



**BISHOPSTON, COTHAM AND REDLAND
NEIGHBOURHOOD PARTNERSHIP
TRANSPORT SUB-GROUP**

Report of: Service Director – Transport Service.

Title: RS12064 - Feasibility Study into safety at Archfield Road/Cotham Grove junction.

Officer presenting report: Rob Grieve, Principal Officer, Highways and Traffic, Transport Service.

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OFFICER COMMENTS

The report investigates two options and highlights various issues with both.

Option 1 suggests the implementation of a left turn ban from Archfield Road however we do not recommend this as it will be impossible to enforce and could lead to a false sense of security for pedestrians.

Option 2 is not recommended as it does not meet visibility requirements.

A revised Option 1 could be considered in which a build-out is introduced on the north west corner, although to overcome drainage issues it would need to be larger and extend southwards into Archfield Road. This would also provide an option to extend parking towards the junction (TROM amendment required) and provide a narrower crossing point on Archfield Road. It would add £10,000 to the cost but would address most of the issues.

RECOMMENDATION

1. Consider whether a revised Option 1 addresses local concerns and should be shortlisted as a priority for the partnership.

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Technical Note

Project	Bristol City Council RS11024 Archfield Road/ Cotham Grove	Date	5 March 2014
Note	Review junction layout	Ref	203742.BL.00.37
Status	FINAL	Revision Number	2
Author	Andrew Seek	Approved	Paul Bufton

1. Introduction

Bristol City Council commissioned CH2M Hill to review the existing priority junction Archfield Road and Cotham Grove.

1.1 The aim of the commission is to: identify options to narrow the junction and to provide shorter crossing distances for pedestrians plus, providing indicative costs.

1.2 Following the introduction, this Technical Note is structured as follows:

- Section 2 – Existing Situation;
- Section 3 – Accident Data;
- Section 4 – Feasibility
- Section 5 – Options;
- Section 6 – Indicative Costs;

2. Existing Situation

2.1 The junction of Archfield Road & Cotham Grove is currently a two way priority junction at an acute angle with the existing provision for pedestrians an in-line uncontrolled crossing point over the junction bellmouth, approximately 17.75m in length. The visibility from both crossing points towards Cotham Grove is restricted by the crest of the hill approximately 60m from the give way junction with on street parking along both sides. At the rear of the highway boundary, both corners also have third party high boundaries restricting views along Archfield Road.



3. Accident Data

3.1 The accident data shows no incidents between the periods of 01/07/2010 & 30/06/2013.

4. Options

4.1 To comply with the scheme brief, we have prepared two options with pedestrian facilities which cover the scenarios detailed below.

4.2 Option 1: Drawing No: 203742.BL.00.37-02-02

Reduce the crossing distances for pedestrians by introducing a build out on the eastern kerb line giving pedestrians full visibility of the junction and approaching vehicles.

The option of installing a single pedestrian island at the centre of the give way junction was considered at this location but was dismissed as this impeded right turning bus movements into Cotham Grove.

Opportunity: The revised layout will allow pedestrians to stand in line with the outside edge of the parked vehicles on the eastern side, allowing uninterrupted view to the crest of the hill and a clear view to the rear of Archfield Road. The build outs have also been checked against the turning movements of local buses.

Opportunity: Due to existing physical restrictions it is not possible to extend the footway out into Cotham Grove on the north-western corner. This is due to poor visibility created by the acute angle of the junction geometry and the high existing block wall to the rear of the highway. At the optimum crossing position, there is also a severe low point from the long falls and the cross falls. If a build out were to be introduced at this optimum crossing location then a gully and concrete dish channels would be required, which potentially could cause a trip hazard to visibly impaired pedestrians. A potential solution is to introduce a 'No Right Turn' from Archfield Road into Cotham Grove. This will increase the safety of the pedestrians crossing from west to east by removing a hazard created by limited visibility from the high block wall at the rear of the highway boundary and on street parking on both Cotham Grove and Archfield Road. All displaced traffic can still access Cotham Grove from Archfield Road by the minor detour of Cotham Park North.

Risk: Vehicles ignoring the proposed 'No Right Turn'

Option 2: Drawing No: 203742.BL.00.37-02-03

4.3 A request was made by the Councillor for this ward to investigate the reversal of the junction priorities to aid the bus movements from Cotham Brow, into Archfield Road and vice versa. The design as per drawing number 203742.BL.00.37-02-03 highlights several issues.

Opportunity: Easier movement for buses and all traffic from Cotham Grove into Archfield Road.

Risk: Detrimental effect for pedestrians, as they will be at more of a risk from a collision of vehicles crossing this arm of the junction as traffic will have priority.

Risk: Traffic approaching the new Give Way line not noticing the change in priority.

Risk: The proposed Give Way junction layout fails the junction visibility requirements as set out in Figure 7.18 of Manual for Streets.

Risk: Southbound traffic approaching at speed from Cotham Grove failing to stop and colliding with other vehicles/ pedestrians or third party boundary wall along Archfield Road.

5. Indicative Costs

5.1 Indicative costs have been prepared for each option using rates currently used by CH2M HILL and BCC for the costing of all Major schemes. Following agreement with the client, no Contingency/ Utility Diversions/ Preliminaries (contractor's on site costs, such as welfare facilities and traffic management) or Topographical Survey have been included to the cost estimates.

5.2 Option 1 Drawing No: 203742.BL.00.37-02-02

Indicative cost with the following assumptions:

- Remove old kerbs and replace with new;
- Plane off and replace footway adjacent to new kerblines
- New gullies where appropriate.
- No Right Turn Traffic Regulation Order

Estimated Works Costs £14,100

5.3 Option 2 Drawing No: 203742.BL.00.37-02-03

- Remove old kerbs and replace with new;

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Project	Bristol City Council RS11024 Junction feasibility study	Ref 203742.BL.00.37

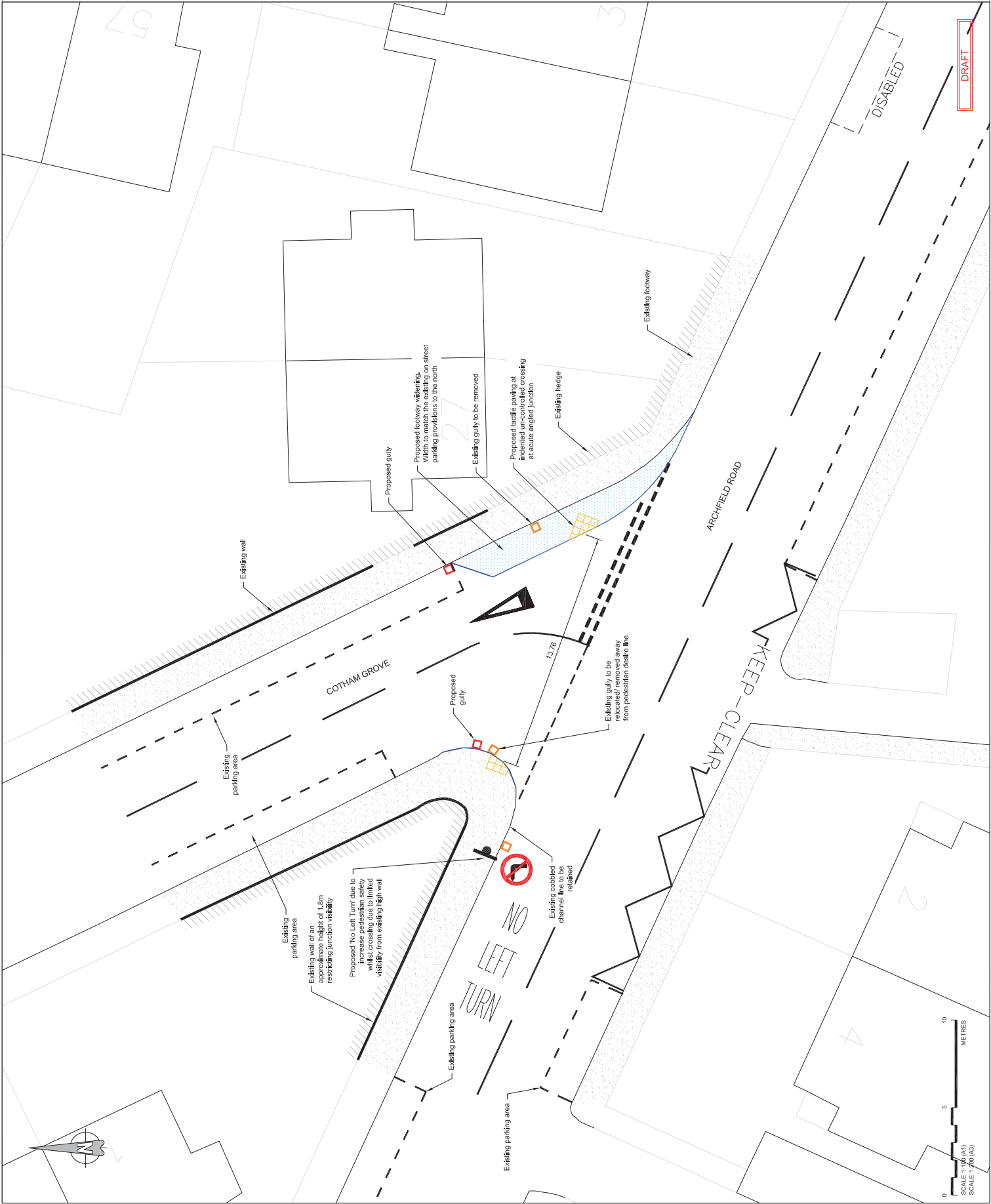
- Plane off and replace footway adjacent to new kerb line
- New gullies where appropriate.

Estimated Works Costs **£16,610**

APPENDIX A:

Feasibility Options

Notes:



Rev	By	Chd	Appvd	Date	Description
CHIT					

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 TRAFFIC MANAGEMENT SCHEMES

Project: PEDESTRIAN IMPROVEMENTS
 ARCHFIELD ROAD/
 COTHAM GROVE
 BCC Ref: RS11024

Drawing No: 2003742.BL.00.37-02-02
 Drawing Title: PEDESTRIAN IMPROVEMENTS
 ARCHFIELD ROAD/
 COTHAM GROVE
 BCC Ref: RS11024

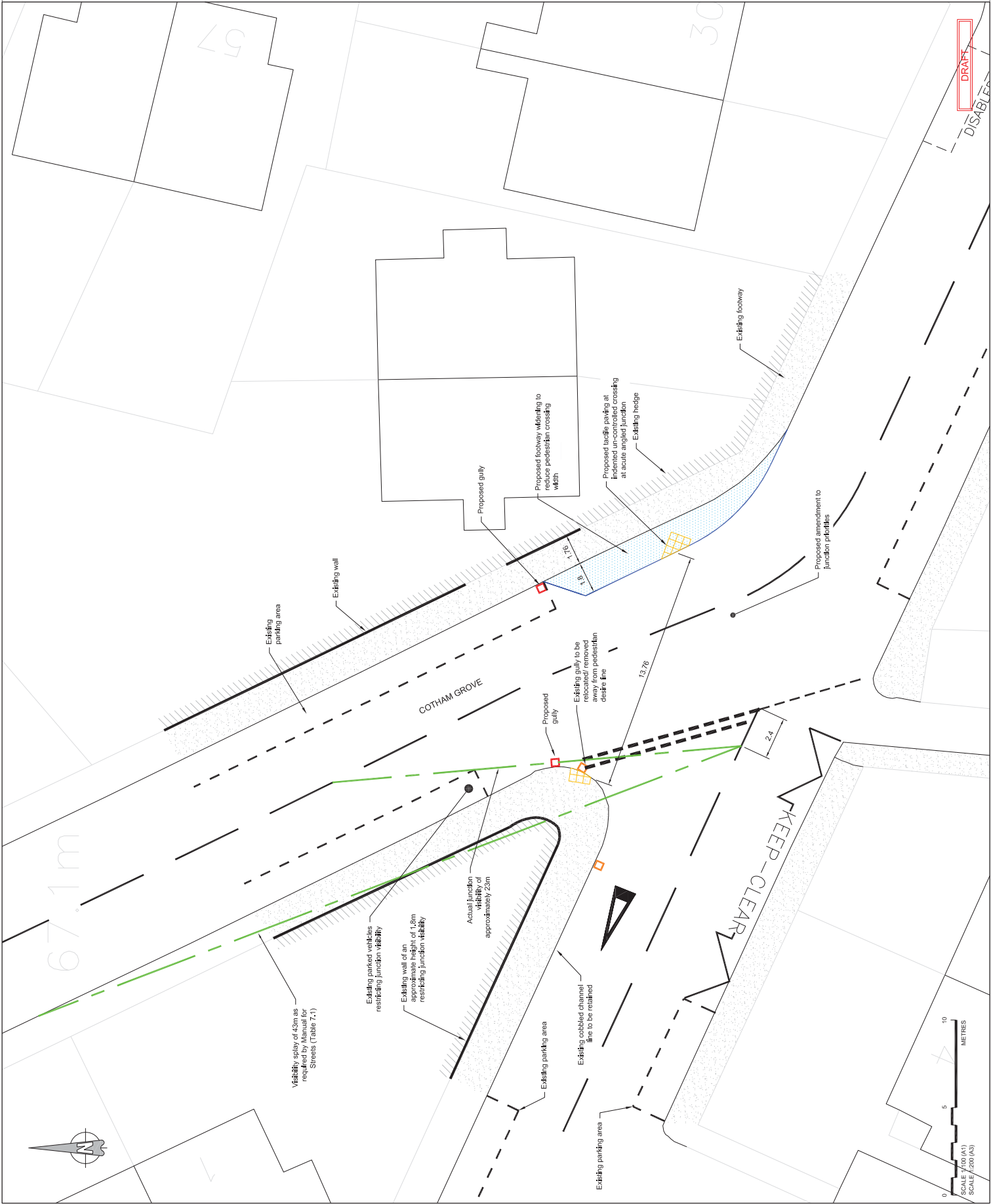
Drawn by: ASD
 Checked by: FB
 Approved by: FB
 Date: 04/03/2014
 Date: 04/03/2014
 Date: 04/03/2014

Revision
 2003742.BL.00.37-02-02

Drawing Scale: 1:100 @ A1



Notes:



DRIFT

DISABLED

Rev	By	Chk	Approved	Date	Description
CHIT					

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Project:
 PEDESTRIAN IMPROVEMENTS
 ARCHFIELD ROAD/
 COTHAM GROVE
 BCC Ref: RS11024

Drawing No:
 203742.BL.00.37-02-03

Drawn by: ANS
 Checked by: FB
 Approved by: FB

Date: 04/03/2014
 Date: 04/03/2014
 Date: 04/03/2014

Scale:
 1:100 (A1)
 1:200 (A3)

Scale:
 1:100 (A1)
 1:200 (A3)

Scale:
 1:100 (A1)
 1:200 (A3)