true view visuals



Online Gritter Tracker Solution

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Introduction



The online gritter tracker solution will be delivered as an adaptive web site optimised for desktop, tablet and mobile screens, supplemented by voice.

This document details the features and benefits of the solution, along with customisation options and back office integration points for the solution.

Delivery and Support

The solution is provided as a hosted solution, integrating with existing GPS-hardware vehicle tracking. This facilitates ease of commissioning and rapid support resolution with a scalable service to ensure high availability.

Features and Benefits

The gritter tracker provides advantages and adds value to existing infrastructure and tracking investments through wider access both externally and internally.

Citizen Benefits

For public consumer access, benefits include:

- ✓ 24/7 access to service activity
- ✓ Instant communication with evidence of previously gritted routes
- ✓ Public engagement helps to minimise delays and disruption
- ✓ Improved citizen safety through on-demand information

Organisation Benefits

Within local authorities and winter service providers benefits include:

- ✓ Reduced call-centre volume
- ✓ Providing public information promotes awareness of activity
- ✓ Service insights inform on usage and therefore increased road safety at peak times
- ✓ Mobile tool allows standby winter controllers to view a live stream of gritter activity

The following sections explore the following in more detail;

- ❄ Web and Mobile
- ❄ Grit Bin Locator, Reporting and Request
- ❄ Alexa Skill
- ❄ Back Office Integration

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Web and Mobile Site

The winter maintenance vehicle tracking will be exposed from the local authority owned and managed pages as an external link. This URL may also be used within email and social media communication, for example custom domain https://<YOURNAME>.grittertracker.com/

External hosting enables:

- ✓ High scalability
- ✓ Performance monitoring and reporting
- ✓ No (minimal) impact on local infrastructure
- ✓ Removes (minimises) IT integration points with security policy
- ✓ Removes (reduces) requirements for remote or site access for support

Customisations Options:

- ❄ Style mimicked to website with colours, fonts, header and footer
- ❄ Header navigation return to local authority homepage
- ❄ Specified name for subdomain on grittertracker.com



Figure 1 Sample weekly reporting data

The following features are detailed below; disclaimer, main map page, list page, gritter page

Initial Disclaimer

Pop-up window on page load detailing terms of use of the site and disclaimer (e.g. council is not responsible for trunk roads).

Customisation Options:

- ❄ Disclaimer text

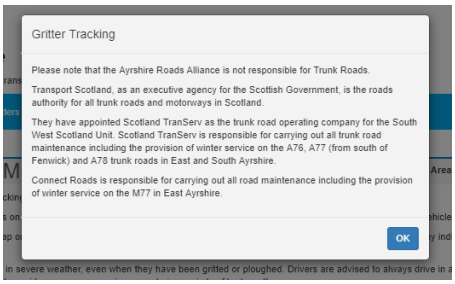


Figure 2 Example disclaimer pop-up window

Main (Map) Page

The primary map page displays an adaptive map including with vehicle location and includes:

- ✓ Vehicle locations and icons automatically updated every minute
- ✓ Gritting history as “melt line” of previous dots, fading automatically over time
- ✓ Familiar Open Street Map styles with intuitive pan and zoom (no OS licence required)
- ✓ Drop-down of towns and localities for rapid map focus (optional)
- ✓ Tooltips detailing vehicle names and active times at every point (optional)
- ✓ History time slider to review recent activity (optional)
- ✓ Polygon highlight of active area on map to indicate extent of activities (optional)
- ✓ Map vehicle labels with registration or names (optional)
- ✓ Click through to Individual Gritter Page (see below)
- ✓ Overlay of P1/P2 intended routes (optional)

Customisation Options (apply to Map Page, List Page and Individual Gritter Page):

- ❄ Active times of live gritter activity (e.g. 4pm to 8am) or via Telemetry (see Back Office below)
- ❄ Length of time for “melt line” to be active (e.g. 10 hours)
- ❄ Vehicle names linked to registrations for friendly display (optional)
- ❄ Multiple geofence locations to hide vehicle locations when in depots etc

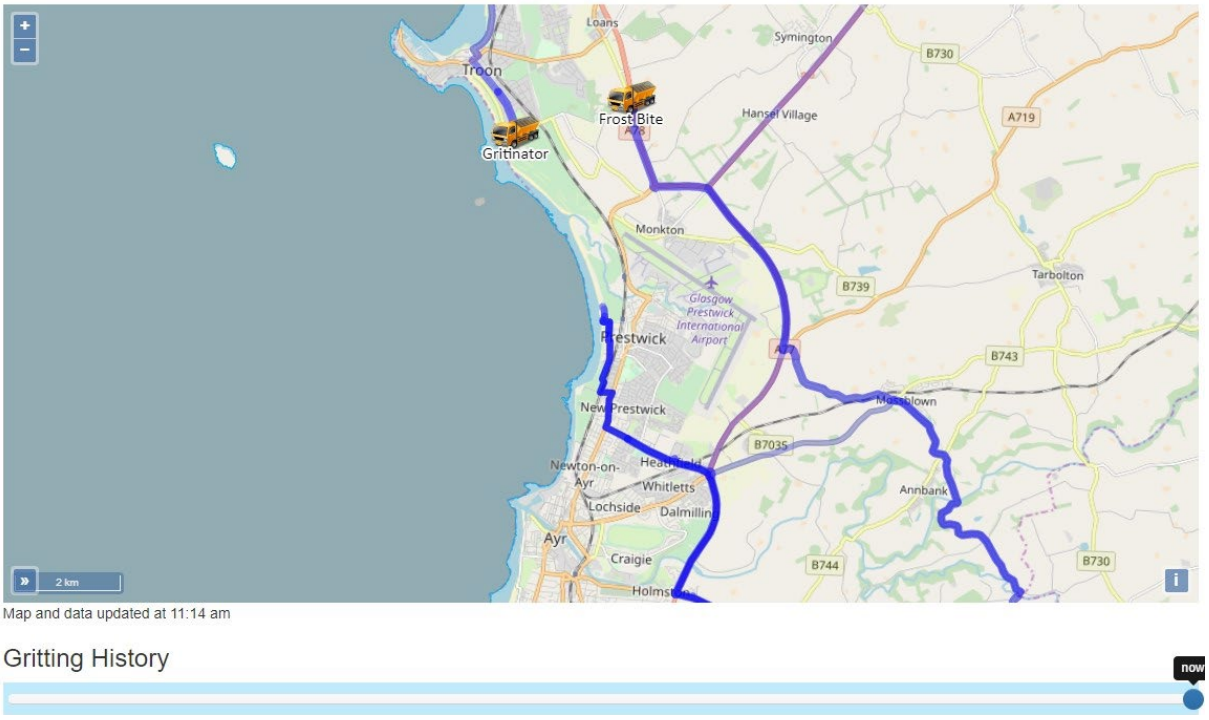


Figure 3 Example of Ayrshire Roads Alliance Gritter Tracker Map page

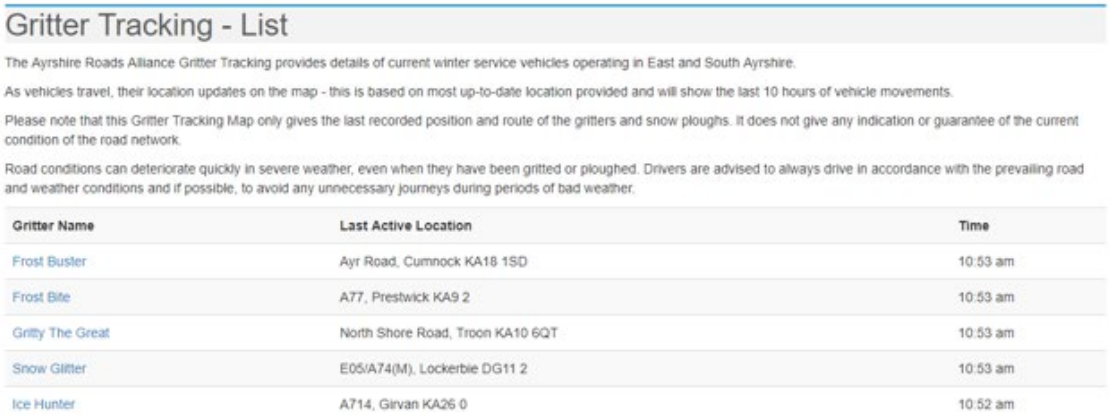
List Page

The list page shows an inventory of active vehicles:

- ✓ Vehicle registration or names (optional)
- ✓ Table of most recent location address and time
- ✓ Click through to Individual Gritter Page (see below)

Customisation Options:

- ❄ (shared settings with Main Map page, see above)



Gritter Tracking - List

The Ayrshire Roads Alliance Gritter Tracking provides details of current winter service vehicles operating in East and South Ayrshire.

As vehicles travel, their location updates on the map - this is based on most up-to-date location provided and will show the last 10 hours of vehicle movements.

Please note that this Gritter Tracking Map only gives the last recorded position and route of the gritters and snow ploughs. It does not give any indication or guarantee of the current condition of the road network.

Road conditions can deteriorate quickly in severe weather, even when they have been gritted or ploughed. Drivers are advised to always drive in accordance with the prevailing road and weather conditions and if possible, to avoid any unnecessary journeys during periods of bad weather.

Gritter Name	Last Active Location	Time
Frost Buster	Ayr Road, Cumnock KA18 1SD	10:53 am
Frost Bite	A77, Prestwick KA9 2	10:53 am
Gritty The Great	North Shore Road, Troon KA10 6QT	10:53 am
Snow Glitter	E05/A74(M), Lockerbie DG11 2	10:53 am
Ice Hunter	A714, Girvan KA26 0	10:52 am

Figure 4 Example of Ayrshire Roads Alliance List page

Individual Gritter Page

The individual vehicle details page shows tracking per gritter:

- ✓ Vehicle registration or names (optional)
- ✓ Table of most recent location addresses and time (including map centre and zoom)
- ✓ Active map showing vehicle history with all locations and melt line

Customisation Options:

- ❄ (shared settings with Main Map page, see above)

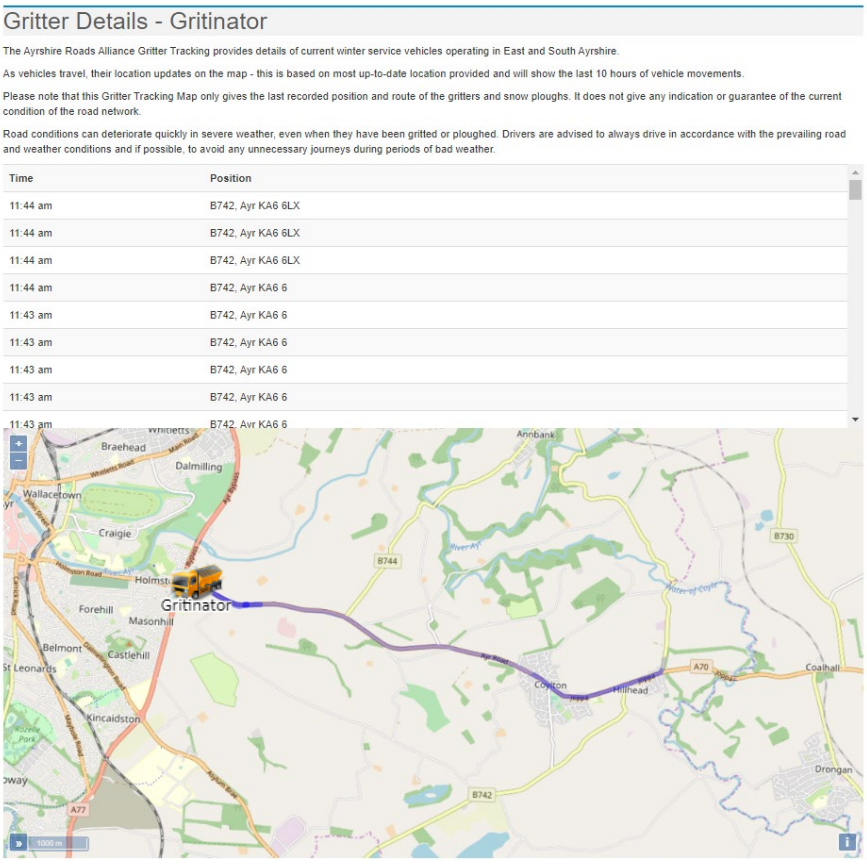


Figure 5 Example of Ayrshire Roads Alliance Individual Gritter page

Grit Bin Locator and Issue Reporting

To create a single source of winter maintenance information, the gritter tracker solution integrates grit bin locations and reporting.

Locator

The solution includes the ability to find the nearest relevant grit bin:

- ✓ Grit bins located via map search or address / postcode search
- ✓ Grit bin icons viewable at neighbourhood scale
- ✓ Hover-over details the location of the bin

Customisation Options:

- ❄ Location address detail
- ❄ Grit bin type: e.g. public or community

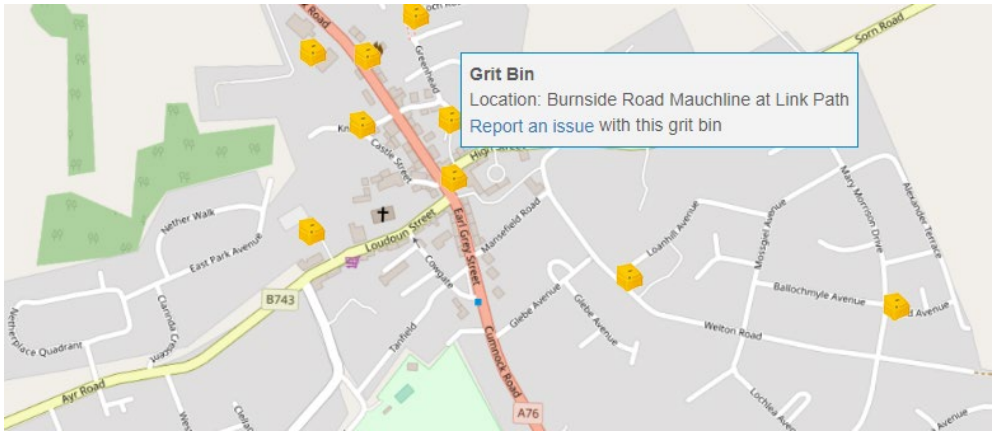


Figure 6 Hover over grit bin to view location details and link to report an issue

Reporting

An additional feature is the ability to report an issue with the grit bin.

Customisation Options:

- ❄ Issue: e.g. empty, missing, vandalised
- ❄ Report delivery: via email, text message, WhatsApp etc

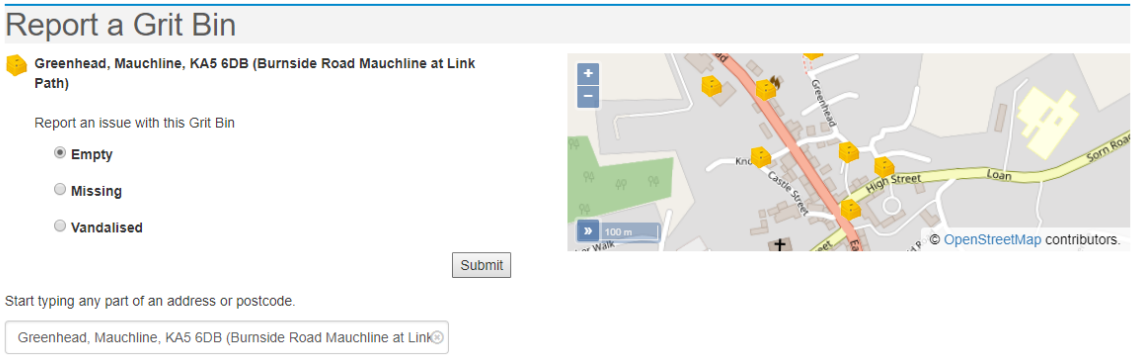


Figure 7 Report an issue with a grit bin

Alexa Skill

The Alexa smart speaker skill is included with the following features. This facilitates:

- ✓ Rapid access in the home
- ✓ Linked to device postcode with Amazon managed permissions for security control
- ✓ Enables easy multi-ability access for users without keyboard/mouse capabilities
- ✓ In-car ready for Amazon Auto GPS for live location reporting



Figure 8 Voice activated skill for gritter tracking

https://vimeo.com/339523592

Launch Request

Alexa will respond to:

- ✓ "Alexa, open Gritter Tracker"

Customisation Options:

- ❄ Launch phrase text

Return Results

Alexa will respond with:

- ✓ "[POSTCODE]. [GRITTER NAME] was on Winter Maintenance Duty at [ADDRESS] at [TIME]"
- ✓ "No recent gritting was found at your location [POSTCODE]"

Customisation Options:

- ❄ Return phrase text detail
- ❄ Vehicle search radius (e.g. 200m)
- ❄ Vehicle recent activity filter (e.g. 10 hours)

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Admin Portal

The Admin Portal allows Depot Managers / Administrators to manage the data behind the gritter tracker as well as view depot reports on any current winter maintenance activities.

Data includes:

- Vehicle registrations and names
- Routes
- Grit bin locations.

Reporting (by depot) shows:

- Grit bins needing refilled
- Any footway or carriageway gritting required
- Any salt pile requiring replenished.

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Back Office Integration

The online gritter tracker is a scalable web and voice interface to existing tracking data. It links to existing back office telemetry from vehicles and so requires no physical infrastructure to be installed. To deliver the performance expectations of uncertain community driven page demands and weather-dependent responses the solution takes a copy of live data at regular intervals. This means that whatever the number of public-facing web requests are, these are delivered by our cloud and the resource requirements on existing systems are minimal (e.g. one request per minute).

To determine what active data is displayed on the map the solution will integrate with either telemetry or time-based.

By Time

All vehicles are tracked on a time-based

- ✓ Rapid to deploy solution
- ✓ Manual service overrides possible for 24hr operations
- ✓ Allows flexibility of fleet and vehicles to be managed, such as contractor vehicles
- × Does not strictly show gritting, but is Winter Maintenance Activity

By Telemetry

All vehicles are tracked according to data from PTO or similar returns in the live feed

- ✓ Delivers best service with real operations hiding patrolling or outbound/inbound access
- ✓ Requires per vehicle logic testing as part of deployment
- × All vehicles must be enabled with similar capabilities

Solution Partners

TrueViewVisuals are experienced partners and licenced integrators with both TomTom and Masternaut and we are working to integrate with Causeway and UKtelematics (Track You).

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