LER

Ledningsejerregisteret

C0200 - GUIDE TO WEB SERVICES (V4)

Table of Contents

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1 Introduction

With the release of LER 2.0 the way service consumers interact with LER changes. A lot of new services will be introduced and the existing *Graveanmodninger* service will be reimplemented in a new format[1].

This document aims to describe the technical details of the new LER 2.0 web API. Therefore the document is intended for people with a technical knowledge that are to implement an integration to LER 2.0. This document does *not* attempt to describe the overall changes that occur between the current LER (1.5) and LER 2.0, but will only describe the new API as it is in 2.0.

The document as a whole is in English, but to avoid confusion all LER specific terms such as *graveforespørgsel* etc. will be kept in Danish.

1.1 Future changes

The following integrations do not support the functionality for *samføring* yet:

- Hent Anmodning (integration 28)
- Kvitter for Anmodning (integration 11)
- Send Graveforespørgselssvar (integration 13)
- Hent Ledningspakke (integration 16)
- Hent Status på Ledningspakke (integration 15)
- Kvitter for Ledningspakke (integration 26)
- Hent Graveforespørgselskvittering (integration 24)
- Hent Ledningspakke til Kortviser (integration 17)

Thus, it will not be possible to specify *'isSamfoeringsforespoergsel'* as a parameter as described in the integrations mentioned in this document. Furthermore, changes to integration 27 '*Opret interesseområde'* will be implemented.

Functionality for *samføring* is planned in a later release and if you sign up to our newsletter you will receive updates on to LER 2.0.

1.2 OpenAPI documentation

In addiction to this document LER also exposes OpenAPI (formerly known as Swagger) documentation of the integrations. This can be accessed at https://services.ler.dk/swagger. For the external test environment the corresponding URL is https://services-extest.ler.dk/swagger.

Note, however, that calling the web service endpoints requires a valid client certificate, so the OpenAPI is mainly meant for browsing, rather than testing the service endpoints.

2 Web services

LER exposes the services in two environments: External test and in production. The two environments have the following base URI's:

- External test: **services-extest.ler.dk**
- Production: **services.ler.dk**

[1] The existing version 3 which is SOAP based will continue to co-exist with the new version 4 (REST based) for a period of time.

Below is a table of all ledningsejer/graveaktør integrations in LER 2.0 and 2.1. In the URL-column, a placeholder for version ([version]) is inserted. See section 2.1 for more information about versioning.

Id	Name	HTTP method	URL	Body
	Hul igennem	GET	/api/BasicTest	-
	Hul igennem med korrekt sikkerhed	GET	/api/SecureTest	-
10	Hent Anmodninger	GET	/api/[version]/anmodning/	-
11	Kvitter for Anmodning	POST	/api/[version]/anmodningModtaget/{id}	-
13	Send graveforespørgselssvar	POST	/api/[version]/graveforespoergselSvar/{id}	Graveforespørgselssvar
15	Hent Status på Ledningspakke	GET	/api/[version]/ledningspakkeStatus/{id}	-
16	Hent ledningspakke	GET	/api/[version]/ledningspakke/{id}	-
17	Hent ledningspakke til kortviser	GET	/api/[version]/ledningspakkeKortviser/{id}	-
18	Indberet graveskade	POST	/api/[version]/graveskade/	Graveskade
19	Opret graveforespørgsel	POST	/api/[version]/graveforespoergsel/	Graveforespørgsel
24	Hent graveforespørgselskvittering	GET	/api/[version]/graveforespoergselKvittering/{id}	-
25	Hent status på ledningspakker	GET	/api/[version]/ledningspakkeStatus/	-
26	Kvitter for ledningspakke	POST	/api/[version]/ledningspakkeModtaget/{id}	-
27	Opret interesseområde	POST	/api/[version]/interesseomraade/	Interesseområde
28	Hent Anmodning	GET	/api/[version]/anmodning/{id}	-

Note that the URLs are not case sensitive.

The service operations are described individually in section 2.8.

2.1 API versioning

When breaking changes are introduced to an exposed service a new major version is added to the API. The version to use is specified in the URL in place of the "[version]" placeholder above. The format is "vX", e.g. "v1" for version 1, "v2" for version 2 etc. After a period of time the older versions will be phased out and removed from the exposed API.

All the listed services initially start at version 1 (v1) except for integration 10 (*Hent Anmodninger*) which starts at version 4 (v4) as it is a continuation of the existing *Graveanmodninger* service which has reached version 3 so far.

2.2 Integration Pattern

The API for *graveaktører* and *ledningsejere* is a pull based model where consumers regularly ask LER for changes. This is done to simplify the development needed in the consumer end and to make it similar to the current LER 1.5 web service model (*Graveanmodning service)*.

The API provides a number of services, many of which are used to look up specific resources based on IDs. Two services, however are provided which the consumer is expected to frequently poll for changes. These two services are described in the following sections.

Hent Anmodninger (integration 10)

See section 2.8.1.3.1 for further details.

2.2.1.1 This service is used by ***ledningsejer*** consumers and should be periodically polled. It will provide information about any *graveforespørgselsanmodninger* created in LER that overlap with the *ledningsejer*'s *Interesseområder* in LER. An *anmodning* will be returned from this service everytime the consumer calls it until the consumer *kvitterer* for the *anmodning* using *Kvitter for Anmodning (integration 11)*.
This service also returns any created *samføringsanmodninger* that overlaps with created *samføringsområder*.
Finally the service also returns a list of overdue *anmodninger* regardless of whether or not it has been marked as *kvitteret* with integration 11. Overdue in this context means that the consumer has not provided a response to the *anmodning* using *Send Graveforespørgselssvar (integration 13)* before the configured deadline.

Hent Status på Ledningspakker (integration 25)

2.2.1.2 *See section 2.8.1.8.2 for further details.*

This service is used by ***graveaktører*** consumers and can be periodically polled whenever the consumer has active ledningspakker in LER[2]. It will provide information about the status of all ledningspakker created by the *graveaktør* that has not been *kvitteret* for using *Kvitter for Ledningspakke (integration 26)*. This is exactly the same pattern as for *Hent Anmodninger (integration 10)* and the existing *Graveanmodninger* service in LER 1.5.

2.2.1.3

Pull frequency

The two services described above are pull based. As the expected number of consumers on LER is very high it is strongly recommended that consumers do not poll LER more often than every 120 seconds. There is at the time of writing no technical limitation preventing more frequent polling, but it is however monitored and should the need arise such a limitation may be implemented.

Also to prevent high spikes in the load on LER it is strongly recommended that consumers randomize their start time within the
2.2.1.4 first 120 seconds, so the load isn't all requests at once and then no requests for 120 seconds. By using a random start time within the first 2 minutes of starting the polling the load on LER will be a lot smoother and result in a much better experience for everyone.

Retry

It is the calling system's responsibility to retry a failed service request until it goes through. Whenever a request is retried because a response from LER was not received it should be called with the same *requestId*. This way LER can detect if a request has already been received and processed and then ignore it and simply return the same response as last time the request was received, thus preventing creating dublicates and in the case of *Opret Graveforespørgsel (integration 19)* being invoiced twice for the same *Graveforespørgsel*!

Note that resending a request that failed validation with the same requestId will not be revalidated and just result in the same validation error! So only reuse requestIds if you didn't get a response from LER.

[2] There is no technical limitation to prevent consumers from polling all the time, but it is needless to call the service unless the consumer has active ledningspakker.

Fully Automized flow

This section illustrates usage of the services in a fully automized setup in relation to *graveforespørgsler*, *graveforespørgselssvar* and *ledningspakker*:

2.2.1.5

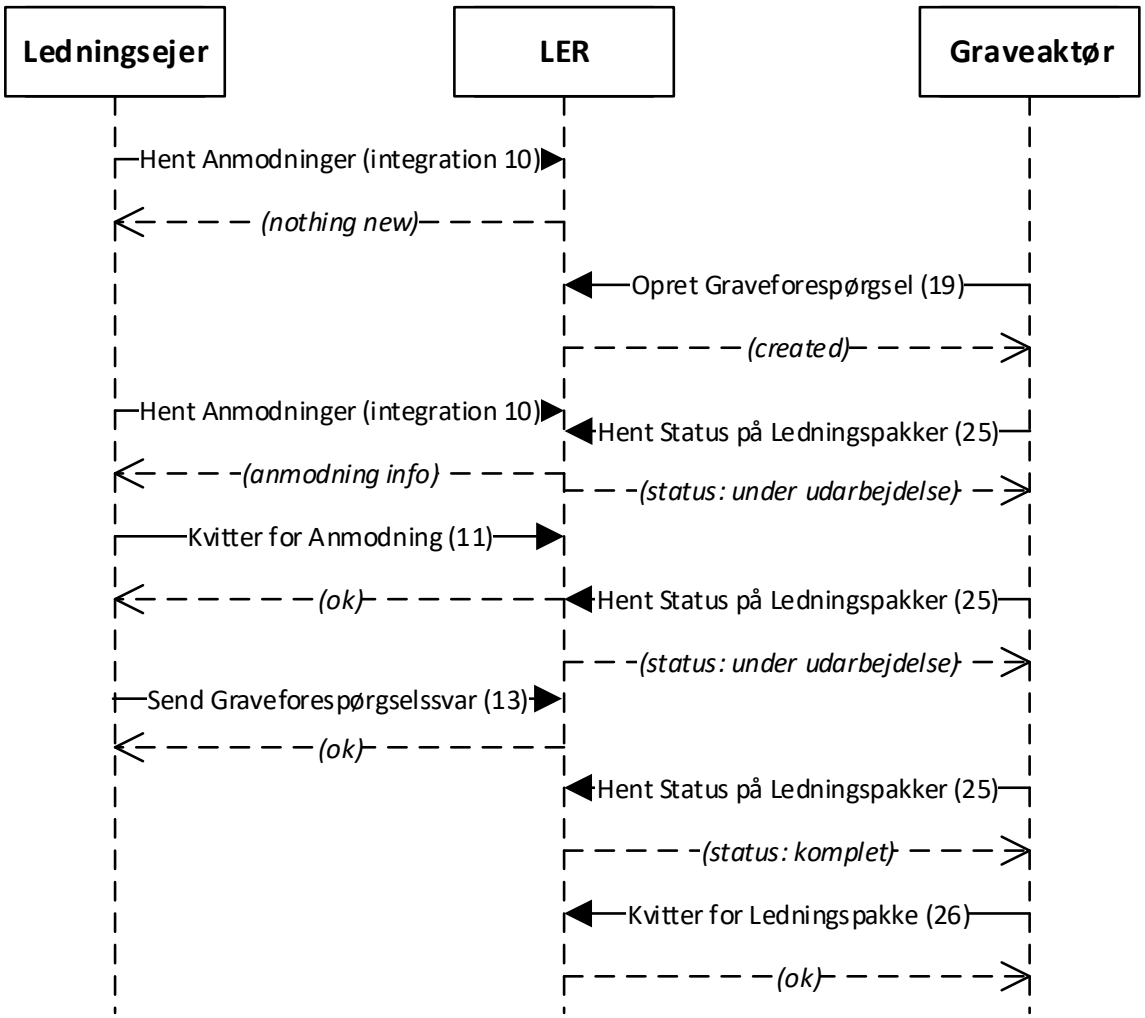

Figure 1: A simple illustration of the flow of integrations in relation to *anmodninger*, *graveforespørgselssvar* and *ledningspakker*.

The illustration is a simplification where only one *ledningsejer* should provide information, but it should give an idea of the concept.

2.3 Output format

All the services use a similar output format. This format is shown below. The only variable is the "Data" element, which contains the concrete data response for a given service; e.g. a *graveforespørgselsID* (in the case of Opret Graveforespørgsel) or the status of a *ledningspakke* (in the case of Hent LedningspakkeStatus). The entire "data" element is replaced by the content shown in the "Output format (data)" row of the given integration in section 2.8. The "Data" element is only included on successful requests and the "Error" element is only included on failed requests.

```
{
  "StatusCode": int,
  "RequestId" : string, format: guid,
```

```
  "TransactionId" : string, format: guid,
  "Transportkvittering" :
    {
      "Afsender" : string,
      "Modtager" : string,
      "Status"   : string
    },
  "Forretningskvittering" :
    {
      "Afsender" : string,
      "Modtager" : string,
      "Status"   : string
    },
  "Error" :
    {
      "ResourceId" : string,
      "UrlParameters" : string,
      "ErrorCode" : integer,
      "SystemErrorMessage" : string,
      "PrettyErrorMessage" : string,
      "DocumentationLink" : string
    },
  "SendTimestamp" : string, format: date-time,
  "Data" :
    {
      <service operation specific>
    }
}
```

The properties of the “Error” element are described below:

ResourceId	ID related to the resource related to the request that failed. This could e.g. be the *graveforespørgselID* when related to *graveforespørgsler.*
UrlParameters	This will contain the URL query string parameters that were registered in the request. This includes the elements after ”?” in the URL, not elements in the body of the request.
ErrorCode	A system specific error code for LER.
SystemErrorMessage	A short name of the error type.
PrettyErrorMessage	A user friendly text describing the error.
DocumentationLink	A link to a place where the relevant errorCode is described.

Table 1 Decription of properties in the "error" element

Below is an example of the output of a successful request to Opret Graveforespørgsel (integration 19):

```
{
  "StatusCode" : 200,
  "RequestId" : "11111111-2222-3333-4444-555555555555",
  "TransactionId" : "55555555-6666-7777-8888-999999999999",
  "Transportkvittering" :
    {
      "Afsender" : "Ledningsejerregistret, SDFE (CVR: 37284114)",
      "Modtager" : "CVR: 14773908",
      "Status"   : "data modtaget"
    },
  "Forretningskvittering" :
    {
      "Afsender" : "Ledningsejerregistret, SDFE (CVR: 37284114)",
      "Modtager" : "CVR: 14773908",
      "Status"   : "data valideret, ansvar overdraget fra afsender til modtager"
    },
  "SendTimestamp" :"2018-08-06T13:57:01+02:00",
  "Data" :
```

```
    {
      "Id" : "12345678"
    }
}
```

Code 1 Example of successful request to Integration 19

Below is an example of the ouput of a failing request:

```
{
  "StatusCode" : 404,
  "RequestId" : "11111111-2222-3333-4444-555555555555",
  "TransactionId" : "55555555-6666-7777-8888-999999999999",
  "Transportkvittering" :
    {
      "Afsender" : "Ledningsejerregistret, SDFE (CVR: 37284114)",
      "Modtager" : "CVR: 14773908",
      "Status"   : "data modtaget"
    },
  "Error" :
    {
      "ResourceId" : "graveforespørgselId:45876987",
      "UrlParameters" : "requestId=11111111-2222-3333-4444-555555555555&transactionId=55555555-6666-7777-8888-
999999999999",
      "ErrorCode" : 123,
      "SystemErrorMessage" : "graveforespørgsel does not exist",
      "PrettyErrorMessage" : "Den efterspurgte graveforespørgsel findes ikke",
      "DocumentationLink" : "https://www.ler.dk/api/errorcodes/123"
    },
  "SendTimestamp" :"2018-08-06T13:57:01+02:00"
}
```

Code 2 Example of failed request to Integration 19

2.3.1 Status codes

Note that LER 2.0 always strives to return HTTP status code 200 on the actual request. The response body may, however communicate an error. Therefore it is VERY important that service consumers do not rely on the HTTP response's status code, but look at the body and inspect the "StatusCode" field in the body as seen in the examples in section 2.3. These status codes map to HTTP status codes and will describe the type of error encountered. On successful attempts this will be a successful statuscode such as "200" (OK) or "201" (Created).

2.3.1.1 Error codes

When an error occurs the output contains an "Error" property. Some of the error codes are general errors while others are service specific. The general errors are described here and can occur on all services.

- **00-100:** An unexpected error occurred in LER.
- **00-110:** It wasn't possible for the Service Gateway API to contact the LER kernel.
- **00-200**: The used account does not have access to the requested resource.
- **00-210**: The used account does not have an active tjenesteaftale with the requested tjenesteaftager.
- **00-220**: The used account does not exist in LER.
- **00-230:** The account has configured a specific certificate to be used for service requests, but the used certificate for this request is not identical to the configured certificate.
- **00-300**: The provided request body is invalid.

All error codes can also be retrieved from LER using https://services.ler.dk/api/errorcodes.

2.3.2 Kvitteringer (receipts)

LER 2.0 responses can contain two types of *kvitteringer* (receipts): *Transportkvittering* and *Forretningskvittering*:

- **Transportkvittering***:* Specifies that LER has received the request, i.e. that the transportation of the data from the consumer to LER was successful. This does NOT say anything about the validity of the sent data, but only that the data was received.
- **Forretningskvittering:** Specifies that LER has validated the sent data and accepts its contents. This is a receipt for the consumer so they know that the sent data is valid.

A response that has reached the LER application will always contain a *Transportkvittering*. The *Forretningskvittering* is only included if the data is valid.

The service consumers are advised to store these kvitteringer as documentation for successful requests.

2.3.3 FaellesGeometri

Integrations 10 and 28 (Hent Anmodninger and Hent Anmodning, see sub-sections of Section 2.8.1.3) introduces a new output parameter, FaellesGeometri. This parameter contains the intersection between polygons of an interesseområde with the polygon of a graveforespørgsel/samføringssøgning. It is a list of strings in order to account for interesseområder with more than one polygon.

Each string in the output list contains a set of coordinates wrapped in a POLYGON().

```
"FaellesGeometri": [
    "POLYGON ((724432.19 6179193.7825, 724689.79 6179484.1825, 724297.79 6179314.5825, 724432.19 6179193.7825))",
    "POLYGON ((724776.19 6178953.7825, 724758.59 6179296.9825, 724557.61995515716 6179099.9072234677,
724635.74689525529 6179042.061022982, 724776.19 6178953.7825))",
    "POLYGON ((724591.39 6179150.5825, 724614.59 6179177.7825, 724620.99 6179267.3825, 724598.59 6179287.3825,
724513.79 6179276.1825, 724496.99 6179256.9825, 724512.99 6179164.1825, 724591.39 6179150.5825))",
    "POLYGON ((724706.59 6179320.1825, 724753.79 6179397.7825, 724696.99 6179423.3825, 724634.59 6179367.3825,
724706.59 6179320.1825))"
        ]
```

Code 3 Example of an output where the interesseområde contains four polygons all intersected by the graveområde.

2.3.4 GeografiskData

Integrations 10 and 28 (Hent Anmodninger and Hent Anmodning, see sub-sections of Section 2.8.1.3) output contains the the "GeografiskData" property string. This is identical to the contents of the same field in the v2 and v3 services in the existing LER. It contains a base64 encoded string of a GML file describing the *graveforespørgsel*. The format follows the XSD format shown below:

```
<?xml version="1.0" encoding="UTF-8" ?>

<xs:schema xmlns:gml="http://www.opengis.net/gml" xmlns:lergml="http://www.ler.dk/ler"
xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="http://www.ler.dk/ler"
elementFormDefault="qualified" version="1.0">

<xs:annotation>

  <xs:appinfo>ler.xsd v1.0</xs:appinfo>

  <xs:documentation>Copyright(c) Erhvervs- og Byggestyrelsen All Rights Reserved</xs:documentation>

</xs:annotation>

<xs:import namespace="http://www.opengis.net/gml" schemaLocation="feature.xsd" />

<xs:element name="featureCollection" type="lergml:featureCollectionType"
substitutionGroup="gml:_FeatureCollection" />

<xs:complexType name="featureCollectionType">

  <xs:complexContent>

    <xs:extension base="gml:AbstractFeatureCollectionType" />

  </xs:complexContent>

</xs:complexType>

<xs:element name="Indberetning" type="lergml:IndberetningType" substitutionGroup="gml:_Feature" />

<xs:element name="Graveforesp" type="lergml:GraveforespType" substitutionGroup="gml:_Feature" />

<xs:element name="Foresp" type="lergml:ForespType" substitutionGroup="gml:_Feature" />
```

```
<xs:simpleType name="Indberetning_fidType">
  <xs:restriction base="xs:string">
    <xs:maxLength value="255" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Polygon_MultiPolygonPropertyType">
  <xs:sequence>
    <xs:choice>
      <xs:element ref="gml:Polygon" />
      <xs:element ref="gml:MultiPolygon" />
    </xs:choice>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="IndberetningType">
  <xs:complexContent>
    <xs:extension base="gml:AbstractFeatureType">
      <xs:sequence>
        <xs:element name="fid" type="lergml:Indberetning_fidType" minOccurs="0" />
        <xs:element name="bemaerkning" type="xs:string" minOccurs="0" />
        <xs:element name="forsyningsart_anden" type="xs:string" minOccurs="0" />
        <xs:element name="forsyningsart_id" type="xs:string" minOccurs="0" />
        <xs:element name="polygonProperty" type="lergml:Polygon_MultiPolygonPropertyType" />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GraveforespType">
  <xs:complexContent>
    <xs:extension base="gml:AbstractFeatureType">
      <xs:sequence>
        <xs:element name="fid" type="lergml:Indberetning_fidType" minOccurs="0" />
        <xs:element name="bemaerkning" type="xs:string" minOccurs="0" />
        <xs:element name="graveart_id" type="xs:string" minOccurs="0" />
        <xs:element name="graveart_anden" type="xs:string" minOccurs="0" />
        <xs:element name="graveperiode_fra" type="xs:date" minOccurs="0" />
        <xs:element name="graveperiode_til" type="xs:date" minOccurs="0" />
        <xs:element name="polygonProperty" type="lergml:Polygon_MultiPolygonPropertyType" />
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="ForespType">
  <xs:complexContent>
    <xs:extension base="gml:AbstractFeatureType">
      <xs:sequence>
        <xs:element name="fid" type="lergml:Indberetning_fidType" minOccurs="0" />
        <xs:element name="formaal" type="xs:string" minOccurs="0" />
        <xs:element name="polygonProperty" type="lergml:Polygon_MultiPolygonPropertyType" />
      </xs:sequence>
```

```
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
</xs:schema>
```

An example output can be seen below:

```
<?xml version="1.0" encoding="UTF-8"?>

<lergml:featureCollection schemaLocation="http://www.ler.dk/ler ler.xsd"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:fn="http://www.w3.org/2004/10/xpath-functions"
xmlns:xdt="http://www.w3.org/2004/10/xpath-datatypes" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:lergml="http://www.ler.dk/ler" xmlns:gml="http://www.opengis.net/gml">

  <gml:featureMember>

    <lergml:Graveforesp>

      <lergml:fid>1</lergml:fid>

      <lergml:graveart_id />

      <lergml:graveperiode_fra>2019-10-21</lergml:graveperiode_fra>

      <lergml:graveperiode_til>2019-10-25</lergml:graveperiode_til>

      <lergml:bemaerkning>Rentemestervej 2, 2400 København NV</lergml:bemaerkning>

      <lergml:polygonProperty><gml:Polygon srsName="EPSG:25832"
><gml:outerBoundaryIs><gml:LinearRing><gml:coordinates>721754.34,6179210.55 722365.54,6179296.95
722727.14,6179053.75 722583.14,6178596.15 722007.14,6178474.55 721514.34,6178743.35
721754.34,6179210.55</gml:coordinates></gml:LinearRing></gml:outerBoundaryIs></gml:Polygon></lergml:polygonPr
operty>

    </lergml:Graveforesp>

  </gml:featureMember>

</lergml:featureCollection>
```

2.4 Data formats

2.4.1 GUID formats

All GUID's sent to and received from LER should always be formatted using hyphens (-) between each group:

format: XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX

Brackets { } around the GUID are optional.

2.5 Validation

The services have a number of validations that are common for all operations:

- RequestId must be a valid GUID (see section 2.4.1)
- TransactionId must be a valid GUID (see section 2.4.1)
- If tjenesteAftagerCvr is provided it must reference a valid CVR number that exists as an account in LER. And that the account with the provided CVR and the account with CVR retrieved from Subject header, has an active '*tjenesteaftale*'.

All operations that take an Id parameter as input also performs the following validations:

- ID refers to an object that exists in LER
- ID refers to an object that the caller has access to (either directly or through tjenesteaftager)

2.6 Security paradigm

Mutal SSL (client certificate).

The requests on both External Test and Production environments require all services (except “hul igennem”) to be called using a valid (not blocked, not expired) FOCES production client certificate. The CVR number present in the “subject” field of the certificate will be used to determine which account the request is performed from. This means that the used client certificates MUST be issued to your own organization.

2.7 Protocol

All services must be accessed using HTTP over TLS 1.1 or higher with AES-128 or higher encryption.

2.8 Service specifications

In the below sections, the web services and integrations are described in more detail. Regarding the relative URL specified for each integration, a placeholder for version ([version]) is inserted. The format of this version number is vX, where X is the actual version number. The Graveforespoergsel service start from version 4 and the remaining services from version 1.

BasicTest

2.8.1.1.1 Hul igennem

Hul igennem	
2.8.1.1 **This service simply tests that the user can reach the LER servers successfully. This is somewhat comparable to a glorified "ping" of LER.**	
HTTP method	GET
Relative URL	/api/basicTest
Id Parameter	-
Query Parameters	-
Request Body	-

Output Format (data)	{
	"Confirmation" : string
	}

Service specific Validation	-
Security paradigm	None
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Any*
Should user continuously pull	No
Suggested pull frequency	-
Expected daily usage (load)	-
2.8.1.2 **Service specific Error messages**	-

SecureTest

2.8.1.2.1 Hul igennem med korrekt sikkerhed

Hul igennem med korrekt sikkerhed	
This service simply tests that the user can reach the LER servers successfully with the correct use of client certificates.	
HTTP method	GET

Relative URL	/api/secureTest
Id Parameter	-
Query Parameters	-
Request Body	-

Output Format (data)	{
	"Confirmation" : string
	}

Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Any*
Should user continuously pull	No
Suggested pull frequency	-
Expected daily usage (load)	-
Service specific Error messages	-

2.8.1.3 Anmodning

2.8.1.3.1 Hent Anmodninger (integration 10)

This service operation retrieves a list of: • ***graveforespørgselsanmodninger* that haven't been *kvitteret* by the receiver** • ***samføringsanmodninger* that haven't been *kvitteret* by the receiver** • ***rykkere* for *graveforespørgselssvar*** • ***rykkere* for *samføringsforespørgselssvar***	
HTTP method	GET
Relative URL	/api/[version]/anmodning/
Id Parameter	-
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional) • interesseomraadenumre: string (int) (optional) ○ comma-separated list of specific interesseområder that the retrieved graveforespørgselsanmodninger should be based upon.

Request Body	-

Output Format (data)	{
	"AnmodningList": [
	{
	“LedningsejerCvr” : string,
	“IsSamfoeringsforespoergsel” : boolean,
	“Graveforespoergsel” : {
	”GraveforespoergselsNr” : string,
	”OprindeligGraveforespoergselsNr” : string,
	”OprettetDato” : string, format: date-time,
	”AendretDato” : string, format: date-time,
	”PapirFormat” : string,
	“LedningsEjerKontakt”: {
	“Id” : string (guid),
	“Virksomhed” : string,
	“Navn” : string,
	“Adresse” : string,
	“Postnr” : string,
	“Postdistrikt” : string,
	“Land” : string,
	“Telefon” : string,
	“Mobiltelefon” : string,
	“Telefax” : string,
	“Email” : string
	},
	“Graveaktoer” : {
	“Id” : string (guid),
	“Virksomhed” : string,
	“Navn” : string,
	“Adresse” : string,
	“Postnr” : string,
	“Postdistrikt” : string,
	“Land” : string,
	“Telefon” : string,
	“Mobiltelefon” : string,
	“Telefax” : string,
	“Email” : string
	},
	“GraveaktoerKontakt” : {
	“Id” : string (guid),
	“Virksomhed” : string,
	“Navn” : string,
	“Adresse” : string,
	“Postnr” : string,
	“Postdistrikt” : string,
	“Land” : string,
	“Telefon” : string,
	“Mobiltelefon” : string,
	“Telefax” : string,
	“Email” : string
	},
	“EmailAfsendt” : string, format: date-time,
	“KonverteringsStatus” : string,
	“GeografiskData” : string
	},
	"Interesseomraade": {
	"InteresseomraaedeId": string,
	"Ler20Signed": boolean,
	"LedningsejerKontakt": {
	"Id": string (guid),
	"Virksomhed": string,
	"Navn": string,
	"Adresse": string,
	"Postnr": string,
	"Postdistrikt": string,
	"Land": string,
	"Telefon": string,
	"Mobiltelefon": string,
	"Telefax": string,
	"Email": string
	},
	”IsLer20Signed”: boolean

	<pre>},
	”FaellesGeometri”: string[]
	}
	],
	"RykkerList": [
	{
	"GraveforespoergselId": int
	}
	]
	}</pre>

Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Ledningsejer* / *tjenesteyder* for *ledningsejer*
Should user continuously pull	Yes
Suggested pull frequency	120 seconds

See Section **Fejl! Henvisningskilde ikke fundet.** for an elaboration of the output field FaellesGeometri.

See section 2.3.4 for an elaboration of the output field GeografiskData.

2.8.1.3.2 Hent Anmodning (integration 28)

Hent Anmodning (integration 28)	
This service operation retrieves a specific graveforespørgselsanmodning or *samføringsanmodning* based on it’s ID.	
HTTP method	GET
Relative URL	/api/[version]/anmodning/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* related to the anmodning

Query Parameters	• requestId : string (guid) (mandatory)
	• transactionId: string (guid) (mandatory)
	• indberetningsNr : string (int) (mandatory)
	  ○ The unique number provided to all interesseområder in LER
	• tjenesteaftagerCvr: string (optional)
	• isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional)
	  ○ Specifies that the request relates to a *samføringsforespørgsel*

Request Body	-

Output Format (data)	<pre>{
	“LedningsejerCvr” : string,
	“IsSamfoeringsforespoergsel” : boolean,</pre>

```
    “Graveforespoergsel” : {
        ”GraveforespoergselsNr” : string,
        ”OprindeligGraveforespoergselsNr” : string,
        ”OprettetDato” : string, format: date-time,
        ”AendretDato” : string, format: date-time,
        ”PapirFormat” : string,
        ”InteresseomraadeIds” : [
            int
        ],
        “LedningsEjerKontakt”: {
            “Id” : string (guid),
            “Virksomhed” : string,
            “Navn” : string,
            “Adresse” : string,
            “Postnr” : string,
            “Postdistrikt” : string,
            “Land” : string,
            “Telefon” : string,
            “Mobiltelefon” : string,
            “Telefax” : string,
            “Email” : string
        },
        “Graveaktoer” : {
            “Id” : string (guid),
            “Virksomhed” : string,
            “Navn” : string,
            “Adresse” : string,
            “Postnr” : string,
            “Postdistrikt” : string,
            “Land” : string,
            “Telefon” : string,
            “Mobiltelefon” : string,
            “Telefax” : string,
            “Email” : string
        },
        “GraveaktoerKontakt” : {
            “Id” : string (guid),
            “Virksomhed” : string,
            “Navn” : string,
            “Adresse” : string,
            “Postnr” : string,
            “Postdistrikt” : string,
            “Land” : string,
            “Telefon” : string,
            “Mobiltelefon” : string,
            “Telefax” : string,
            “Email” : string
        },
        “EmailAfsendt” : string, format: date-time,
        “KonverteringsStatus” : string,
        “GeografiskData” : string
    },
    "Interesseomraade": {
            "InteresseomraaedeId": string,
            "Ler20Signed": boolean,
            "LedningsejerKontakt": {
                "Id": string (guid),
                "Virksomhed": string,
                "Navn": string,
                "Adresse": string,
                "Postnr": string,
                "Postdistrikt": string,
                "Land": string,
                "Telefon": string,
                "Mobiltelefon": string,
                "Telefax": string,
                "Email": string
            },
            ”IsLer20Signed”: boolean
    },
    ”FaellesGeometri”: string[]
}
```

Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Ledningsejer* / *tjenesteyder* for *ledningsejer*
Should user continuously pull	No
Suggested pull frequency	-

See Section **Fejl! Henvisningskilde ikke fundet.** for an elaboration of the output field FaellesGeometri.

See section 2.3.4 for an elaboration of the output field GeografiskData.

AnmodningModtaget

2.8.1.4.1 Kvitter for Anmodning (integration 11)

2.8.1.4

Kvitter for Anmodning (integration 11)	
This service is used to mark an *anmodning* as received (*kvitteret*). This means that the *anmodning* will no longer be returned in requests to integration 10.	
HTTP method	POST
Relative URL	/api/[version]/AnmodningModtaget/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* that the *anmodning* response relates to

Query Parameters	• requestId : string (guid) (mandatory)
	• transactionId: string (guid) (mandatory)
	• indberetningsNr: string (int) (mandatory)
	  ○ The unique number provided to all *interesseområder* in LER
	• tjenesteaftagerCvr: string (optional)
	• isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional)
	  ○ Specifies that the request relates to a *samføringsforespørgsel*

Request Body	-
Output Format (data)	`{ }`
Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Ledningsejer*
Should user continuously pull	No

Suggested pull frequency	-

Graveforespørgsel

2.8.1.5.1 Opret Graveforespørgsel (integration 19)

Opret Graveforespørgsel (integration 19)	
2.8.1.5 **This service operation creates a new *graveforespørgsel* and returns the new element's graveforespørgselsnummer.**	
HTTP method	POST
Relative URL	/api/[version]/graveforespoergsel/
Id Parameter	-
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional)
Request Body	`{ "Gmlbase64data" : string }` The file must be a valid GML 3.3.0 (or later version) file and must be a Base64 encoded string of the file contents
Output Format (data)	`{ "id" : string }`
Service specific Validation	• The account for which the graveforespørgsel is being created must not be blocked from paying with Invoice • GML Validation, see section 2.8.1.5.1.1
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Graveaktør* / *tjenesteyder* for *graveaktør*
Should user continuously pull	No
Suggested pull frequency	-

2.8.1.5.1.1 GML Validation

The uploaded file must be a valid GML 3.3.0 file. An example can be seen here:

```
<?xml version="1.0" encoding="UTF-8"?><lergml:featureCollection schemaLocation="http://www.ler.dk/ler ler.xsd"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:fn="http://www.w3.org/2004/10/xpath-functions"
xmlns:xdt="http://www.w3.org/2004/10/xpath-datatypes" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:lergml="http://www.ler.dk/ler" xmlns:gml="http://www.opengis.net/gml">

 <gml:featureMember>
```

```
  <lergml:Graveforesp>
   <lergml:fid>1</lergml:fid>
   <lergml:graveart_id>1,2</lergml:graveart_id>
   <lergml:graveperiode_fra>2019-07-24</lergml:graveperiode_fra>
   <lergml:graveperiode_til>2019-07-30</lergml:graveperiode_til>
   <lergml:bemaerkning>My test graveforespoergsel</lergml:bemaerkning>
   <lergml:polygonProperty><gml:Polygon srsName="EPSG:25832"
><gml:outerBoundaryIs><gml:LinearRing><gml:coordinates>546996.4,6212545 547082.8,6212484.2 546967.6,6212477.8
546996.4,6212545</gml:coordinates></gml:LinearRing></gml:outerBoundaryIs></gml:Polygon></lergml:polygonProperty>
  </lergml:Graveforesp>
 </gml:featureMember>
</lergml:featureCollection>
```

Additional examples can be made by creating a Graveforespørgsel in LER user interface (e.g. in external test environment) and then exporting it as a GML file.

All GML files MUST include the following properties (note that LER is case sensitive):

- fid (and value must be 1)
- polygonProperty
- graveperiode_fra
- Graveperiode_til
- Bemaerkning
- EITHER *graveart_id* (commaseparated numbers) OR *graveart_anden* (text)

Valid values for graveart_id are displayed here:

Graveart	Id
Kædegraver	1
Gennempresning	2
Boring m. pælebor	3
Relining	4
Cracking	5
Gravemaskine	6
Styret underboring	7
Plov	8
Ramning	9

Sprængning	10
Andet	99

GraveforespoergselSvar

2.8.1.6.1 Send Graveforespørgselssvar (integration 13)

Send Graveforespørgselssvar (integration 13)	
2.8.1.6 **Used by *ledningsejer* to send a *graveforespørgselssvar* (a zip file containing GML and related information) relating to a given *graveforespørgsel* or *samføringsforespørgsel* identified by its ID and the related interesseområde by indberetningsNr.**	
HTTP method	POST
Relative URL	/api/[version]/graveforespoergselSvar/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* that the response relates to

Query Parameters	• requestId : string (guid) (mandatory)
	• transactionId: string (guid) (mandatory)
	• indberetningsNr: string (int) (mandatory)
	  ○ The unique number provided to all interesseområder in LER
	• tjenesteaftagerCvr: string (optional)
	• isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional)
	  ○ Specifies that the request relates to a *samføringsforespørgsel*

Request Body	`{ "base64data" : string }` The file must be a base64 encoded version of a valid ZIP file that follow the structure described in section 2.8.1.6.1.1
Output Format (data)	`{ }`
Service specific Validation	*base64data* posted in the request body is validated to adhere to the specifications set by "datamodel for udveksling af ledningsoplysninger". This is further described in *C0200 – Vejledning til udfyldelse af GML for udvekslning af ledningsoplysninger*.
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Ledningsejer / actor on behalf (tjenesteyder) of ledningsejer*
Should user continuously pull	No
Suggested pull frequency	-

2.8.1.6.1.1 Graveforespørgselssvar ZIP file

The *graveforespørgselssvar* zip file that should be posted as body should contain one GML file with all the *ledningsoplysninger* as described in *C0200 – Vejledning til udfyldelse af GML for udvekslning af ledningsoplysninger*¸ as well as any supplementary documents that are referenced in the GML file. The folder should follow this structure:

- [Root]
    - GML file (file name is irrelevant, but file extension must be ".gml")
    - Supplementary documents

This means that all the files are placed in a flat structure in the root of the zip file. If multiple GML files are provided on the first file detected by LER will be used. Any other GML files will be ignored, so it is important to put all relevant *ledningsoplysninger* into one GML file!

All supplementary documents should be of one of the following file formats:

- CSV
- DGN
- DOC
- DOCX
- DWF
- DWG
- DXF
- IFC-SPF
- IFC-XML
- JPEG
- PDF
- SAT
- SHP
- SKP
- TAB
- TIFF

2.8.1.7
- XLS
- XLSX

Note that the contents of these files are *not* validated.

Ledningspakke

2.8.1.7.1 Hent Ledningspakke (integration 16)

Hent Ledningspakke (integration 16)

Used by *graveaktører* to retrieve a *ledningspakke* (zip file) for a given *graveforespørgsel* or *samføringsforespørgsel* identified by its ID.	
HTTP method	GET
Relative URL	/api/[version]/ledningspakke/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* that the request relates to

Query Parameters	• requestId : string (guid) (mandatory)
	• transactionId: string (guid) (mandatory)
	• indberetningsNr: string (int) (mandatory)
	  ○ The unique number provided to all interesseområder in LER
	• tjenesteaftagerCvr: string (optional)
	• isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional)
	  ○ Specifies that the request relates to a *samføringsforespørgsel*

Request Body	-
Output Format (data)	`{ "base64data" : string, "contenttype" : string, "fileName" : string }` `Content-type will be "application/zip"`
Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Graveaktør*
Should user continuously pull	No
Suggested pull frequency	-

2.8.1.8

LedningspakkeStatus

2.8.1.8.1 Hent Status på Ledningspakke (integration 15)

Hent Status på Ledningspakke (integration 15)	
Used by *graveaktører* to get the status of a *ledningspakke* for a given *graveforespørgsel* or *samføringsforespørgsel* identified by its ID.	
HTTP method	GET
Relative URL	/api/[version]/ledningspakkeStatus/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* that the request relates to

Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional) • isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional) ○ Specifies that the request relates to a *samføringsforespørgsel*
Request Body	-

Output Format (data)	`{`
	`  "Status" : string (enum)`
	`}`
	
	`Valid values of "status" enum:`
	• `Ingen ledningspakke`
	• `Under udarbejdelse`
	• `Afventer ledningsejer`
	• `Delvis komplet`
	• `Komplet`
	• `Arkiveret`
	• `Slettet`

Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Graveaktør*
Should user continuously pull	No
Suggested pull frequency	-

2.8.1.8.2 Hent Status for Ledningspakker (integration 25)

Hent Status for Ledningspakker (integration 25)	
Used by *graveaktører* to get the status of all the *ledningspakker* they haven't *kvitteret* for yet using integration 26.	
HTTP method	GET
Relative URL	/api/[version]/ledningspakkeStatus
Id Parameter	-
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional)
Request Body	-

Output Format (data)	`{`
	`  "ledningspakkeStatuser": [`
	`  {`
	`  "Id" : string,`
	`  "ErSamfoeringsforespoergsel" : boolean,`
	`  "Status" : string (enum)`
	`  }`
	`  ]`
	`}`

	Valid values of "status" enum: • Ingen ledningspakke • Under udarbejdelse • Afventer ledningsejer • Delvis komplet • Komplet • Arkiveret • Slettet
Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Graveaktør*
Should user continuously pull	Yes
Suggested pull frequency	120 seconds

LedningspakkeModtaget

2.8.1.9.1 Kvitter for Ledningspakke (integration 26)

Kvitter for Ledningspakke (integration 26)	
Used by *graveaktører* to inform LER that a *ledgninspakke* has been received (*kvitter*) based on its ID so it should no longer be included in calls to integration 25.	
HTTP method	POST
Relative URL	/api/[version]/ledningspakkeModtaget/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* that the request relates to
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional) • isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional) ○ Specifies that the request relates to a *samføringsforespørgsel*
Request Body	-
Output Format (data)	{ }
Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Graveaktør*

Should user continuously pull	No
Suggested pull frequency	-

GraveforespoergselKvittering

2.8.1.10.1 Hent Graveforespørgselskvittering (integration 24)

Hent Graveforespørgselskvittering (integration 24)	
2.8.1.10 **Used by *graveaktører* to retrieve a *graveforespørgselskvittering* (receipt for a created *graveforespørgsel*) based on the *graveforespørgsels* ID.**	
HTTP method	GET
Relative URL	/api/[version]/graveforespoergselKvittering/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* that the request relates to
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional) • isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional) ○ Specifies that the request relates to a *samføringsforespørgsel*
Request Body	-

Output Format (data)	`{ "base64data" : string, "contenttype" : string, "fileName" : string }`
	
	`Content-type will be "application/pdf"`

Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Graveaktør*
2.8.1.11 **Should user continuously pull**	No
Suggested pull frequency	-

LedningspakkeKortviser

2.8.1.11.1 Hent Ledningspakke til Kortviser (integration 17)

Hent Ledningspakke til Kortviser (integration 17)
This service is made available so *graveaktører* can retrieve *ledningspakker* for map viewers in their own IT systems.

HTTP method	GET
Relative URL	/api/[version]/ledningspakkeKortviser/{id}
Id Parameter	ID (GraveforespoergselsNr) of the *graveforespørgsel* or *samføringsforespørgsel* that the request relates to
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional) • isSamfoeringsforespoergsel : Boolean (default value = *false*) (optional) ○ Specifies that the request relates to a *samføringsforespørgsel*
Request Body	-
Output Format (data)	{ "Data" : string, "ContentType" : string, "FileName" : string } "Data" is a Base64 encoded zip file containing the ledningspakke. "ContentType" is always "application/gml+xml".
Service specific Validation	-
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	External systems with their own map viewer
Should user continuously pull	No
Suggested pull frequency	-

2.8.1.12

Graveskade

2.8.1.12.1 Indberet Graveskade (integration 18)

Indberet Graveskade (integration 18)	
Used by *ledningsejere* to register a *graveskade* that have occurred on their *ledninger* and returns the new element's graveskadenummer.	
HTTP method	POST
Relative URL	/api/[version]/graveskade/
Id Parameter	-
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional)
Request Body	{ "xKoordinat" : decimal, "yKoordinat" : decimal,

	<pre> "projektion" : string,
	  "skadevolderType" : int,
	  "skadevolderCvr" : string,
	  "skadesDato" : DateTime,
	  "skadesDatoUkendt" : boolean,
	  "forsyningsart" : int,
	  "forsyningsartAnden" : string,
	  "lerNummer" : string,
	  "omfangFunktionsevne" : int,
	  "omfangNaermiljoe" : int[],
	  "omfangOmkostningUdbedring" : int,
	  "omfangOmkostningAdministration" : int,
	  "aarsag" : int[],
	  "bemaerkning" : string
	}</pre>

Output Format (data)	<pre>{
	  "graveskadeId" : string
	}</pre>

Service specific Validation	• xKoordinat (mandatory) • yKoordinat (mandatory) • Projection must be “EPSG:25832” (mandatory) • SkadevolderType must be: Virksomhed (0), Privatperson (1) or Ukendt (2) (mandatory) • SkadevolderCvr must be a valid CVR number (mandatory if skadevolderUkendt is “false” and SkadevolderType is equal to Virksomhed) • SkadevolderUkendt (mandatory) • SkadesDato must be a valid date in the format “dd-MM-yyyy”, that is either the current date or a past date (mandatory if skadesDato is “false”) • Forsyningart (mandatory) • ForsyningsartAnden (mandatory if forsyningsart is 99 - Anden) • LerNummer (opional) • OmfangFunktionsevne (optional) • OmfangNaermiljoe must be declared as semicolon separated list (optional) • OmfangOmkostningUdbedring (optional) • OmfangOmkostningAdministration (optional) • Aarsag must declared as semicolon separated list (optional) • Bemaerkning (optional)
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Ledningsejer*
Should user continuously pull	No
Suggested pull frequency	-

Interesseomraade

2.8.1.13.1 Opret Interesseområde (integration 27)

Opret Interesseområde (integration 27)	
Used by *ledningsejere* to programmatically create an *interesseområde*. Returns the interesseområde number of the created interesseområde.	
HTTP method	POST
Relative URL	/api/[version]/interesseomraade/
Id Parameter	-
Query Parameters	• requestId : string (guid) (mandatory) • transactionId: string (guid) (mandatory) • tjenesteaftagerCvr: string (optional)
Request Body	{ "Gmlbase64data" : string } The file must be valid GML 3.3.0 file and be sent as a Base64 encoded string of the file contents.
Output Format (data)	{ "interesseomraadeId" : string }
Service specific Validation	• GML validation, see section 2.8.1.13.1.1
Security paradigm	Mutal SSL (client certificate), see section 2.6
Protocol	HTTP over TLS 1.1 or higher with AES-128 or higher encryption
Expected user	*Ledningsejer*
Should user continuously pull	No
Suggested pull frequency	-

2.8.1.13

2.8.1.13.1.1 GML Validation

The uploaded file must be a valid GML 3.3.0 file. An example can be seen here:

```
<?xml version="1.0" encoding="UTF-8"?><lergml:featureCollection schemaLocation="http://www.ler.dk/ler ler.xsd"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:fn="http://www.w3.org/2004/10/xpath-functions"
xmlns:xdt="http://www.w3.org/2004/10/xpath-datatypes" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:lergml="http://www.ler.dk/ler" xmlns:gml="http://www.opengis.net/gml">
 <gml:featureMember>
  <lergml:Indberetning>
   <lergml:fid>1</lergml:fid>
   <lergml:forsyningsart_id>6,99</lergml:forsyningsart_id>
```

```
    <lergml:forsyningsart_anden>Min anden forsyningsart</lergml:forsyningsart_anden>
    <lergml:bemaerkning>TEST forening for LER</lergml:bemaerkning>
    <lergml:polygonProperty><gml:Polygon srsName="EPSG:25832"
><gml:outerBoundaryIs><gml:LinearRing><gml:coordinates>553825.2,6289175.4 494842.8,6240023.4 554644.4,6226097
553825.2,6289175.4</gml:coordinates></gml:LinearRing></gml:outerBoundaryIs></gml:Polygon></lergml:polygonPropert
y>
  </lergml:Indberetning>
 </gml:featureMember>
</lergml:featureCollection>
```

Additional examples can be made by creating an Interesseområde in LER user interface (e.g. in external test environment) and then exporting it as a GML file.

All GML files MUST include the following properties (note that LER is case sensitive):

- fid (and value must be 1)
- polygonProperty
- bemaerkning
- EITHER *forsyningsart_id* (commaseparated numbers) OR *forsyningsart_anden* (text)

Valid values for forsyningsart_id are displayed here:

Forsyningsart	Id
Tele og data	1
Antenne	2
Vand	3
Varme	4
El	5
Olie	6
Gas	7
Spildevand	8
Andet	99