

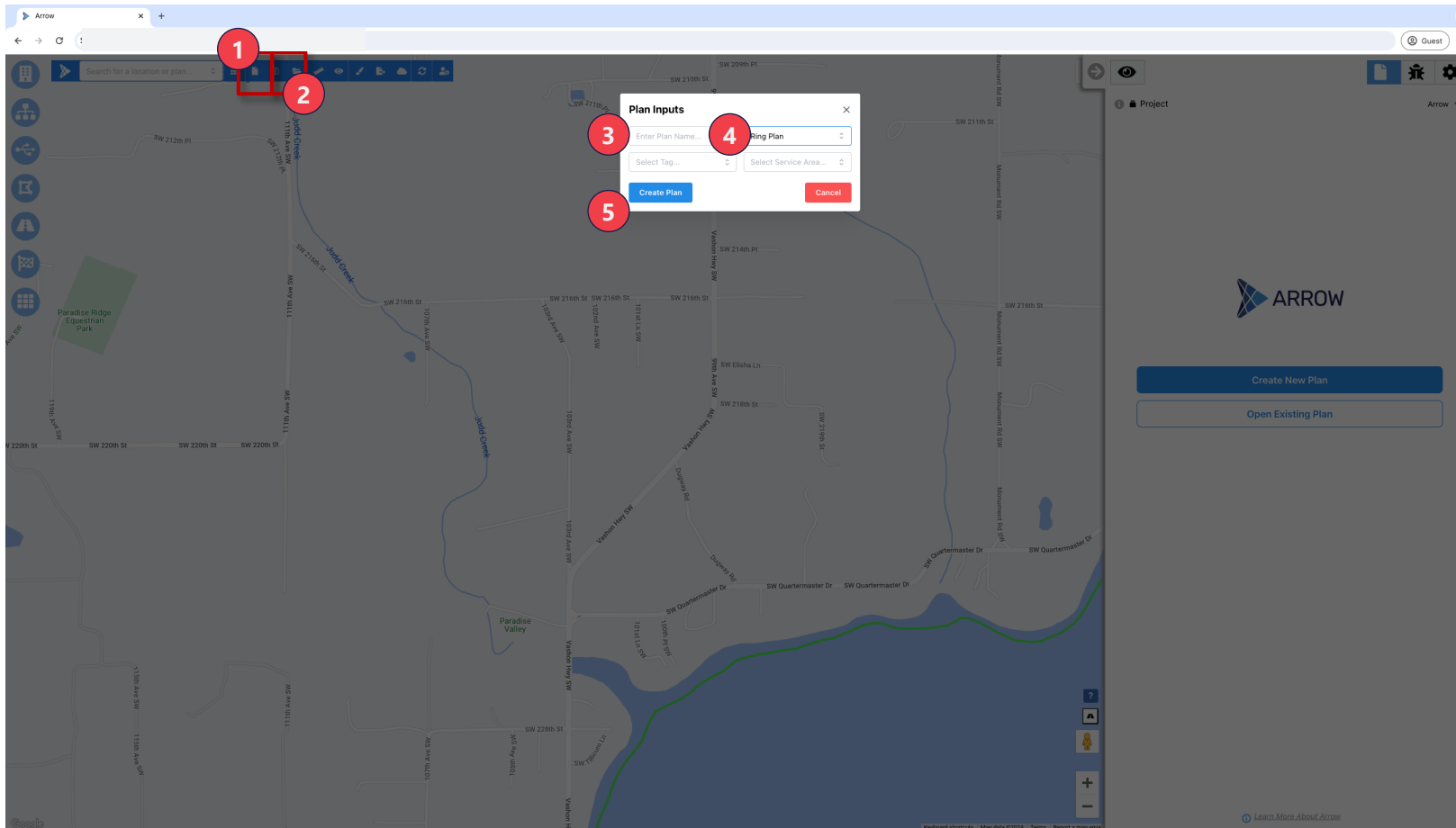
---

# Arrow Platform

## Ring Plans



# Create a new plan and select 'Ring Plan' in plan type dropdown



## Creating and Saving a New Plan

1. **Create New Plan** – Click "Create a New Plan"
2. **Save** – Click "Save Plan as" to make the analysis permanent, and accessible in the future. Popup screen will appear
3. **Plan Name** – Give plan a name
4. **Ring Plan** – Select "Ring Plan" from the dropdown
5. **Create** – Click "Create Plan" to begin analysis



### Tip:

Best practice is to save names without spaces; instead use underscores (" \_ ")

# Select data layers to include in the analysis

The screenshot shows the ARO application interface. On the left, a map of London is displayed with a green ring overlay. The map includes labels for various areas like Farringdon, Barbican, Moorgate, Liverpool Street, Aldgate East, Whitechapel, and Waterloo. A search bar at the top left contains the text 'Christchurch Greyfriars Church Gar...'. A blue button labeled 'Demo Ring P...' is visible. On the right, a 'Data Selection' panel is open, showing a table of data layers with dropdown menus for selection. The panel has a red border and numbered callouts 1, 2, and 3. Below the table are buttons for 'Resource Selection' and 'Project Configuration'.

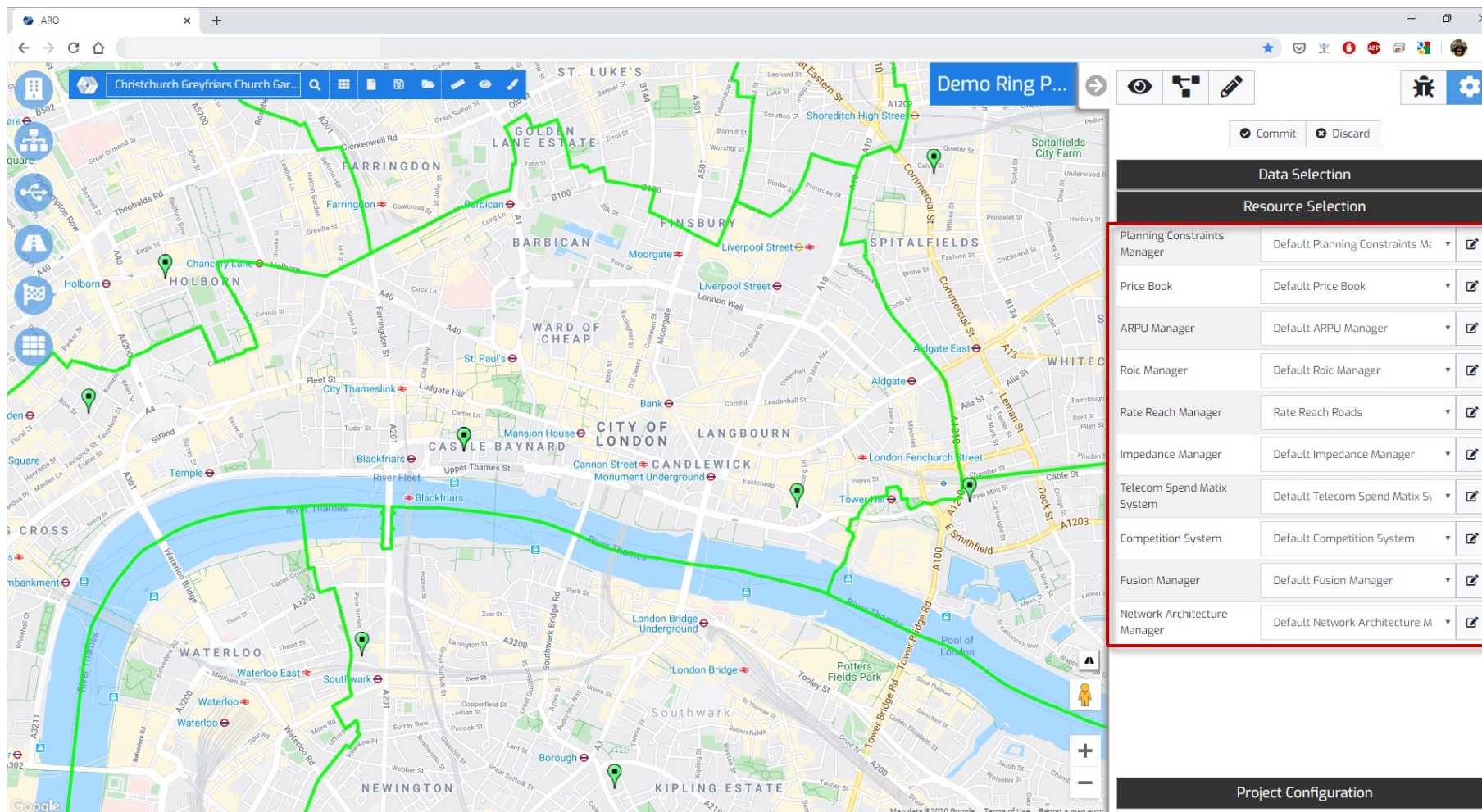
Data Selection	
Locations	C3 OE TC
Graph Edges	uk_roads_all
Equipment	ALL Bt exchanges
Fiber	None Selected
Construction location	None Selected
Service Layer	Westminster Constituencies
Conic tile system	None Selected
Cable construction area	None Selected

## Data Selection

1. **Data Selection** – Navigate to “Data Selection” tab in the accordion
2. **Pick Data Layers** – use the dropdown menu next to each data type to view available data sources and select desired ones. Select only the sources that are needed for the analysis
3. **Commit** – When done, hit “Commit” to save your selection



# Select Resource Managers to use in the analysis



The screenshot shows the ARO software interface. The main map displays a green ring around a central area of London, including the City of London and parts of the surrounding areas. The sidebar on the right contains the 'Resource Selection' tab, which is highlighted. Below this tab is a table listing various resource managers and their default settings. The table has two columns: the name of the resource manager and a dropdown menu for selecting a specific manager. The 'Commit' button is visible at the bottom of the sidebar.

Resource Selection	
Planning Constraints Manager	Default Planning Constraints Manager
Price Book	Default Price Book
ARPU Manager	Default ARPU Manager
Roic Manager	Default Roic Manager
Rate Reach Manager	Rate Reach Roads
Impedance Manager	Default Impedance Manager
Telecom Spend Matrix System	Default Telecom Spend Matrix System
Competition System	Default Competition System
Fusion Manager	Default Fusion Manager
Network Architecture Manager	Default Network Architecture Manager

## Resource Selection

- 1. Resource Selection** – While still inside “Plan Settings Mode”, open “Resource Selection” tab in the accordion
- 2. Select Resource Managers** – Select your desired Resource Managers (click the relevant drop down to view available resources and select desired one)
- 3. Commit** – When done, hit “Commit” to save your selection



**Tip:**  
Not all Resource Managers are needed for each analysis. Select the ones you need, and leave the Default otherwise



# Turn on location layers to be used in simulations, and to view on the map

The screenshot shows the ARO software interface. On the left, the 'Locations' panel is open, displaying a list of location filters with checkboxes. A red box labeled '1' highlights the 'Locations' button in the top-left toolbar. A red box labeled '2' highlights the 'Locations' panel. A red box labeled '3' highlights the 'Locations' button in the top-right toolbar. The main map area shows a map of London with various location types marked as red and green icons. The 'Demo Ring P...' window on the right shows a 'Data Selection' table with various managers and their default settings.

Data Selection	
Resource Selection	
Planning Constraints Manager	Default Planning Constraints Manager
Price Book	Default Price Book
ARPU Manager	Default ARPU Manager
Roic Manager	Default Roic Manager
Rate Reach Manager	Rate Reach Roads
Impedance Manager	Default Impedance Manager
Telecom Spend Matrix System	Default Telecom Spend Matrix System
Competition System	Default Competition System
Fusion Manager	Default Fusion Manager
Network Architecture Manager	Default Network Architecture Manager

## Locations

- Open Modal** – Click “Locations” button to open pane
- Enable** – Select the checkbox corresponding to the desired location type(s)  
**Your selections here determine what type of locations will be targeted in the optimization run**
- Heatmap** – Toggle “Location Heatmap On” to see the individual locations



### Tip:

You will not see locations unless they are selected in the data sources



# Specify ring endpoints, optimization settings, and run the analysis

The screenshot shows the ARO software interface. On the left is a 'Locations' panel with various filters. The main map displays a pink polygon ring around the City of London. On the right, the 'Ring Edit' panel is visible, showing a list of rings with endpoints like 'MONUMENT T E', 'BISHOPSGATE T E', and 'SHOREDITCH T E'. A 'Run' button is highlighted with a red circle and the number 3. A yellow callout bubble points to the pink polygon with the text 'Drag and adjust polygon corners to shape the area'.

## Optimization Inputs

- 1. Analysis Mode** – Go to “Analysis Mode” on the Analysis Panel
- 2. Define Rings** – Use the “Add Ring” button begin ring creation. Click on the CO/Exchange on a map where you want the ring begin, followed by CO/Exchange where it should end. You can continue on to create longer chains
- 3. Run** – Click “Run” to begin the optimization. Small plans should finish in < 1 min.



**Tip:**  
To define ring endpoints existing COs/Exchanges have to be visible on a map

# Turn on equipment and cable layers to view on the map

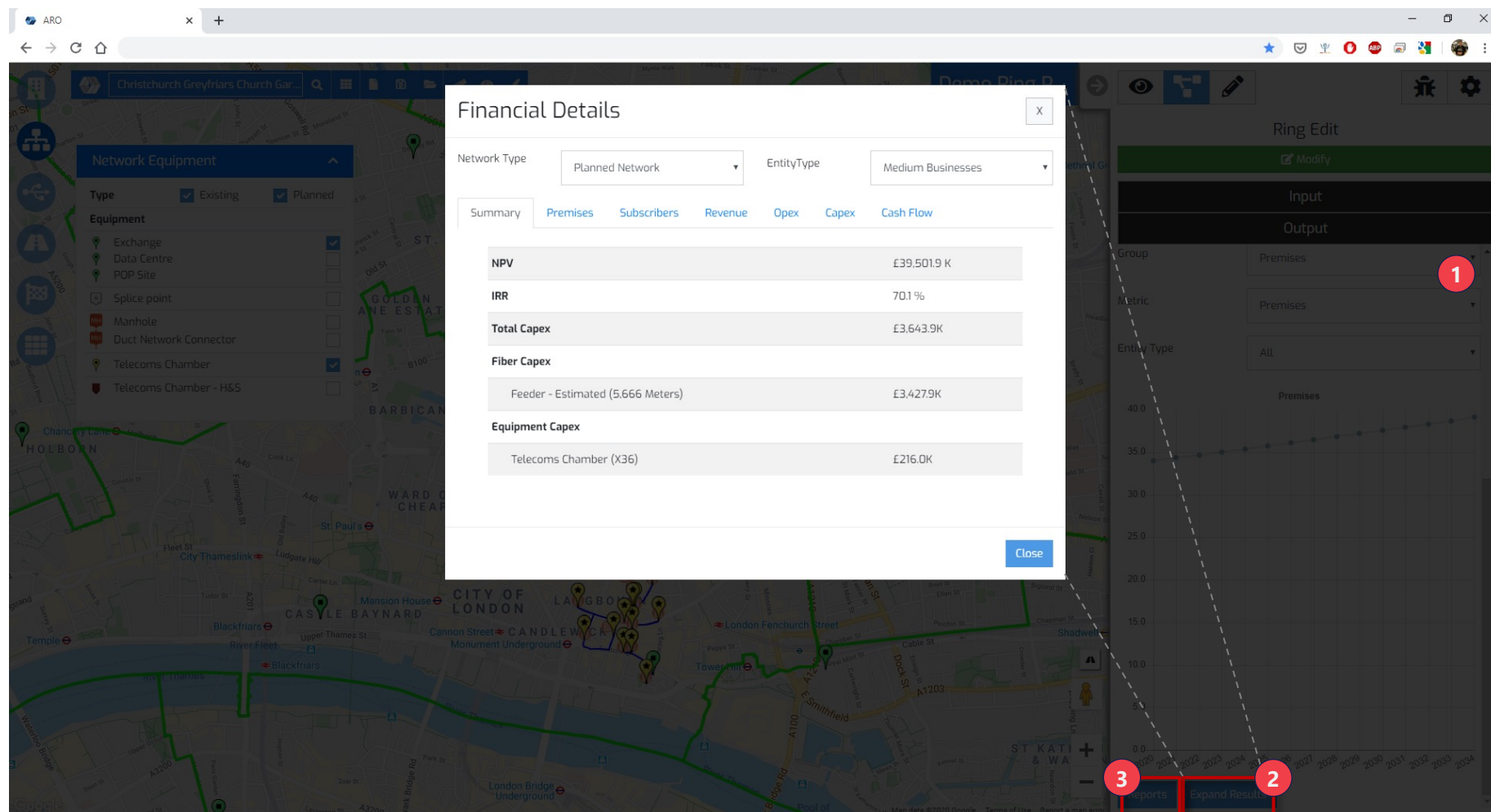
The screenshot displays the ARO software interface. On the left, a sidebar contains a 'Network Equipment' panel with a 'Type' dropdown set to 'Existing' and 'Planned'. Below this, a list of equipment types is shown, with checkboxes for 'Exchange', 'Data Centre', 'POP Site', 'Splice point', 'Manhole', 'Duct Network Connector', 'Telecoms Chamber', and 'Telecoms Chamber - H&S'. A red circle 1 highlights the 'Network Equipment' panel, a red circle 2 highlights the 'Existing' and 'Planned' toggle, and a red circle 3 highlights the 'Equipment Capex' section. The main map area shows a street map of London with various locations marked. On the right, a 'Ring Edit' panel is visible, and below it, a 'Summary' panel displays financial details. The 'Summary' panel includes sections for 'NPV', 'IRR', 'Total Capex', 'Fiber Capex', 'Equipment Capex', and 'Financial Details'. The 'Financial Details' section shows 'Network Type' as 'Planned Network', 'Group' as 'Premises', 'Metric' as 'Premises', and 'Entity Type' as 'All'.

## Equipment

1. **Open Modals** – Navigate to “Network Equipment” and “Cables” modals
2. **Existing vs. Planned** – Toggle viewing existing and planned networking equipment
3. **Enable** – Toggle specific cable layers to bring into the view.



After running a plan, a number of outputs can be extracted from Arrow, including financial projections and new fiber routes



### Optimization Output

- 1. Summary** – High level plan summary is displayed in the Output section of the Analysis panel
- 2. Financial Detail** – Additional detail, such as YoY financial projection, subscriber counts etc. can be accessed by clicking "Expand Results". A popup window will open
- 3. Reports** – Plan data can also be downloaded in a form of csv reports. More on the reports in their own section