

MANUAL TEST TABLE

Requirement(s)	Ref	Description	Steps to be followed (including input values)	Expected outcome	Actual outcome	Status
UR_EVENTS FR_EVENTS	1	Test that events pop up when event countdown reaches 0	Let game play run until countdown countdown reaches 0 (1 min intervals)	Event pops up	Event pops up	PASS
	2	Test that each event affects other things (e.g. reputation) appropriately for action selected	Once an event has popped up, LMB on the option to increase money	Money value increases by specified amount	Money value increases by specified amount	PASS
			Once an event has popped up, LMB on the option to decrease money	Money value decreases by specified amount	Money value decreases by specified amount	PASS
			Once an event has popped up, LMB on the option to increase reputation	Reputation value increases by specified amount	Reputation value increases by specified amount	PASS
			Once an event has popped up, LMB on the option to decrease reputation	Reputation value decreases by specified amount	Reputation value decreases by specified amount	PASS
	3	Test that the user cannot build whilst there is an event pop-up	LMB on a building in the menu whilst there is an event pop-up	No change is observed	No change is observed	PASS
			LMB on an already placed building to move it whilst there is an event pop-up	No change is observed	No change is observed	PASS
	4	Test that all buttons are off limits (e.g., resume play or settings) until the event has been dealt with	Use the LMB on the play button to resume the game	No change occurs	No change occurs	PASS
			Press the P to			PASS

			resume the game			
			LMB on the settings cog			PASS
5	Test that the game pauses whilst there is an event pop-up (timer and money pause)	Let game play run until countdown timer runs out and observe the timer and money values in the top bar	Timer pauses and no change occurs to any counter (building, score, money, reputation) until the event pop up has been dealt with	Timer pauses and no change occurs to any counter (building, score, money, reputation) until the event pop up has been dealt with	PASS	
6	Test that the event countdown is displayed correctly	Enter the game screen and observe the top bar	A one minute countdown should be clearly visible in the place specified as "next event in:"	A regularly updating, one minute countdown is clearly visible in the place specified as "next event in:"	PASS	
7	Test that event countdown decrements appropriately (e.g. test that it is correct at various intervals)	Enter the game and observe the countdown at the top of the screen at the start	The event countdown should read 1:00	The event countdown reads 1:00	PASS	
		Enter the game and observe the countdown at the top of the screen after 30 seconds	The countdown should have updated and should read 0:30	The countdown has updated and reads 0:30	PASS	
		Enter the game and observe the countdown at the top of the screen after 1 minute	The countdown should have updated and now read 0 and an event should occur	The countdown updates and now reads 0 and an event occurs	PASS	
8	Test that event countdown resets to 1 minute after each event has been dealt with	LMB either one of the available buttons on the event pop-up to resume the game	The countdown should be reset to one minute and	The countdown is reset to start counting down from	PASS	

				start counting down again	one minute again.	
	9	Test that event timer starts at 1 minute when the game is started	Start the game from the menu screen using the LMB	The countdown to next event displayed on the bar at the top should read one minute	The timer is set to one minute as displayed on the screen when the game starts	PASS
	10	Test you cannot choose an option for which you have insufficient funds	When the event pops up, use the LMB to select a button that will remove more money than you currently have	A pop up defining the problem (insufficient funds) occurs and the game, including the event pop up, remains unchanged	A pop up defining the problem (insufficient funds) occurs and the game, including the event pop up, remains unchanged	PASS
	11	Test you cannot choose an option for which you have insufficient reputation	When the event pops up, use the LMB to select a button that will remove more reputation than you currently have	A pop up defining the problem (insufficient reputation) occurs and the game, including the event pop up, remains unchanged	A pop up defining the problem (reputation funds) occurs and the game, including the event pop up, remains unchanged	PASS
UR_IN_GAME_TIME FR_IN_GAME_TIME	12	Test that in game time displayed correctly	Enter the game screen and observe the left side of the top bar	The correct in game time is clearly displayed in years and months, updating every 5 seconds.	The correct in game time is clearly displayed in years and months, updating every 5 seconds.	PASS
	13	Test that years and months are incremented correctly	Let the game play for 5 seconds	The month value increments by one	The month value increments by one	PASS
			Let the game play for 1 minute	The year value increments by	The year values increments by	PASS

				one	one	
UR_TIMER FR_TIME_LIMIT FR_TIMER	14	Test that countdown displayed correctly	Enter the game screen and observe the bar at the top of the screen	The counter is displayed clearly on the bar at the top of the screen	The counter is displayed clearly on the bar at the top of the screen	PASS
	15	Test that countdown decrements appropriately	Enter the game and observe the countdown immediately	The countdown starts at 5 minutes	The countdown starts at 5 minutes	PASS
			Enter the game and observe the countdown after 30 seconds	The seconds on the timer update (should now read 4:29)	The seconds on the timer are updated (now reading 4:30)	PASS
			Enter the game and observe the countdown after 1 minute	The minutes on the timer update (should now read 3:59)	The minutes on the timer are updated (reads 3:59)	PASS
			Enter the game and observe the countdown after 5 minutes	The timer reaches 0 and the end screen is displayed	The timer reaches 0 and the end screen is displayed	PASS
	16	Test that game ends when countdown reaches zero	Enter the game and let it run for five minutes to run down the counter.	The game finishes by displaying the gameover screen	The game finishes by displaying the gameover screen	PASS
	17	Test that minutes and seconds calculated correctly	Check the timer at one minute intervals	The timer displayed on the game screen should correspond the the external one you are testing with	The game timer correctly corresponds with the actual timer	PASS
			Check the timer at one second intervals	The timer displayed on the game screen should correspond the the external one you are	The game timer correctly corresponds with the actual timer	PASS

				testing with		
UR_BUILDING_COUNTER FR_BUILDING_COUNTER	18	Test that building counter displayed on screen correctly	Enter the game and look to the right hand side of the bar at the top	The building counter should appear clearly, separated and labelled by type.	The counter for some of the buildings spills out of the top bar and onto the main game screen (messy and hard to read)	FAIL
UR_MONEY FR_BUDGET FR_BUYING FR_INCOME	19	Test that money displayed correctly	Enter the game and look at the bar at the top	Money should be clearly displayed in £	Money is labelled and displayed clearly in £	PASS
	20	Test that money increments correctly over time	Observe the money value at the top of the screen every 6 months in-game (30 seconds)	Money should increase based on difficulty and building count	Money increases based on difficulty and building count	PASS
	21	Test that money decrements when you place a building	Select and place a building using the LMB on an available space with enough money.	Money decrements by the amount specified in the building menu	Money decrements by the amount specified in the building menu	PASS
			Select and place a building using the LMB on an unavailable space with enough money.	Money remains unchanged as the building cannot be placed	Money remains unchanged as the building cannot be placed	PASS
			Select and place a building using the LMB on an available space with not enough money.	Money remains unchanged as the building cannot be placed	Money remains unchanged as the building cannot be placed	PASS
			Select and place a building using the LMB on an unavailable space with not enough money.	Money remains unchanged as the building cannot be placed	Money remains unchanged as the building cannot be placed	PASS
	22	Test that you cannot place building without sufficient	Hover over a building in the	The game remains	The game remains	PASS

		funds (works for all buildings)	menu to identify its cost. Rundown money to ensure insufficient funds. Then for each building, select and place it in an available spot using the LMB.	unchanged save for a pop-up explaining the error (insufficient funds)	unchanged save for a pop-up explaining the error (insufficient funds)	
UR_HOW_TO_PLAY	23	Test that button to instructions screen works	Use the LMB to press the “How to Play” button from the main menu screen	The instruction screen is entered	The instruction screen is entered	PASS
	24	Test that you can use the scroll box on the instruction screen	Hold the LMB on the scroll box and move the mouse up and down	The page scrolls up and down	The page scrolls up and down	PASS
	25	Test that you can navigate to the second page of the instruction screen	Use the LMB to press the “next” button from the first page	The second page of the instruction screen is entered	The second page of the instruction screen is entered	PASS
	26	Test that you can navigate from the second page of the instruction screen	Use the LMB to press the “next” button from the second page	The first page of the instruction page is entered	The first page of the instruction page is entered	PASS
	27	Test that back button from instructions screen works	Use the LMB to press the “exit” button from the first page	Exit into the main menu	Exit into the main menu	PASS
			Use the LMB to press the “exit” button from the second page	Exit into the main menu	Exit into the main menu	PASS
UR_LEADERBOARD FR_LEADERBOARD	28	Test that button to leaderboard screen works (From various screens)	Use the LMB to press the Leaderboard button from the main menu	Enters the leaderboard screen	Enters the leaderboard screen	PASS
			Use the LMB to press the Leaderboard button from the end screen	Exits to main menu	Exits to main menu	PASS

	29	Test that back button from leaderboard screen works (from various screens)	Use the LMB to press the back button from the leaderboard screen, accessed via the menu	Enters the leaderboard screen	Enters the leaderboard screen	PASS
			Use the LMB to press the back button from the leaderboard screen, accessed via end screen	Exits to end screen	Exits to end screen	PASS
	30	Test that file read correctly and displayed in leaderboard correctly	Compare the leaderboard.txt file with the actual leaderboard (accessed via the menu screen using the LMB)	The scores and corresponding names should match	The scores and corresponding names match	PASS
	31	Test that someone can enter leaderboard	Play the game through to the end. Click the leaderboard button using the LMB and observe	The name inputted at the start and the corresponding score should be displayed on the leaderboard	The name inputted at the start and the corresponding score are displayed on the leaderboard	PASS
	32	Test that a new leaderboard entry removes a previous, lower one if the leaderboard is full	First fill the leaderboard by playing through the game 5 times. Play the game again and achieve a better score than the current 5th place spot	The current 5th place is removed, the new score added and the rankings adjusted accordingly	The current 5th place is removed, the new score added and the rankings adjusted accordingly	PASS
UR_ACHIEVEMENTS FR_ACHIEVEMENTS	33	Test that a new entry on the leaderboard is written to the text file correctly	Play through the game and check the leaderboard.txt file	The name inputted and the corresponding score should now appear in the text file	The name inputted and the corresponding score now appear in the text file	PASS
	34	Test that achievements display on screen correctly in-game	Navigate to the achievement screen using the LBM via the main menu	The achievements are displayed clearly, those achieved are	The achievements are displayed clearly, those achieved are	PASS

				labelled as unlocked and the rest are labelled as locked	labelled as unlocked and the rest are labelled as locked	
			Navigate to the achievement screen using the LBM via the end screen	The achievements are displayed clearly, those achieved are labelled as unlocked and the rest are labelled as locked	The achievements are displayed clearly, those achieved are labelled as unlocked and the rest are labelled as locked	PASS
	35	Test that button to achievements screen works (from various screens)	Use the LMB to click the achievement button from the menu screen	Enters the achievement screen	Enters the achievement screen	PASS
			Use the LMB to click the achievement button from the end screen	Enters the achievement screen	Enters the achievement screen	PASS
	36	Test that button back from achievements screen works (from various screens)	Use the LMB to click the back button on the achievement screen accessed via the menu screen	Re-enters the menu screen	Re-enters the menu screen	PASS
			Use the LMB to click the back button on the achievement screen accessed via the end screen	Re-enters the end screen	Re-enters the end screen	PASS
UR_DIFFICULTY	37	Test that correct settings applied for each difficulty	In settings menu toggle difficulty to easy and enter the game using LMB	Money should start as £20,000 and reputation as 70%	Money starts as £20,000 and reputation as 70%	PASS
			In settings menu toggle difficulty to medium and enter	Money should start as £15,000 and	Money starts as £15,000 and reputation	PASS

			the game using LMB	reputation as 60%	as 60%	
			In settings menu toggle difficulty to hard and enter the game using LMB	Money should start as £10,000 and reputation as 50%	Money starts as £10,000 and reputation as 50%	PASS
UR_PAUSE FR_PAUSE_BUTTON	38	Pausing the game pauses the timer	Use the LMB to click the pause button and wait for 10 s	The timer should remain unchanged despite the added time	The timer remains unchanged	PASS
			Press the P key and wait for 10 s	The timer should remain unchanged despite the added time	The timer remains unchanged	PASS
	39	Pausing the game pauses the event countdown	Use the LMB to click the pause button and wait for 10s	The countdown should remain unchanged despite the added time	The countdown remains unchanged	PASS
			Press the P key and wait for 10s	The countdown should remain unchanged despite the added time	The countdown remains unchanged	PASS
	40	Pausing the game means money stops increasing	Use the LMB to click the pause button and wait for 6 in-game months (30 seconds)	The money value should remain unchanged	The money. value remains unchanged	PASS
			Press the P key and wait fo 6 in-game months (30 seconds)	The money value remains unchanged	The money value remains unchanged	PASS
	41	Pausing the game means reputation stops increasing	Use the LMB to click the pause button and wait for 6 in-game months (30 seconds)	The reputation value remains unchanged	The reputation value remains unchanged	PASS
			Press the P key	The	The	PASS

			and wait for 6 in-game months (30 seconds)	reputation value remains unchanged	reputation value remains unchanged	
	42	Pausing the game means you can't place buildings	Use the LMB to click the pause button and use it again to select a building from the menu	No building should be placed and a pop-up should occur outlining the error (Can't build while paused)	Pop-up occurs and no building is placed	PASS
			Press the P key and then use the LMB to select a house from the menu	No building should be placed and a pop-up should occur outlining the error (Can't build while paused)	Pop-up occurs and no building is placed	PASS
	43	Pausing the game means events can't occur	Leave the game paused for 1 minute (the time between events being triggered)	No changes should be observed. No event should pop up	Nothing happens and no pop up occurs	PASS
	44	Pausing the game means achievements can't be obtained	Pause the game using P and since all achievements are earned by placing some building, use the LMB to try and place one that would earn an achievement ("first building placed")	An error message will pop up saying that no buildings can be placed and the achievement is not received	An error message pops up saying that no buildings can be placed and the achievement is not received	PASS
			Pause the game by pressing the pause button using the LMB and since all achievements are earned by placing some building, use the LMB to try and place one that would earn	An error message will pop up saying that no buildings can be placed and the achievement is not received	An error message pops up saying that no buildings can be placed and the achievement is not received	PASS

			an achievement ("first building placed")			
	45	Unpausing the game starts the timer again	Press P to unpause the game and observe the timer at the top of the screen	Timer starts decreasing again	Timer starts decreasing again	PASS
			Using the LMB, click the play button to unpause the game and observe the timer at the top of the screen	Timer starts decreasing again	Timer starts decreasing again	PASS
	46	Unpausing the game starts the event countdown again	Press P to unpause the game and observe the countdown at the top of the screen	Event countdown resumes decreasing	Event countdown resumes decreasing	PASS
			Using the LMB, click the play button to unpause the game and observe the timer at the top of the screen	Event countdown resumes decreasing	Event countdown resumes decreasing	PASS
	47	Unpausing the game means money starts increasing again	Press P to unpause the game and observe the money counter at the top of the screen	After 6 in-game months (30 seconds) money should increase	Money increases	PASS
			Using the LMB, click the play button to unpause the game and observe the money counter at the top of the screen	After 6 in-game months (30 seconds) money should increase	Money increases	PASS
	48	Unpausing the game means reputation starts increasing again	Press P to unpause the game and	After 6 in-game months (30	Reputation increases	PASS

			observe the money counter at the top of the screen	seconds) reputation should increase		
			Using the LMB, click the play button to unpause the game and observe the money counter at the top of the screen	After 6 in-game months (30 seconds) reputation should increase	Reputation increases	PASS
	49	Unpausing the game means you can place buildings again	Press P to unpause the game and attempt to select and place a building using the LMB	A building should be placed with no error message	Building successfully placed	PASS
			Using the LMB, click the play button to unpause the game. Then attempt to select and place a building.	A building should be placed with no error message	Building successfully placed	PASS
	50	Unpausing the game means events can occur again	Press P to unpause the game and wait until the countdown to next event runs to 0	An event should pop up	An event pops up	PASS
			Using the LMB, click the play button to unpause the game and wait until the countdown to next event runs to 0	An event should pop up	An event pops up	PASS
	51	Unpausing the game means you can get achievements again	Unpause the game using P and attempt to get an achievement by using the LMB to place a building	A pop up should appear, rewarding the user for getting the "First building placed achievement"	A pop up appears, rewarding the user for getting the "First building placed achievement"	PASS

			Unpause the game by clicking the play button using the LMB. And attempt to get an achievement by using the LMB to place a building	A pop up should appear, rewarding the user for getting the "First building placed achievement"	A pop up appears, rewarding the user for getting the "First building placed achievement"	PASS
	52	Test that pause icon displayed when game is in play state	Play the game using the LMB and observe the top left corner of the screen	The pause icon is being displayed	The pause icon is being displayed	PASS
			Play the game using P and observe the top left corner of the screen	The pause icon is being displayed	The pause icon is being displayed	PASS
	53	Test that play icon displayed when game is in pause state	Pause the game using the LMB and observe the top left corner of the screen	The play icon is being displayed	The play icon is being displayed	PASS
			Pause the game using P and observe the top left corner of the screen	The play icon is being displayed	The play icon is being displayed	PASS
UR_CAMERA FR_PAN_CAMERA	54	The camera can move up	The W key is pressed in the game screen	The camera moves up	The camera moves up	PASS
			The UP arrow key is pressed in the game screen	The camera moves up	The camera moves up	PASS
			In the game screen hold down the LMB and drag the mouse down	The camera moves up	The camera moves up	PASS
	55	The camera can move down	The S key is pressed in the game screen	The camera moves down	The camera moves down	PASS
			The DOWN arrow key is pressed in the game screen	The camera moves down	The camera moves down	PASS

			In the game screen hold down the LMB and drag the mouse up	The camera moves down	The camera moves down	PASS
	56	The camera can move to the left	The A key is pressed in the game screen	The camera moves left	The camera moves left	PASS
			The LEFT arrow key is pressed in the game screen	The camera moves left	The camera moves left	PASS
			In the game screen hold down the LMB and drag the mouse right	The camera moves left	The camera moves left	PASS
	57	The camera can move to the right	The D key is pressed in the game screen	The camera moves right	The camera moves right	PASS
			The RIGHT arrow key is pressed in the game screen	The camera moves right	The camera moves right	PASS
			In the game screen hold down the LMB and drag the mouse left	The camera moves right	The camera moves right	PASS
	58	The camera cannot move past certain boundaries	Navigate to the top of the map and attempt to move up	The boarder has been reached so no movement should occur	The camera continues to move, causing the map to go out of frame	FAIL
			Navigate to the bottom of the map and attempt to move down	The boarder has been reached so no movement should occur	The camera continues to move, causing the map to go out of frame	FAIL
			Navigate to the left hand side of the map and attempt to move left	The boarder has been reached so no movement should occur	The camera continues to move, causing the map to go out of frame	FAIL
			Navigate to the right hand side of the map and	The boarder has been reached so no	The camera continues to move,	FAIL

			attempt to move right	movement should occur	causing the map to go out of frame	
UR_SOUND	59	Test that the music is audible	Load the game and ensure both in-game and device volumes are not muted	Game music should be audible	Music is audible	PASS
FR_MAP	60	The map displays correctly	"Start Game" button is pressed	Game Map is loaded to the screen in its initial state	Initial Game Map is loaded to the screen	PASS
FR_BUILDING FR_OBSTACLES FR_BUILDING_TYPE	61	Buildings can be selected from the manager, entering building mode	LMB on a building from the building manager at the bottom of the screen.	The building selected should now follow the cursor around the screen (building mode) ready to be placed.	The building selected now follows the cursor around the screen (building mode) ready to be placed	PASS
	62	Buildings can be deselected from the manager	RMB is pressed when building mode is activated	The building will deselect, exiting building mode	The building is deselected and building mode is deactivated.	PASS
			RMB is pressed when building mode is not activated	Nothing will happen	Nothing happens	PASS
	63	Building information is displayed	Hover over a building in the menu with the cursor	Name and price of the building will pop-up on the left hand side of the screen	Name and price of the building is displayed on the left hand side of the screen.	PASS
	64	Buildings can be rotated	"R" is pressed when building mode is activated	The building's image will rotate	The building's image rotates	PASS
			"R" is pressed when building mode is not activated	Nothing will happen	Nothing happens	PASS
	65	Buildings can be placed and will appear on the screen	LMB is pressed in an available slot,	The building will be placed	The building is placed	PASS

			with ample money when building mode is activated			
			LMB is pressed in an available slot, with ample money when building mode is not activated	Nothing will happen	Nothing happens	PASS
	66	Buildings can be moved	Use the LMB to select a placed building from the map. Click the LMB again to place it in an available area, with enough money	Building should be removed from previous position and placed in the new one	Building is moved to new position	PASS
	67	You cannot place buildings in certain areas	Hovering over out of bounds section in building mode	Base of the building asset should turn red	Base of the building asset turns red	PASS
			Hovering over available section in building mode	Base of the building asset should remain unchanged (White)	Base of the building asset remains unchanged (White)	PASS
			LMB on out of bounds section in build mode	The building is not placed and an error message pops up	The building is not placed and an error message pops up	PASS
FR_DIFFICULTY_SELECTION	68	Test that default difficulty is correct	Navigate to the settings page upon starting the game	Toggle should be on medium	Toggle is on medium	PASS
FR_SCORE	69	Test that score displayed correctly on screen	Enter the game and observe the top right of the screen	The updated score should be clearly visible and labeled	The updated score should be clearly visible and labeled	PASS
	70	Test that score displayed correctly on end screen	Wait for 5 minutes to run down the timer and observe the end screen	The updated score should be clearly visible and labeled	The updated score should be clearly visible and labeled	PASS

FR_SCORING	71	Test that score recalculated correctly after placing building	Use the LMB to select and place an available building. Then observe the score	Score increases to correspond with new building	Score increases to correspond with new building	
	72	Test that score recalculated correctly as time passes	Enter the game and wait for 30 seconds, then observe the score	Score is recalculated based on difficulty and number of buildings placed	Score is recalculated based on difficulty and number of buildings placed	PASS
FR_HOME_SCREEN	73	The home screen displays (correctly) when the application starts	Run the application	The home screen is displayed	The home screen is displayed	PASS
	74	Pressing the play button starts the game	Use the LMB to select the Play button	The game starts	The game starts	PASS
	75	The how to play button displays the instructions when clicked	Use the LMB to select the How to play button	The instruction screen is loaded	The instruction screen is loaded	PASS
	76	The quit button closes the application	Use the LMB to select the Quit button	The application should close	The application closes	PASS
	77	The leaderboard button displays the leaderboard when clicked	Use the LMB to select the Leaderboard button	The leaderboard screen should be loaded	The leaderboard screen is loaded	PASS
	78	Inputting your name works correctly	Use the LMB to select the play button.	An input box for the name should pop up	An input box for the name pops up	PASS
	79	The settings button works	Use the LMB to select the Settings button	The leaderboard screen should be loaded	The leaderboard screen should be loaded	PASS
	80	The achievements button works	Use the LMB to select the Achievement button	The achievement screen is loaded	The achievement screen is loaded	PASS
FR_SETTINGS	81	The difficulty can be selected	In the settings menu, use the LMB to click the right difficulty arrow	Difficulty increases until "hard" when it cycles back to "easy"	Difficulty increases until "hard" when it cycles back to "easy"	PASS

			In the settings menu, use the LMB to click the left difficulty arrow	Difficulty decreases until “easy” when it cycles back to “hard”	Difficulty decreases until “easy” when it cycles back to “hard”	PASS
	82	Test that the changes to the difficulty are saved between states	Toggle to a new difficulty from the settings. Then use the buttons to exit and re enter the settings page	The change to the difficulty should be saved	Any changes to difficulty are saved	PASS
	83	The volume can be selected	Use the LMB to select the settings button from the main menu and again to adjust the volume slider	Volume is changed	Volume is changed	PASS
			Use the LMB to select the settings cog from the game screen and again to adjust the volume slider	Volume is changed	Volume is changed	PASS
	84	Test that the changes to the volume are saved between states	Using the LMB mute the volume in the settings via the main menu screen and click the play button	Changes to the volume (muting) should be carried over into the new, playing state	Changes to the volume are saved between the states	PASS
	85	Changing the volume in settings actually changes the volume	Use the slider in the settings page to increase the volume	Volume of the music should increase	Volume of the music increases	PASS
			Use the slider in the settings page to decrease the volume	Volume of the music should decrease	Volume decreases	PASS
	86	The volume is displayed correctly	Enter the settings screen via the main menu	The volume slider should be clearly visible and labelled	The labels are the wrong way round. The difficulty toggle is labelled as “volume” and the volume slider is	FAIL
			Enter the settings screen via the game screen	The volume slider should be clearly visible and		FAIL

				labelled	labelled as "difficulty"	
	87	The difficulty is displayed correctly	Enter the settings screen via the main menu	The difficulty should be clearly visible and labelled		FAIL
			Enter the settings screen via the game screen	The difficulty should be clearly visible and labelled		FAIL
	88	Test that the settings button works from the game screen	Click the settings cog using the LMB	The game is paused and the settings page is opened	The game is paused and the settings page is opened	PASS
	89	Test that the settings button works when paused	Use the P key to pause the game and then click the settings cog using the LMB	The game is paused and the settings page is opened	The game is paused and the settings page is opened	PASS
			Click the pause button and then the settings cog using the LMB	The game is paused and the settings page is opened	The game is paused and the settings page is opened	PASS
	90	Test that entering settings screen whilst playing pauses the game	Use the LMB to press the settings cog from the game screen. Wait for a few seconds and resume play	The timer and other counters should not have been updated, despite the time that has passed and the play button needs to be repressed	Timers and other counters remain unchanged due to pausing and the game needs to be unpaused using the play button	PASS
FR_END	91	The end score is displayed	Run the game for 5 minutes and observe the end screen	The final score is clearly shown and labelled	The final score is clearly shown and labelled	PASS
	92	The end score is correct	Run the game for 5 minutes and observe the end screen. Compare the score displayed with the	The score displayed at the end corresponds with the one calculated	The score displayed at the end corresponds with the one calculated	PASS

			one			
	93	The number of buildings placed is displayed	Run the game for 5 minutes and observe the end screen	The number of buildings are labelled and shown clearly	The correct number (one of each) is displayed	PASS
	94	The number of buildings placed is correct	Place one of each building type and wait 5 minutes for the end screen	The correct number (1 of each) is displayed	The correct number (one of each) is displayed	PASS
	95	The button to display achievements works	Load the end screen by running the game for 5 minutes. Then use the LMB to click the achievement button	The achievement screen should be entered	The achievement screen is entered	PASS
	96	The button to check the leaderboard works	Load the end screen by running the game for 5 minutes. Then use the LMB to click the leaderboard button	The leaderboard screen should be entered	The achievement screen is entered	PASS
FR_ACHIEVEMENT_SCREEN	97	Test that button to achievements screen works	Use the LMB to click the achievement button from the main menu screen	The achievement screen should be entered	The achievement screen is entered	PASS
			Use the LMB to click the achievement button from the end screen	The achievement screen should be entered	The achievement screen is entered	PASS
	98	Test that back button works correctly (from various screens)	Use the LMB to click the end button from the main menu screen	Returns to the main menu	Returns to the main menu	PASS
			Use the LMB to click the end button from the end screen	Returns to the end screen	Returns to the end screen	PASS

FR_NAME	99	The player is asked to enter their name	Using the LMB click on the play button from the main menu	A pop-up prompting the user to enter their name should appear	A pop-up prompting the user to enter their name appears	PASS
	100	The player is able to enter their name	Using the LMB click on the play button from the main menu	A box allowing the user to enter a name should pop-up	A box allowing the user to enter a name pop-ups	PASS
	101	The name is recorded correctly	Once the game has concluded, navigate to the leaderboard screen using the LMB to click the buttons	The name entered at the beginning should be recorded with the score and displayed on the leaderboard	The name given is recorded and displayed on the leaderboard	PASS
	102	The game starts after the player enters their name	Enter a name and click the ... button using the LMB	The game should start	The game starts	PASS
NFR_INTERACTIVE_ELEMENTS	103	Test that an arrow appears next to the button that is being hovered over	Using the mouse, move the cursor to hover over a button	An arrow should appear to the left of the selected button, point towards it	An arrow appears to the left of the selected button, point towards it	PASS
NFR_END_OF_GAME	104	The game ends quickly when the timer ends	Enter the game and play for 5 minutes to rundown the timer	The game should transition to the end screen as soon as the timer runs out	The game transitions to the end screen as soon as the timer runs out	PASS
	105	You are not able to do anything else to game when timer ends (e.g. place building)	Enter the game and play for 5 minutes to rundown the timer	The player is not able to do anything between the timer running out and the end screen being displayed	The player is not able to do anything between the timer running out and the end screen being displayed	PASS
NFR_MUTE	106	The volume being at its lowest means there is no sound	Use the LMB to move the slider all the way to the left	The volume should mute	The volume is muted	PASS

			from the settings page via the main menu			
			Use the LMB to move the slider all the way to the left from the settings page via game screen	The volume should mute	The volume is muted	PASS
	107	Initial changes to volume are saved when the game starts	Starting from the main menu screen, use the LMB to navigate to the settings page and mute the volume. Then start the game	The volume should remain muted	The volume doesn't remain muted	FAIL
NFR_ZOOM	108	The camera zooms in	Scroll up using the mouse wheel	The camera should zoom in	The camera zooms in	PASS
	109	The camera zooms out	Scroll down with the mouse wheel	The camera should zoom out	The camera zooms out	PASS
	110	There is a maximum zoom that the camera cannot surpass	Continuously scroll up using the mouse wheel	A point is reached in which the game no longer zooms in	A point is reached in which the game no longer zooms in	PASS
	111	There is a minimum zoom that the camera cannot surpass	Continuously scroll down using the mouse wheel	A point is reached in which the game no longer zooms out	A point is reached in which the game no longer zooms out	PASS
CR_SYSTEM_COMPATIBILITY	112	The game runs on Windows	Download and run the game on a window enabled device	The game should load and run without issue	The game loads and runs without issue	PASS