

Electrical Installation Certificate

Unique Certificate No. GCE1-000253-EIC

To comply with:

BS 7671: 2018 (Amendment 2: 2022)

Requirement for Electrical Installations

IET Wiring Regulations Eighteenth Edition

50 School Lane

Higham

Rochester

ME3 7JF

Completion of electrical works undertaken for:

Electrical installation completed: 25 July 2024

Electrical installation undertaken by:

GardnerCo Electrical Contractors

30 Montgomery Close

Gravesend

Kent

DA12 5NR





Unique Certificate No. GCE1-000253-EIC

ELECTRICAL INSTALLATION CERTIFICATE

This safety certificate is an important and valuable document which should be retained for future reference

Issued in accordance with BS 7671 - Requirements for Electrical Installations

DETAILS OF THE CLIENT

Client:		Contract Ref (if any):	
Address:			
50 School Lane, Higham, Rochester, ME3 7JF			

INSTALLATION ADDRESS

Address:
50 School Lane, Higham, Rochester, ME3 7JF

DESCRIPTION AND EXTENT OF THE INSTALLATION

Description of installation:	Domestic	Installation type	Alteration to the Existing Installation
Extent of electrical works covered by this certificate:			
Install of new 16mm SWA supply to out building, full install of power and lighting circuits			

FOR DESIGN, CONSTRUCTION, INSPECTION & TESTING

I being the person responsible for the inspection & testing of the electrical installation (as indicated by my signature below), particulars of which are described above, having exercised reasonable skill and care when carrying out the inspection & testing, hereby CERTIFY that the work for which I have been responsible is to the best of my knowledge and belief in accordance with BS 7671: 2018 (Amendment 2: 2022), except for the departures, if any, detailed as follows.

The extent of liability of the signatory is limited to the work described above as the subject of this certificate

Name:	Ricky Gardner	For & on behalf of:	GardnerCo Electrical Contractors		
Position:	Electrician	Address:	30 Montgomery Close Gravesend Kent DA12 5NR gardnerco@outlook.com		
Date:	25 July 2024				
Signature:					
Accredited Body:	NAPIT	Enrolment No.:	34033	Branch No.:	

REPORT AUTHORISED FOR ISSUE BY

Name:	Ricky Gardner	For & on behalf of:	GardnerCo Electrical Contractors		
Position:	Electrician	Address:	30 Montgomery Close Gravesend Kent DA12 5NR gardnerco@outlook.com		
Date:	25 July 2024				
Signature:					
Accredited Body:	NAPIT	Enrolment No.:	34033	Branch No.:	

Details of departures from BS 7671: 2018 (Amendment 2: 2022)

None

NEXT INSPECTION

It is recommended that the installation is further inspected & tested:	before 25 July 2029
For the following reason:	

SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

System type and earthing arrangements	TN-S	TN-C-S	TT	☒	TN-C	IT	
Number and Type of Live Conductors	A.C./D.C. A.C.		No. of phases	1-Phase (2-wire)			
Nature of Supply Parameters							
Nominal voltage(s), U ₀	230V	Nominal frequency, f	50Hz	Number of supplies	1	Phase sequence confirmed:	N/A
U		External earth fault loop impedance, Z _e	24.8Ω	Prospective fault current, I _{pf}	3.2kA	Supply polarity confirmed:	✓
Primary Supply Overcurrent Protective Device(s)	BS 1362 Fuse (Domestic) System G [Clip-in]			Rated current	100A	Short-circuit capacity	33kA
Other sources of supply:							

PARTICULARS OF INSTALLATION REFERRED TO IN THE CERTIFICATE

Means of earthing:	Supplier's facility	Maximum Demand (Load):	70			
Method of Fault Protection:	ADS					
Main Protective Conductors						
Earthing Conductor	Conductor material	Copper	Conductor csa	16mm²	Continuity check	✓
Main protective bonding conductors	Conductor material	Copper	Conductor csa	10mm²	Continuity check	✓
Bonding of extraneous-conductive parts	Water installation pipes:	✓	Gas installation pipes:	N/A	Oil service:	
	Structural steel:		Lightning protection:	N/A	Other incoming services	
Main Switch / Switch-Fuse / Circuit-breaker / RCD						
Location	kitchen		BS(EN)	BS EN 60947-3 N/A		
	No. of poles	2	Rated voltage	230V	Rated current	100A
	Fuse rating or setting	N/A	Conductors material	Copper	Conductors csa	2 x 16mm²
Front End Residual Current Device details (if applicable)						
RCD type		Operating current I _{Δn}	N/A	Operating time @ I _{Δn}	Type 'S' RCD (time delayed)	N/A

SCHEDULE OF INSPECTIONS SUMMARY

Item No.	Description	Outcome	Item No.	Description	Outcome
1.0	Condition of consumer's intake equipment (Visual inspection only)	Pass	8.0	Circuits (Distribution and Final)	Pass
2.0	Parallel or switched alternative sources of supply	N/A	9.0	Isolation and switching	Pass
3.0	Protective measure: Automatic disconnection of supply	Pass	10.0	Current-using equipment (permanently connected)	Pass
4.0	Basic protection	Pass	11.0	Identification and notices	Pass
5.0	Protective measures other than ADS	Pass	12.0	Section 6 - Location(s) containing a bath or shower	Pass
6.0	Additional protection	Pass	13.0	Other special installations or locations	N/A
7.0	Distribution equipment	Pass	14.0	Prosumer's low voltage electrical installation(s)	N/A

COMMENTS ON THE EXISTING INSTALLATION

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ADDITIONAL INFORMATION

10% of fixed wire installation and 20% visual inspection of accessories.
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Distribution Schedule: DB 001

DB Location:	Kitchen	Supply Derived From:	Main supply	Distribution circuit OCPD BS (EN) / Type:	BS 1362 Fuse (Domestic) System G [Clip-in]
DB Type/No:	N/A	Voltage:	230V	OCPD Rating / SCC:	100A / 33kA
Designation:	Lighting & Power	No. of phases:	1	SPD BS (EN) / Type:	
Tested by:	Ricky Gardner	Signed:		Date:	25 July 2024

Circuit		Conductor Details						Protective device					RCD				
No.	Description	Type of wiring	Reference Method	No. of points	Live (mm²)	CPC (mm²)	Max Disc. Time (s)	BS (EN)	Type	Rating (A)	Breaking Cap. (kA)	Maximum Permitted Z (Ω)	BS (EN)	Type	I _{Δn} (mA)	Rating (A)	No. of poles
1	RCD	--	--	--	--	--	--	--	--	--	--	--	61008	AC	30	63	2
2	Hob	PVC T&E	C	--	6.0	2.5	0.4	60898	B	32	6	1.37	--	--	--	--	--
3	Water heater	PVC T&E	C	--	6.0	2.5	0.4	60898	B	32	6	1.37	--	--	--	--	--
4	Sockets	PVC T&E	C	--	2.5	1.5	0.4	60898	B	32	6	1.37	--	--	--	--	--
5	Lights	PVC T&E	C	--	1.5	1.0	0.4	60898	B	6	6	7.28	--	--	--	--	--
6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7	RCD	--	--	--	--	--	--	--	--	--	--	--	61008	AC	30	63	2
8	Cooker	PVC T&E	C	--	6.0	2.5	0.4	60898	B	32	6	1.37	--	--	--	--	--
9	Kitchen sockets	PVC T&E	C	--	2.5	1.5	0.4	60898	B	32	6	1.37	--	--	--	--	--
10	Heater spurs	PVC T&E	C	--	2.5	1.5	0.4	60898	B	16	6	200	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Test Results: DB 001

Phase sequence confirmed:	N/A	Z _s at DB:	24.8Ω	SPD Functionality Confirmed:	
Supply polarity confirmed:	✓	I _{pf} at DB:	3.2kA	Vulnerable circuits and/or installed equipment:	LED Lamps, Appliances
Details of Test Instruments Used					
Continuity:	Kewtech KT65DL	Insulation resistance:	Kewtech KT65DL	Earth fault loop impedance:	Kewtech KT65DL
RCD:	Kewtech KT65DL	Earth electrode resistance:	Kewtech KT65DL	Other:	

Circuit		Ring Final Circuit Continuity (Ω)			Continuity (Ω)		Insulation Resistance			Polarity	Z _s	RCD Test Results		Manual AFDD Test Button
No.	Description	r ₁ (phase)	r _n (neutral)	r ₂ (cpc)	R1 + R2 (Ω)	R2 (Ω)	Test Voltage	L-N (MΩ)	L-E (MΩ)		Max Measured Z (Ω)	Op. time at I _{Δn} (ms)	Test Button	
1	RCD	--	--	--	--	--	500V	>999	>999	✓	--	19	✓	--
2	Hob	--	--	--	0.14	--	500V	>999	>999	✓	25.1	--	--	--
3	Water heater	--	--	--	0.21	--	500V	>999	>999	✓	25.4	--	--	--
4	Sockets	0.65	0.65	0.93	0.30	--	500V	>999	>999	✓	25.2	--	--	--
5	Lights	--	--	--	0.47	--	500V	>999	>999	✓	25.6	--	--	--
6	--	--	--	--	--	--	500V	>999	>999	✓	--	--	--	--
7	RCD	--	--	--	--	--	500V	>999	>999	✓	--	25	✓	--
8	Cooker	--	--	--	0.09	--	500V	>999	>999	✓	25.1	--	--	--
9	Kitchen sockets	0.29	0.29	0.58	0.13	--	500V	>999	>999	✓	24.9	--	--	--
10	Heater spurs	0.51	0.51	0.79	0.21	--	500V	>999	>999	✓	25.3	--	--	--
11	--	--	--	--	--	--	500V	>999	>999	✓	--	--	--	--
12	--	--	--	--	--	--	500V	>999	>999	✓	--	--	--	--

Electrical Installation Certificate

Guidance for Recipients

This safety Certificate has been issued to confirm that the electrical installation work to which it relates has been designed, constructed, inspected and tested in accordance with BS 7671.

You should have received an 'original' Certificate and the person that issued the Certificate should have retained a duplicate. If you were the person ordering the work, but not the owner of the installation, you should pass this Certificate, or a full copy of it including the schedules, immediately to the owner.

The 'original' Certificate should be retained in a safe place and be shown to any person inspecting or undertaking further work on the electrical installation in the future. If you later vacate the property, this Certificate will demonstrate to the new owner that the electrical installation complied with the requirements of BS 7671 at the time the Certificate was issued. The Construction (Design and Management) Regulations require that, for a project covered by those Regulations, a copy of this Certificate, together with schedules, is included in the project health and safety documentation.

For safety reasons, the electrical installation will need to be inspected at appropriate intervals by a skilled person or persons, competent in such work. The maximum time interval recommended before the next inspection is stated on Page 1 under 'Next Inspection'.

This Certificate is intended to be issued only for a new electrical installation or for new work associated with an addition or alteration to an existing installation. It should not have been issued for the inspection and testing of an existing electrical installation. An 'Electrical Installation Condition Report' should be issued for such an inspection.

This Certificate is only valid if accompanied by the Schedule of Inspections has been completed to confirm that all relevant inspections have been carried out and where accompanied by Schedule(s) of Circuit Details and Test Results.

Where the installation includes a residual current device (RCD) it should be tested six-monthly by pressing the button marked 'T' or 'Test'. The device should switch off the supply and should then be switched on to restore the supply. If the device does not switch off the supply when the button is pressed, seek expert advice. For safety reasons it is important that this instruction is followed.

Where the installation includes an arc fault detection device (AFDD) having a manual test facility it should be tested six-monthly by pressing the test button. Where an AFDD has both a test button and automatic test function, manufacturer's instructions shall be followed with respect to test button operation.

Where the installation includes a surge protection device (SPD) the status indicator should be checked to confirm it is in operational condition in accordance with manufacturer's information. If the indication shows that the device is not operational, seek expert advice. For safety reasons it is important that this instruction is followed.

Where the installation includes alternative or additional sources of supply, warning notices should be found at the origin or meter position or, if remote from the origin, at the consumer unit or distribution board and at all points of isolation of all sources of supply.

EIC Schedule of Inspections Check List

1.0	CONDITION OF CONSUMER'S INTAKE EQUIPMENT (VISUAL INSPECTION ONLY)
	Where inadequacies in the intake equipment are encountered, which may result in a dangerous or potentially dangerous situation, it is recommended that the person ordering the work informs the appropriate authority.
1.1	Consumer's isolator (where present)
1.2	Consumer's meter tails
2.0	PARALLEL OR SWITCHED ALTERNATIVE SOURCES OF SUPPLY
2.1	Presence of adequate arrangements where generator to operate as a switched alternative (551.6)
2.2	Dedicated earthing arrangement independent of that of the public supply (551.4.3.2.1)
2.3	Presence of adequate arrangements where generator to operate in parallel system with the public supply (551.7)
2.4	Correct connection of generator in parallel (551.7.2)
2.5	Compatibility of characteristics of means of generation (551.7.3)
2.6	Means to provide automatic disconnection of generator in the event of loss of public supply system or voltage or frequency deviation beyond declared values (551.7.4)
2.7	Means to prevent connection of generator in the event of loss of public supply system or voltage or frequency deviation beyond declared values (551.7.5)
2.8	Means to isolate generator from the public supply system (551.7.6)
3.0	PROTECTIVE MEASURE: AUTOMATIC DISCONNECTION OF SUPPLY
3.1	Distributor's earthing arrangement (542.1.2.1, 542.1.2.2)
3.2	Installation earth electrode (where applicable) (542.1.2.3)
3.3	Earthing conductor and connections, including accessibility (542.3, 543.3.2)
3.4	Main protective bonding conductors and connections, including accessibility (411.3.1.2, 543.3.2, 544.1)
3.5	Provision of safety electrical earthing/bonding labels at all appropriate locations (514.13)
3.6	RCD(s) provided for fault protection (411.4.204, 411.5.3)
3.7	Provisions where automatic disconnection is not feasible (411.3.2.5)
3.8	FELV - requirements satisfied (411.7, 411.7.1)
3.9	RLV - requirements satisfied (411.8)
4.0	BASIC PROTECTION
4.1	Insulation of live parts (416.1)
4.2	Barriers or enclosures (416.2, 416.2.1)
4.3	Obstacles (Section 417, 417.2.1, 417.2.2)
4.4	Placing out of reach (Section 417, 417.3)
5.0	PROTECTIVE MEASURES OTHER THAN ADS
5.1	SELV (Section 414)
5.2	PELV (Section 414)
5.3	Double insulation i.e. Class II or equivalent equipment and associated circuits (Section 412)
5.4	Reinforced insulation i.e. Class II or equivalent equipment and associated circuits (Section 412)
5.5	Non-conducting location (418.1)

5.6	Earth-free local equipotential bonding (418.2)
5.7	Electrical separation (Section 413, 418.3)
6.0	ADDITIONAL PROTECTION
6.1	RCDs not exceeding 30 mA as specified (415.1)
6.2	Supplementary bonding (Section 415, 415.2)
7.0	DISTRIBUTION EQUIPMENT
7.1	Adequacy of working space/accessibility to equipment (132.12, 513.1)
7.2	Security of fixing (134.1.1)
7.3	Insulation of live parts not damaged during erection (416.1)
7.4	Adequacy/security of barriers (416.2)
7.5	Suitability of enclosures for IP and fire ratings (416.2, 421.1.6, 421.1.201, 526.5)
7.6	Enclosures not damaged during installation (134.1.1)
7.7	Presence and effectiveness of obstacles (417.2)
7.8	Components are suitable according to manufacturers' assembly instructions or literature (536.4.203)
7.9	Presence of main switch(es), linked where required (462.1.201)
7.10	Isolators, for every circuit or group of circuits and all items of equipment (462.2)
7.11	Operation of main switch(es) (functional check) (643.10)
7.12	Manual operation of circuit-breakers, RCDs and AFDDs to prove functionality (643.10)
7.13	Confirmation that integral test button/switch causes RCD(s) to trip when operated (functional check) (643.10)
7.14	Confirmation overvoltage protection (SPDs) provided where specified (534.4.1.1)
7.15	Selection of protective device(s) and base(s), correct type and rating (411.3.2, 411.4, 411.5, 411.6, Sections 432, 433, 434, 537.1.1)
7.16	Single-pole protective devices in line conductors only (132.14.1, 530.3.3, 643.6)
7.17	Protection against mechanical damage where cables enter equipment (522.8.1, 522.8.5, 522.8.11)
7.18	Protection against electromagnetic effects where cables enter ferromagnetic enclosures (521.5.1)
7.19	Confirmation that ALL conductor connections, including connections to busbars, are correctly located in terminals and are tight and secure (526.1)
8.0	CIRCUITS (Distribution and Final)
8.1	Identification of conductors (514.3.1)
8.2	Conductors correctly identified by colour, lettering or numbering (Section 514)
8.3	Cables correctly supported throughout, with protection against abrasion (521.10.202, 522.8.5)
8.4	No basic insulation of a conductor visible outside enclosure (526.8)
8.5	Examination of cables for signs of mechanical damage during installation (522.6.1, 522.8.1, 522.8.3)
8.6	Examination of insulation of live parts, not damaged during erection (522.6.1, 522.8.1)
8.7	Non-sheathed cables protected by enclosure in conduit, ducting or trunking (521.10.1, 526.8)
8.8	Suitability of containment systems (including flexible conduit) (Section 522)
8.9	Correct temperature rating of cable insulation (522.1.1, Table 52.1)
8.10	Adequacy of cables for current-carrying capacity with regard for the type and nature of installation (Section 523)

8.11	Adequacy of overcurrent protective devices: type and fault current rating for fault protection (434.5)
8.12	Adequacy of RCDs: type and current rating (531.3.3)
8.13	Adequacy of AFDDs: current rating (532.6)
8.14	Presence, adequacy and correct termination of protective conductors (411.3.1.1, 543.1)
8.15	Coordination between conductors and overload protective devices (433.1, 533.2.1)
8.16	Wiring systems and cable installation methods/practices with regard to the type and nature of installation and external influences (Section 522)
8.17	Cables concealed under floors, above ceilings, in walls/partitions, adequately protected against damage (522.6.201, 522.6.202, 522.6.203, 522.6.204)
8.18	Provision of additional protection by RCDs having rated residual operating current ($I_{\Delta n}$) not exceeding 30 mA (i) For all socket-outlets of rating 32 A or less, unless an exception is permitted (411.3.3) (ii) Supplies for mobile equipment not exceeding 32 A rating for use outdoors (411.3.3) (iii) For cables concealed in walls at a depth of less than 50 mm (522.6.202, 522.6.203) (iv) For cables concealed in walls/partitions containing metal parts regardless of depth (522.6.202, 522.6.203) (v) Final circuits supplying luminaires within domestic (household) premises (411.3.4)
8.19	Provision of fire barriers, sealing arrangements so as to minimize the spread of fire (Section 527)
8.20	Segregation/separation of Band I (ELV) and Band II (LV) circuits (528.1)
8.21	Cables segregated/separated from non-electrical services (528.3)
8.22	Termination of cables at enclosures (Section 526) (i) Connections under no undue strain (522.8.5, 526.6) (ii) No basic insulation of a conductor visible outside enclosure (526.8) (iii) Connections of live conductors adequately enclosed (526.5) (iv) Adequately connected at point of entry to enclosure (glands, bushes etc.) (522.8.5)
8.23	Suitability of circuit accessories for external influences (512.2)
8.24	Circuit accessories not damaged, securely fixed, correctly connected, suitable for external influences (134.101, 512.2, Section 526)
8.25	Single-pole devices for switching or protection in line conductors only (132.14.1, 530.3.3, 643.6)
8.26	Cables and conductors correctly connected, enclosed and with no undue mechanical strain (Section 526)
8.27	Adequacy of connections, including CPCs, within accessories and at fixed and stationary equipment (Section 526)
9.0	ISOLATION AND SWITCHING
9.1	Isolators (462, 537.2) (i) Presence and location of appropriate devices (Section 462, 537.2.7) (ii) Capable of being secured in the OFF position (537.2.4) (iii) Correct operation verified (functional check) (643.10) (iv) The installation, circuit or part thereof that will be isolated clearly identified by location and/or durable marking (537.2.7)
9.2	Switching off for mechanical maintenance (464, 537.3.2) (i) Presence of appropriate devices (464.1, 537.3.2) (ii) Acceptable location (537.3.2.4) (iii) Capable of being secured in the OFF position (464.2) (iv) Correct operation verified (functional check) (643.10)
9.3	Emergency switching off (Section 465, 537.3.3, 537.4)

	(i) Presence of appropriate devices (465.1, 537.3.3, 537.4) (ii) Readily accessible for operation where danger might occur (537.3.3.6) (iii) Correct operation verified (functional check) (643.10) (iv) Firefighter's switches (537.4)
9.4	Functional switching (463.1, 537.3.1) (i) Presence of appropriate devices (537.3.1.1, 537.3.1.2) (ii) Correct operation verified (functional check) (537.3.1.1, 537.3.1.2, 643.10) (iii) Functional switching, for control of parts of the installation and current-using equipment (463.1, 537.3.1)
10.0	CURRENT-USING EQUIPMENT (PERMANENTLY CONNECTED)
10.1	Suitability of equipment in terms of IP and fire ratings (416.2, 421.1, 421.1.201, 526.5)
10.2	Enclosure not damaged/deteriorated during installation so as to impair safety (134.1.1)
10.3	Suitability for the environment and external influences (512.2)
10.4	Security of fixing (134.1.1)
10.5	Cable entry holes in ceilings above luminaires, sized or sealed so as to restrict the spread of fire (527.2)
10.6	Provision of undervoltage protection, where specified (Section 445)
10.7	Provision of overload protection, where specified (Section 433, 552.1)
10.8	Provision of overload and/or undervoltage protection e.g. for rotating machines, if required (Sections 445, 552)
10.9	Correct selection and installation of luminaires fitted (559.3)
10.10	Installed to minimize the build-up of heat and restrict the spread of fire (421.1.4, 559.4.1)
10.11	Adequacy of working space/accessibility to equipment (132.12, 513.1)
11.0	IDENTIFICATION AND NOTICES
11.1	Presence of RCD six-monthly test notice, where required (514.12.2)
11.2	AFDD six-monthly test notice, where required
11.3	Presence of diagrams, charts or schedules at or near each distribution board, where required (514.9.1)
11.4	Presence of alternative supply warning notice at or near (514.15) (i) The origin (ii) The meter position, if remote from origin (iii) The distribution board to which the alternative/additional sources are connected (iv) All points of isolation of ALL sources of supply
11.5	Presence of next inspection recommendation label (514.12.1)
11.6	Presence of other required labelling (Section 514)
11.7	Presence of labels to indicate the purpose of switchgear and protective devices (514.1.1, 514.8)
11.8	Warning notice posted in situation where live parts cannot be isolated by the operation of a single device (514.11.1, 537.1.2)
11.9	The circuit or part thereof to be disconnected clearly identified by location and/or durable marking (537.3.2.3, 537.3.2.4)
11.10	The installation, circuit or part thereof to be disconnected clearly identified by location and/or durable marking (537.3.3.6)
12.0	LOCATION(S) CONTAINING A BATH OR SHOWER
12.1	Additional protection for all low voltage (LV) circuits by RCD not exceeding 30 mA (701.411.3.3)
12.2	Where used as a protective measure, requirements for SELV or PELV met (701.414.4.5)

12.3	Shaver supply units comply with BS EN 61558-2-5 formerly BS 3535 (701.512.3)
12.4	Presence of supplementary bonding conductors, unless not required by BS 7671 (701.415.2)
12.5	Low voltage (e.g. 230 V) socket-outlets sited at least 2.5 m from zone 1 (701.512.3)
12.6	Suitability of equipment for external influences for installed location in terms of IP rating (701.512.2)
12.7	Suitability of accessories and control gear etc. for a particular zone (701.512.3)
12.8	Suitability of current-using equipment for particular position within the location (701.55)
13.0	OTHER SPECIAL INSTALLATIONS OR LOCATIONS
13.1	Where the installation includes special installations or locations relating to sections of Part 7, additional inspection items should be added to the checklist.
13.2	List all other special installations or locations present, if any. (Record separately the results of particular inspections applied)
14.0	PROSUMER'S LOW VOLTAGE ELECTRICAL INSTALLATION(S)
14.1	Where the installation includes additional requirements and recommendations relating to Chapter 82, additional inspection items should be added to the checklist.