Maintainence Document

Audience: Technical   Department

DIFFABLE ASSISTOR

SUPPORT DIFFERENTLY ABLED IN EAST GIPPSLAND

Team ALPHA

VERSION 1.1

6/7/2020

Version Control

Serial No.	Author	Date	Changes
1.0	`Sushant	23/05/2020	No changes (Initial Draft)
1.1	Sushant and Richu	24/05/2020	Updation in Security and system maintainence (Baseline Version)

TABLE OF CONTENTS

1. PURPOSE

This Maintenance document is for technical person to main our website Diffable Assistor Effectively effectively. It provides system organisation including system structure diagram, major system components diagram, plugin map and the functional breakdown diagram to help you understand how our website build and what functions can be carried out. Also, data sources, error conditions and testing details are provided at last.

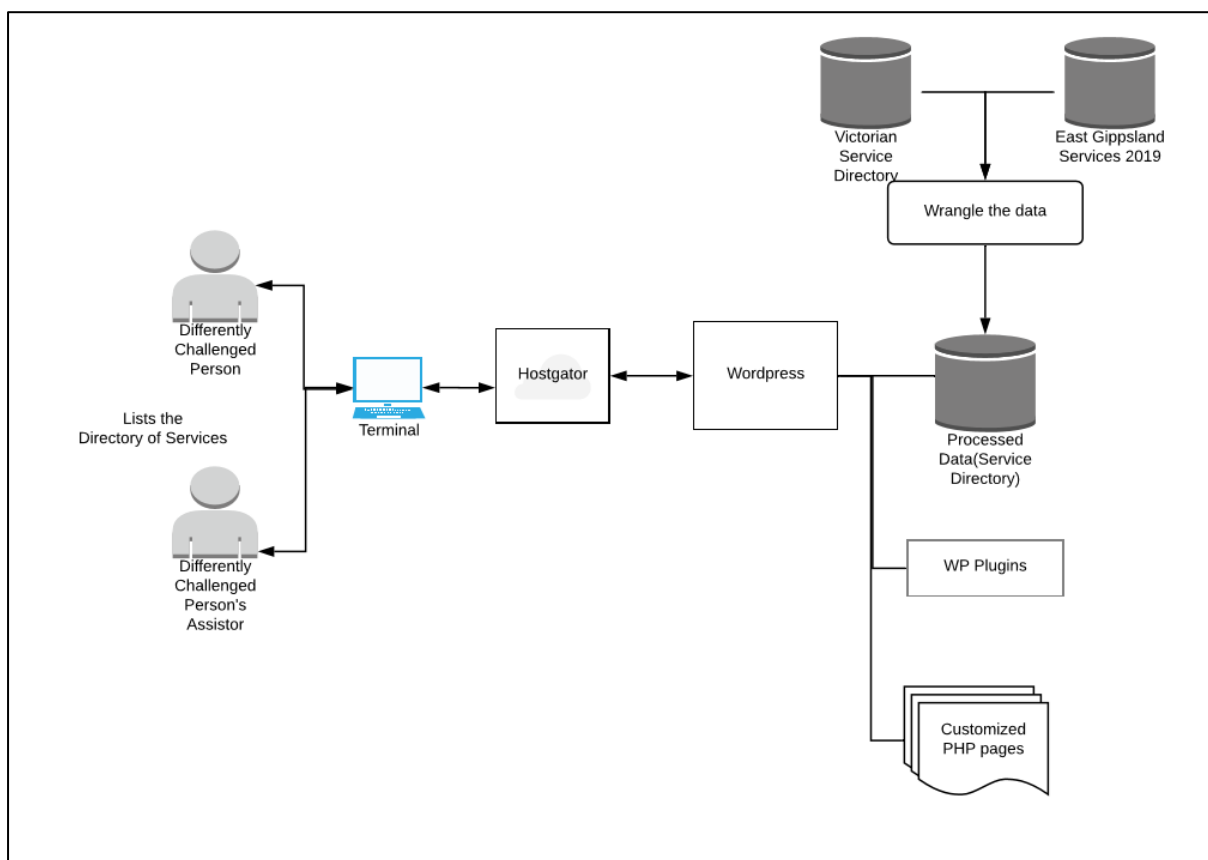# 2. TECHNICAL ASPECTS

2.1 SYSTEM ORGANISATION

Figure 1: System Architecture

As shown in the figure, the website is built on wordpress which uses built-in plugins, database to handle and manage data and PHP pages handling user input data. The website is hosted on hostgator.

2.2 FUNCTIONAL DECOMPOSITION DIAGRAM

The functional breakdown diagram helps to understand the different functions in our website and also the relationship between the functions
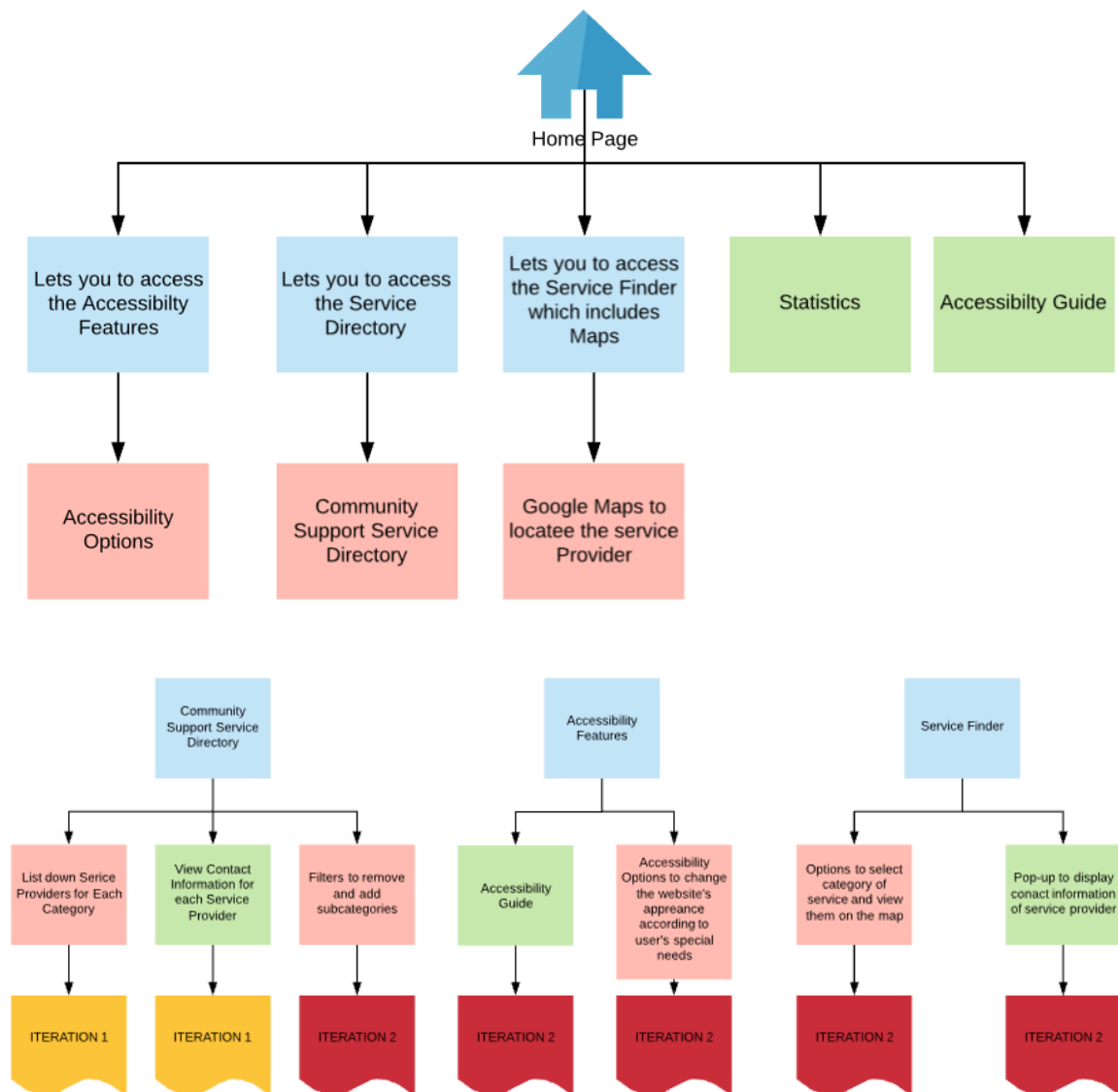

Figure 2: Functional Decomposition Diagram
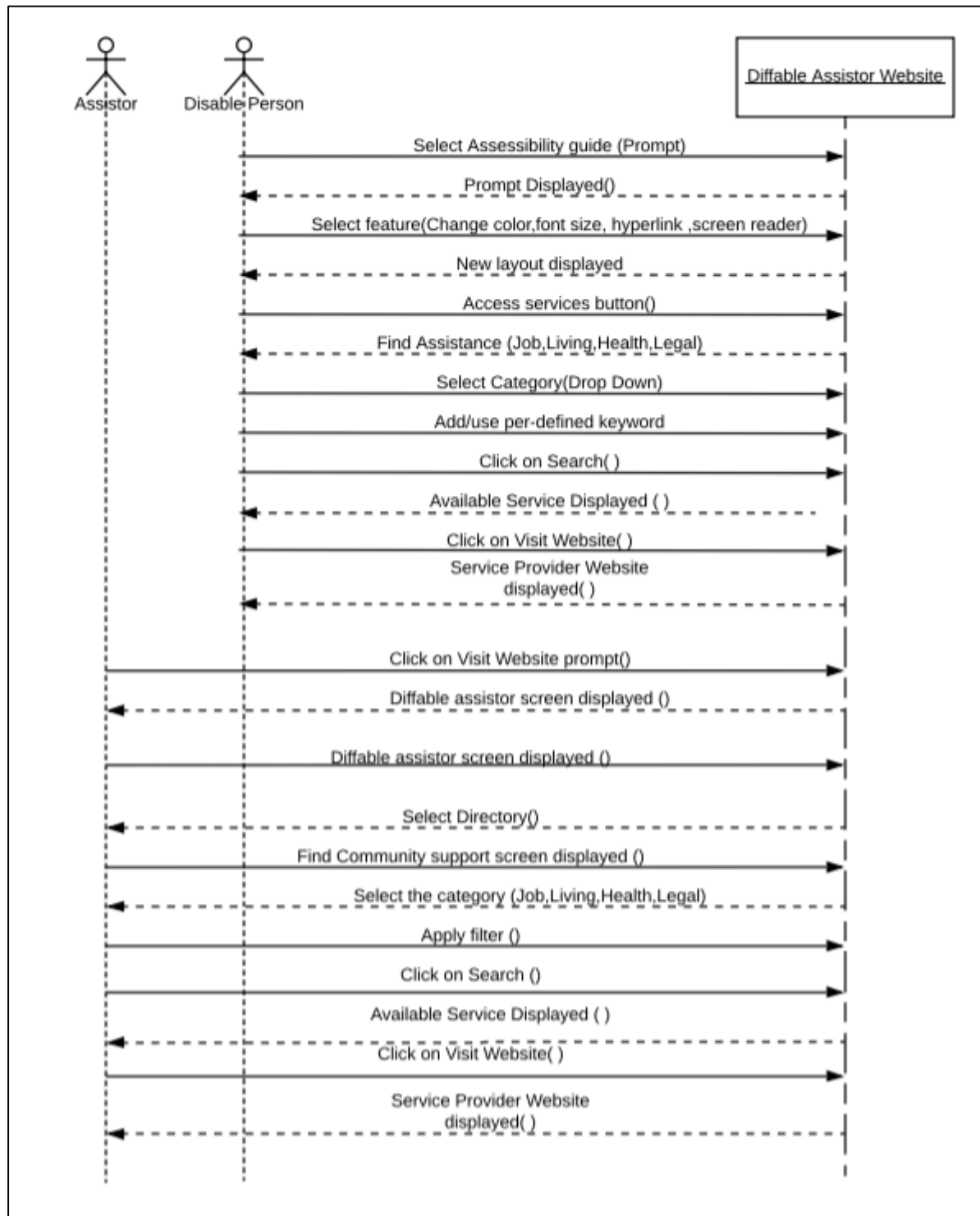
2.3 SYSTEM SEQUENCE DIAGRAM

Figure 3 Use Case Find Services feature

2.4 USE CASE DIAGRAM

Use case diagram illustrates list steps the two users (Disable and Assistor) how the process of finding the service provider is carried out in a website.
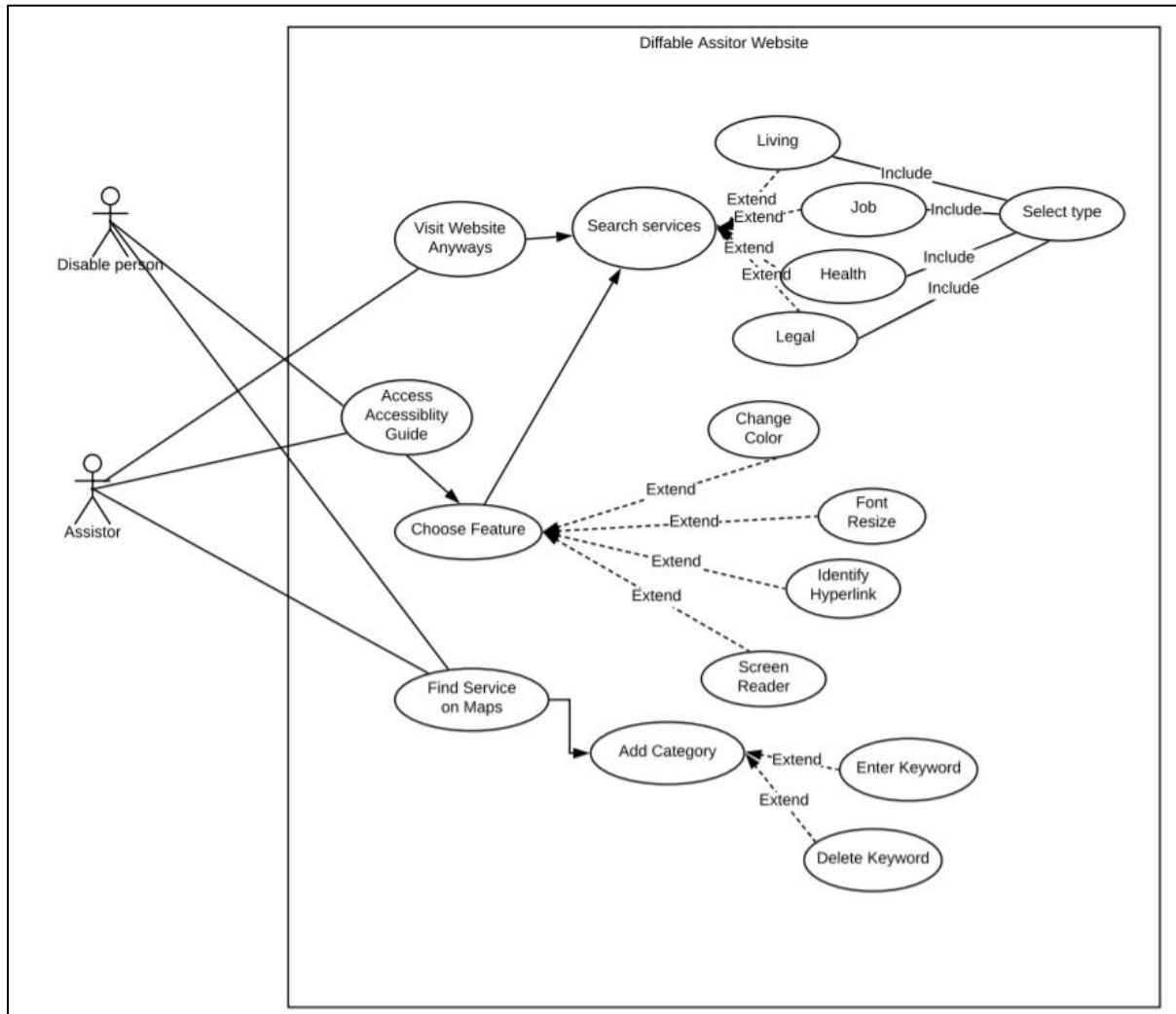

Figure 4 Use case: Find services using accessibility features

3. SECURITY

A user does not need to create an account to be able to use our website functionalities to its fullest potentials, which will be managed by the administrator. The administrator also needs login details for the backend/dashboard page to be able to perform administrative and troubleshooting tasks.

 For security purposes to prevent brute force attacks on the wp-admin and login pages so attackers cannot gain access through these pages. We have used SSL , its is an abbreviation used for Secure Sockets Layers, which are encryption protocols used on the internet to secure information exchange and provide certificate information. If your website is not using a SSL certificate, then Chrome and other modern browsers mark it as Not Secure.

• Settings   SSL, see Fig. 5
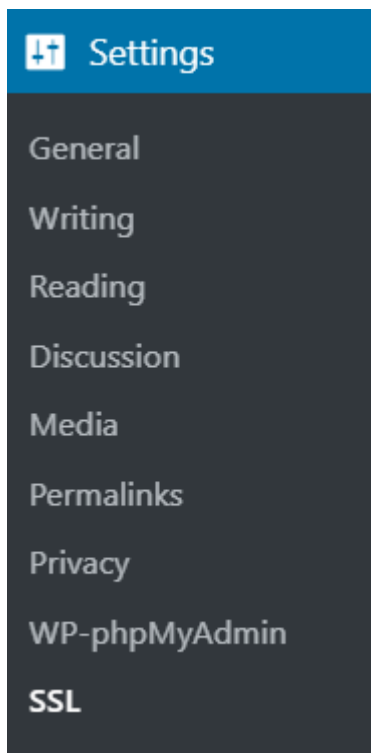
• Click SSL, you will be presented with Fig. 6

Figure 5: Click Settings then SSL

DIFFABLE ASSISTOR

Detected setup

✔ SSL is enabled on your site.

✔ Mixed content fixer was successfully detected on the front-end

✔ An SSL certificate was detected on your site.

✔ 301 redirect to https set: WordPress redirect.

⚠ HTTP Strict Transport Security is not enabled (premium)

⚠ Secure cookie settings not enabled (premium)

⚠ No mixed content scan performed (premium)

Figure 6: SSL Configuration

Settings

Settings to optimize your SSL configuration

Dismiss review notice	⬜ ❓	
Mixed content fixer	🔵 ❓	
Enable WordPress 301 redirection to SSL	🔵 ❓	
Enable 301 .htaccess redirect	⬜ ❓	Before you enable this, make sure you know how to regain access to your site in case of a redirect loop.
Enable Javascript redirection to SSL	⬜ ❓	
Debug	⬜ ❓	
Stop editing the .htaccess file	⬜ ❓	
Use alternative method to fix mixed content	⬜ ❓	
Dismiss all Really Simple SSL notices	⬜ ❓	
Deactivate plugin and keep SSL	Deactivate Plugin and keep SSL ❓	

Save

Figure 7: Optimize the SSL configuration

4. EQUIPMENT ENVIRONMENT

4.1 HARDWARE SUPPORT

The current system is hosted on Hostgator, so no hardware equipment is required in-house. Computer hardware upgrade is managed by the Hostgator.

4.2 SOFTWARE SUPPORT

SOFTWARE	DESCRIPTION
Wordpress	To build the functionality of the platform
Hostgator	Hostgator is used to host the server for our website
Python	Data is wrangled and transformed using Python
MySQL	This is used to host the database for our website

5. SYSTEM MAINTAINENCE PROCEDURES

5.1 ERROR HANDLING

➢ Syntax Errors:
When a developer is building a software, usually there comes a situation where a common mistake can be encountered in their code. This might be a result of something wrong that has happened in the code. Wordpress displays an error message which would indicate the unexpected thing found in the code and the location of the script where the error occurred with line number.

➢ 404 Error:
When a particular page/post that is requested is not fetched by the server, then 404 Error is displayed. Usually occurs while using permalinks.

➢ Database Connection Error:
When the website is unable to connect to the database an error message stating, "Errorestablishing a database connection" is displayed. This usually happens when the admin mistakenly enters wrong credentials.

5.2 Database characteristics

Table 1

Data Sources (Open datasets)

Names	Physical Access	Frequency of Source Updated	Frequency of iteration system Updates	Link	Granularity	Copyright
Victorian Government Organizations, services, description, and contact information	XLSX	Annually	Annually	Service Directory - Victoria XLSX	Low(By Services in East Gippsland)	Vic.gov.au - Service Directory
Data About service providers in East Gippsland categorized	PDF	Annually	Annually	East Gippsland Service Directory PDF	High(By service providers)	East Gippsland.Vic.Gov.Au
Data about the contact details for each service provider in East Gippsland	PDF	Annually	Annually	East Gippsland Service provider Contact Information PDF	Low(By Location)	East Gippsland.Vic.Gov.Au

5.3 PLUGIN DESCRIPTION

Sr No.	Plugin Name	Description
1	Elementor	Elementor is used to edit the website. There are a lot of encapsulated html elements, which are beautiful and easy to adjust without coding too much. We spend a lot of time with that to adjust the layout of each pages in our website, especially setting the layout for different devices, and also establish the connection among pages. It also provides the place to write HTML code, which is partly used in some pages.
2	WP phpMyAdmin	PhpMyAdmin is the lightweight database for storing the open data of the website. It is used to import the data with csv format and store them. In this database, the table called provider stores all the information of filtered open data.
3	Insert PHP Code Snippet	PHP Code Snippet provides the place to write the php code and insert those code into website with short code format. By writing PHP code in there, we establish connection with database WP phpMyAdmin and fetch the data based on the need as well as transfer the data between two pages.
4	Scripts n Styles	Script n styles provides the place to write Javascript, CSS and also Jquery. It is convenienet to write the code based on the demand for each page—writing CSS to control page alignment and layouts, Javascript to control the event response for HTML controls and Jquery to control Bootstrap controls. Besides, it also provides the place to do global setting for the overall website by writing those programming languages.
5	Popup Maker	Popup maker provides the pop-up message setting for the website. It also provides the place to insert HTML code for pop-up window. By setting the cookie, the repeat frequency of each pop-up message will be properly set.
6	Twitter Bootstrap for WordPress	Twitter Bootstrap for WordPress helps to import Bootstrap package into the website. There are different versions provided and accepts the setting for importing specific bootstrap Javascript and CSS.
7	GOOGLE MAP API	Google MAP API is used to set location on Google Map and show the detailed information of those locations on the map.

8	Classic Editor	Classic Editor provides the place to write the HTML code and also write the plain text but with customized setting for those word without any coding. It can be integrated into the website like the block on the page.
9	Screen Reader Free	Screen Reader Free provides the options for the user to hear the voice of a selected paragraph and also see the enlarged plain text.
10	WordPress Accessibility	WordPress Accessibility provides the options for the user to enlarge or narrow down the text size, to change the page colour, to show all hyperlinks.
11	Password Protected	Password Protected is used to do the primary protection when developing the website. Even though the website is published, the people without the password cannot log in the website and browse it. It reduces the possibility to suffer malicious attacks since the website is still under construction.
12	Really Simple SSL	Really Simple SSL is used to add website security, which helps the website to complete the register for SSL certificate and make the site SSL proof.

6. TESTING DETAILS

6.1 TESTING PLAN

Different testing methods are conducted before submitting our final system to ensure our website's quality and usability and user experience. The following table describes testing types, approaches and results.

Testing Type	Test Details	Approach	Method
Compatibility	Open the website via safari, chrome, Firefox, Edge	Non Functional Testing	PASS
	Open the website on various iOS devices like iPhone, iPad and various android devices like Samsung Galaxy S10+	Non Functional Testing	PASS
Usability Testing	Test UI design in our website including menus, buttons and layout.	Allow users to perform by themselves using laptop (Record testing video)	PASS
	Test if all the functions implemented in each iteration perform as desired.	Record testing video	PASS
	Test if functions satisfy users' requirement	Record testing video	PASS
Load Testing	Test time taken for the website to load during more visits	Use Pingdom.com select the nearest location to be Pacific, Australia-Sydney and calculate the time taken for the website to load by using different browsers	PASS
Performance Testing	Test the potential vulnerabilities for the website.	Use Pentest tools, select the scan you want to perform on the website	PASS
	Check the risk level of the website.	Based on result, determine the risk level and potential vulnerabilities of the system.	PASS
Security Test	Test the vulnerabilities and misconfiguration in the website.	SSL labs.	PASS

Usability Testing 2 Time spent:20 mins Testing Date: Device:	Potential user Name: Jessica	UX test	A potential user is asked to test the website, record their actions and behaviour and get feedback from them https://youtu.be/Vxbo3Hd506E
Usability Testing 3 Time spent:20 mins Testing Date: Device:	Potential user Name: Sam	UX test	A potential user is asked to test the website, record their actions and behaviour and get feedback from them https://youtu.be/rJX7TAw472o

6.2 DOCUMENTED TESTING

6.2.1 INTEGRITY TESTING

An assistor assisting a specially challenged person or the specially person themselves can select the category of service providers and get a full listing of services under the selected category			
FUNCTION	ACTIVITY	PASS/FAIL	TESTER
List the community support service directory	Display all the services listed under each category	Pass	Tester
	Add or remove checkbox under each category to list down the service providers	Pass	Team Alpha
Display the service provider's contact information	View the contact information of the service provider like contact number, email and address and a link to go to the website listed for each service	Pass	Team Alpha
	View each service provider's website directly from the service listing	Pass	Team Alpha
Visualising the service providers on a map.	Show the service providers for each category on map	Pass	Team Alpha
	A pop-up to Display the contact information of the service provider	Pass	Team Alpha

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A specially challenged person can access the accessibility guide and choose the pre-defined features from the prompt or make the change manually to access services available from the Accessibility Button.
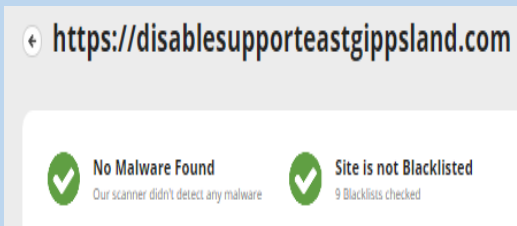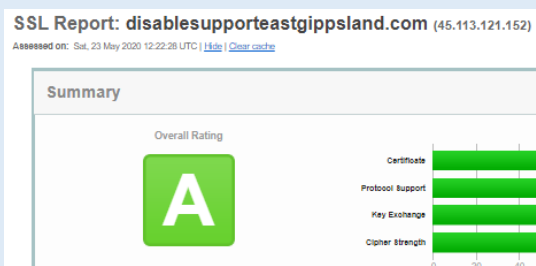
FUNCTION	ACTIVITY	PASS/FAIL	Team Alpha
Accessibility Options	Show the available accessibility Options	Pass	Team Alpha
	Display the description for each option	Pass	Team Alpha
	Accessibility Options can selected	Pass	Team Alpha

6.2.2 USABILITY TESTING

For each iteration, usability testing was done by a potential user of our website. Based on the testing video, we got the feedback and changes were done as per received feedback

Iteration	Test Date	Test Video Link	Tester
Iteration 1 usability testing	27/04/2020	https://youtu.be/N8CfoFxsm70	Manasi Thakur
Iteration 2 usability testing	16/05/2020	https://youtu.be/Vxbo3Hd506E https://youtu.be/rJX7TAw472o	Jessica Sam Pascuzzi

6.2.3 SECURITY TESTING

Test Type	Description	Tool	Test Result	Tester
Security Test	Test for Malware, Website Errors Blacklisting Status, Injected SPAM and Out-of-date	Sucuri Site Check	https://disablesupporteastgippsland.com — No Malware Found. Our scanner didn't detect any malware. Site is not Blacklisted. 9 Blacklists checked	Sushant
Security Test	An in-depth scan analysis for vulnerabilities and misconfiguration in our web application	SSL Labs	SSL Report: disablesupporteastgippsland.com (45.113.121.152) Assessed on: Sat, 23 May 2020 12:22:26 UTC	Hide	Clear cache. Summary. Overall Rating: A. Certificate, Protocol Support, Key Exchange, Cipher Strength	Sushant

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Backup and recovery Test	Test if the website can be recovered by the backup file	UpdraftPlus Backup/Rest ore	Passed	Sushan t