of Highway Engineers (IHIE) Guidelines for Motorcycling, published in 2005.³⁰ Some of the guidance contained in that document has been repeated here for ease of reference.

8.4.3 The IHIE guidelines provide considerable detail on the provision of public motorcycle parking at locations such as educational establishments and workplaces, at shopping/entertainment areas and within residential areas lacking private parking opportunities.

8.4.4 Motorcyclists prefer to park close to their destination, in places where they can secure their machine. Designated motorcycle parking facilities that fail to meet these requirements will probably be overlooked in favour of informal spaces that are considered more suitable by owners.

8.4.5 Motorcycles are prone to theft, as they can be readily lifted into another vehicle. Security should therefore be a key consideration for those providing parking facilities for motorcycles.

24 Department for Transport (2005) *Traffic Advisory Leaflet 05/05 – Parking for Disabled People*. London: Department for Transport.

25 Department for Transport (2005) *Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure*. London: Department for Transport.

26 British Standards Institute (BSI) (2001) BS 8300: 2001 *Design of Buildings and their Approaches to Meet the Needs of Disabled People*. London: BSI.

27 Department for Transport (1986) *Traffic Signs Manual Chapter 3: Regulatory Signs*. London: HMSO.

28 Department for Transport (2003) *Traffic Signs Manual Chapter 5: Road Markings*. London: TSO.

29 Department for Transport (2002) *Traffic Advisory Leaflet 02/02 – Motorcycle Parking*. London: Department for Transport.

30 IHIE (2005) *Guidelines for Motorcycling: Improving Safety through Engineering and Integration*. London: IHIE.

suitable evidence of this measure must be submitted with the planning application (i.e. within the supporting Transport Assessment/Statement and Travel Plan). Please note that this measure might not be possible to provide in areas where public transport has been identified in the Community Infrastructure Levy Regulation 123 list.

3.4.4. Car Parking

3.4.4.1. *How many spaces*

The provision of spaces in residential developments is considered as 'Origin Parking' and spaces in employment, retail and leisure developments as 'Destination Parking'. The appropriate guidance for space provision is given in the Use Class Tables in Section 7. The shift in residential guidance to minimum advisory parking space provision, reflects the evidence that where constrained approaches to Origin Parking have not been supported by effective controls, problems affecting the use and enjoyment of streets have often arisen.

Suffolk County Council carried out a comprehensive research project looking at the number of vehicles owned by residential properties in the county. This included a survey of approximately 9000 dwellings as well as analysis of the 2001 and 2011 Census data for Suffolk car ownership (see Appendix 1).

3.4.4.2. *Bay Size and Manoeuvring*

The provision of parking that makes getting into and out of the vehicle as convenient as possible for the widest range of people (including those with reduced mobility and/or those with children).

Bay size for cars - including space to access car and boot	5.0m x 2.5m
Parallel parking	6.0m x 2.0m

Notes:

Minimum bay size for vans	7.5m x 3.5m*
Minimum bay size for HGVs:	
Articulated	17.0m x 3.5m
Rigid	12.0m x 3.5m

* To allow for the trend of increasingly long vans (e.g. Mercedes-Benz Sprinter, up to 7345mm, Fort Transit, up to 6403mm)

Occupants might not be able to get in or out of an average sized family car parked in a bay smaller than the minimum with cars parked in adjacent bays. Smaller bays will not be considered a usable parking space.

In order to physically provide access to both sides of a parked car, those parking spaces located at the end of a row, against a boundary fence or wall of a building will require an extra width of 300mm (total width of 3.1m). Additional width is required for disabled parking spaces to give a total width of 3.9m minimum.